DEVELOPMENT AND VALIDATION OF THE READING ENGAGEMENT SURVEY

by

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(Under the Direction of Shawn Glynn)

ABSTRACT

Engagement is a critical component of successful reading. In the present study, reading engagement represents a metaconstruct, subsuming motivation, personal beliefs, interest, self-regulation, and other aspects of reading often examined independently of one another. Specifically, reading engagement is defined as the combined functioning of these elements of reading, which produces a reader who has the desire, skills, and ability to become deeply involved with a text. The Reading Engagement Survey (RES), a questionnaire using a five-point Likert scale, was developed from a social-cognitive perspective. The RES was administered to 159 upper elementary-school students. The students' scores on the RES were reliable and related to students' reading-achievement scores, an indication of criterion-related validity. An exploratory factor analysis provided evidence of construct validity, revealing that the students conceptualized their reading engagement in terms of three factors: task-value, anxiety, and flow. The findings suggest that the RES is a reliable, valid, and efficient tool for teachers to measure their students' levels of reading engagement. Directions for future research include the cross validation of the RES on a new sample of students and the use of confirmatory factor analysis.

INDEX WORDS: Reading Engagement, Literacy, Exploratory Factor Analysis, Elementary-School, Likert Scale

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CHAPTER 1

INTRODUCTION

Ms. Barbara Jenkins, a fourth-grade teacher, is puzzled by the reading behavior of Josie, one of her students. During one-on-one conferences, Josie routinely says that "reading is fun." In fact, Josie remarked that reading is one of her favorite things to do for fun. And, during the "Free Friday Afternoon" held in class each week, Josie usually picks a book from the classroom library. Invariably, Josie soon abandons her book and turns her attention to science games or drawing. Ms. Jenkins knows that Josie has satisfactory reading skills because Josie consistently scores slightly above average on standardized reading tests. Ms. Jenkins would like to understand why Josie, who is good at reading and says she likes to read, actually reads so little, at least in school. During a parent-teacher conference, Josie's parents tell Ms. Jenkins that Josie does not read much at home, either.

Josie's case illustrates the difficulty that teachers have understanding the myriad internal processes that contribute to their students' reading. Ms. Jenkins has determined that Josie has reading skills but is uncertain about Josie's motivation to read. It appears Josie's reading motivation is not enough to inspire her to read for fun. What Ms. Jenkins is trying to promote in her students is not just motivation but a balance of interests, attitudes, emotions, motivation, self-regulation, and the ability to elicit flow states while reading. In the present study, *reading engagement* will be operationalized as a metaconstruct subsuming all these aspects of reading. Specifically, reading engagement is defined as the combined functioning of these elements of reading, which produces a reader who has the desire, skills, and ability to become deeply

involved with a text. Instead of providing a precise definition, Baker, Dreher, and Guthrie (2000) choose instead to describe elements that contribute to reading engagement:

"Students are engaged readers when they read frequently for interest enjoyment and learning. The heart of engagement is the desire to gain new knowledge of a topic, to follow the excitement of a narrative, to expand one's experience through print. Engaged readers can find books of personal significance and make time for reading them. The investment of time is rewarded by the experience of immersion in the text itself. Engaged readers draw on knowledge gained from previous experiences to construct new understandings, and they use cognitive strategies to regulate comprehension, so that goals are met and interests are satisfied" (p. 2).

Ms. Jenkins, and other teachers who would like to promote the type of reading described above, would benefit from a reliable, valid, and efficient questionnaire to assess and gain insight into students' reading engagement. A questionnaire of this kind would be useful to researchers, as well, by helping them to study the nature of reading engagement. In order to be effective, this questionnaire should be based on a well-researched theory of human behavior that is applicable to students' reading engagement.

Social-cognitive theory provides a multi-faceted perspective of understanding human learning by integrating the effects of behavioral, environmental, and personal characteristics (Bandura, 2001). Social-cognitive theory explains that learning happens internally and thus, behavioral changes may or may not be seen. The complexities of a student's physical and mental environment interact to influence learning. Like learning in general, reading is a highly complex task in which both internal and external factors play an important role. A student's reading skills, psychological state, intellectual state, and social and physical surroundings must all interact to

result in a true understanding of a text (Schunk & Zimmerman, 2007). The mere act of decoding letters on a page is not enough to comprehend and retain what is taken in during this intricate process. Students must actively engage with text in order to understand it to its fullest.

Csikszentmihalyi (1991) describes reading engagement as a state of complete absorption called flow. Flow is characterized by a student so lost in a passage that he or she is oblivious to his or her surroundings. In addition to the word flow, terms like mental presence, absorption, and thoughtfulness are also common elements in definitions of reading engagement. Guthrie (2001) defined reading engagement as "a merger of motivation and thoughtfulness" (p. 1).

Is a student's ability to engage with a task the same for every type of task? Josie's lack of mental presence in reading is especially evident when compared with her attentiveness in her two favorite subjects, science and art. She spends uninterrupted hours engaged in science experiments or art projects, which indicates that for Josie, the issue is not one of general attention span. Instead it appears that her level of engagement for reading-related tasks is simply not equal to that of her two favorite subjects. Her teacher is left with a challenging and common problem of trying to address this disparity in Josie's engagement. Subject-matter disparities are common among learners of all ages. To this end, student engagement has increasingly been studied in the context of specific domains, or subject areas, such as math (Freeman & Lucius, 2008), social studies (Holmes, Russell, & Movitz, 2007), and science (Venturini, 2007).

Rationale for Domain-Specificity

The term *engagement* is often used in the phrase *student-engagement*, which is a general conception of students' connection to the school experience. The most prominent model of student-engagement, the *participation-identification model* (Finn, 1989), emphasizes the importance of students' emotional and social identification with school and participation in

school activities in general. Student-engagement research has increasingly been conducted in specific subjects, including reading, in a move to examine the domain-specificity of the construct.

Engagement was once measured as a student's time-on-task behavior (Cazden, 1973; Hess & Takanishi, 1974). Subsequent definitions have expanded upon this narrow focus on behavior, to include cognitive and affective characteristics such as enthusiasm, interest, and strategy use (Skinner & Belmont, 1993). Refuting the time-on-task definition of reading engagement, Guthrie (2004) states that "engaged reading is observable as behavior in the classroom but also entails cognitive, motivational, and social attributes" (p. 4). Guthrie, Rueda, MacGillivray, and Monzo (2001) observed students attend to inauthentic or repetitive activities below their level and, as a result, criticized the time-on-task definition of engagement: "It does not necessarily follow that because students are engaged, they are necessarily engaged in instructionally challenging activities that might result in future academic success…[This] suggests the need to explicitly connect engagement to high-level challenging activities" (p. 19). In order to describe engagement comprehensively, Martin (2007; Martin & Marsh, 2004) has synthesized several theoretical positions to encompass both cognitive and behavioral aspects of student-engagement.

Why study engagement at all? Relationships between student engagement and achievement have important implications for students and their teachers, and research along these lines has given school administrators and teachers information about students' likelihood of school drop-out. To understand the nuances of individual students' reading engagement, and to have a chance of affecting these students' school success at a young age, it is critical that engagement be investigated in specific domains. Engagement has a strong positive correlation to

achievement in particular domains, as measured by a variety of indicators. In reading, several key dimensions of Martin's Motivation and Engagement Scale are positively correlated with literacy, GPA, and English achievement (Martin & Marsh, 2003; Martin, Marsh, & Debus, 2001). As the collective conception of engagement is refined, teachers and researchers will be able to better understand domain-specific effects of engagement and apply their understanding to help students like Josie.

As a characteristic of engagement, domain-specificity may be a nearly universal construct, extending across ages and cultures. Although it is reportedly difficult to measure affective and metacognitive constructs in young children, Wigfield, Guthrie, Tonks, and Perencevich (2004) succeeded in measuring the reading motivation of children as young as first-grade. They found that even children as young as first-grade demonstrate variability in both quality and strength across subject areas when examining reading motivation. Engagement also varies across domains in non-Western cultures. A study in Korea found that a related construct, *task-value*, was relatively distinct across subject domains in middle-school and high-school students (Bong, 2001a). By studying the more precise concept of reading engagement rather than the general concept of student-engagement, researchers are able to refine their understanding of engagement. The decision to examine the domain-specific nature of engagement is supported by research showing this quality to be universal across people of different ages and cultures.

Rationale for Construct Generality

In the current study, reading engagement is operationalized as a combination of motivation, self-regulation, strategy use, and personal beliefs. This approach is consistent with the general student-engagement literature, where engagement is increasingly understood as a metaconstruct (Appleton, Christenson, Kim, & Reschly, 2006; Fredricks, Blumenfeld & Paris,

2004). In the case of Josie, one sees a student who is skillful with some of elements of engagement, such as her slightly above-average achievement scores; however, if she does not have an effective balance of all the engagement components, then she will not perform as an optimally engaged reader. This is the state that teachers strive to elicit in their students. Many researchers focus on one subset of reading engagement, such as reading motivation, and give others relatively little attention, assuming that their results will generalize to reading engagement as a whole. This approach and assumption is of questionable value.

A better approach is to conceive of reading engagement as a metaconstruct which subsumes the aforementioned constructs. Teachers and researchers who do this will be able to more efficiently and directly understand students' relationships to reading. This approach makes educational theory more applicable to classroom educators.

Research results focused narrowly on one aspect of engagement may be interesting from a theoretical position but pose a problem to teachers who try to implement the results in their classrooms. Teachers invariably lack the time necessary to assess or coach students on each of reading engagement's subconstructs individually. Viewing reading engagement as a metaconstruct is not only theoretically sound but may also lead to a comprehensive assessment of the type necessitated by the busy classroom environment. Engaged reading is the final product to which all reading instruction is directed; engaged readers are interested in what they read, believe they are capable of succeeding, are able to sustain attention, and are capable of using reading strategies. This is a reasonable goal for Josie to strive for, with the help of her classroom teacher.

While there is relatively little research on reading engagement specifically, there is a vast amount of research on its subconstructs like reading motivation and reading self-regulation.

Research on each of these subconstructs in isolation is valuable, but not nearly as valuable as research that examines the subconstructs in combination. When viewed as a metaconstruct, reading engagement brings together disparate lines of research to form a comprehensive picture of elementary-student reading engagement. Those subconstructs of reading engagement which have received the most research attention will be examined here and related to each other by means of the metaconstruct of reading engagement.

CHAPTER 2

REVIEW OF LITERATURE

In the present study, the many subfields of reading research have been organized into two broad categories: (1) *Beliefs, attitudes, and emotions about reading*, and (2) *Motivation, self-regulation, and flow while reading.* The first category concerns the impact of students' personal beliefs about reading. The second category concerns mental states conducive to reading. The final section of the literature review summarizes the major approaches to assessing various subconstructs of reading engagement, including reading motivation and reading self-concept.

Beliefs, Attitudes, and Emotions about Reading

Students' beliefs, attitudes, and emotions about reading help demonstrate how students engage in the act of reading. These personal characteristics illuminate the underpinnings of reading engagement from a social-cognitive perspective (Bandura, 1986; Bandura, 2001). In social-cognitive theories of learning, personal characteristics interact reciprocally with other characteristics of a student's environment. These other characteristics might include the presence or absence of books or the temperament of a student's teacher. In this section, personal beliefs, attitudes, and emotions about reading will be examined in more detail. Connections among them will be explored in the broader context of reading engagement.

Reading interest. Most adults have learned from experience that being interested in a project or task's subject matter will increase one's chances of success. Promoting children's interest in reading has an intuitive appeal. However, increased reading interest has benefits beyond pure enjoyment. It also has a positive effect on students' motivation to read

independently (Guthrie & Humenick, 2004). Interest also has a positive effect on reading recall. Interviews with elementary students showed that students with high interest in reading had good memory performance, and presumably good comprehension, for what they read (Guthrie et al., 2007). A recent study with early adolescents found that text interest varied with different patterns of task interest (Graham, Tisher, Ainley, & Kennedy, 2008). These findings indicate that it is important not just to help students enjoy the process of reading and find things that are interesting to read, but students must be helped to believe that the tasks of reading and interacting with texts in other ways are interesting and valuable themselves.

Task-value in regards to reading. Task-value is a term that indicates that an individual believes a task is important and worthwhile. Wigfield and Eccles (1992) point out two important components of task-value: *utility value* and *intrinsic value*. Utility value indicates that an individual believes that the task at hand will be useful, whereas intrinsic value indicates that an individual values doing an activity for its own sake because it is enjoyable or interesting. Utility value is linked to achievement. Bong (2001) found that college students' perceived usefulness of a course indirectly predicted students' achievement on exams, as mediated by self-efficacy, a subconstruct which is discussed in more detail later.

Both forms of task-value—utility value and intrinsic value—are linked to motivation, which, in turn is highly correlated with school success (Wigfield, 1994). This indicates that if students are interested in reading for the sake of reading and believe that it is a useful and valid skill in life, they will be more motivated and, therefore, more likely to succeed. A recent study of both academic and non-academic learning contexts suggests that initial interest, which is similar to intrinsic value, combined with achievement goals, which are a likely product of utility value, leads to task-value (Hulleman, Durik, Schweigert & Harackiewicz, 2008).

Self-efficacy about reading. Self-efficacy, which plays an important role in social-cognitive theory, is an individual's sense of being effective at a certain task (Bandura, 1986). Self-efficacy is different from general perceptions of competence because it is specific to a task or skill set. In the realm of reading, self-efficacy is sometimes conceived of as a subset of reading motivation, as in the Motivation for Reading Questionnaire. In studies with this questionnaire, reading performance was found to be positively predicted by students' self-efficacy as well as their enjoyment of reading (Wigfield, 1996a). Competence beliefs and efficacy beliefs both relate strongly to general academic achievement (Bandura, 1997; Pajares, 1996; Schunk & Rice, 1993).

An individual's belief that he or she can succeed at a task is closely examined in the social-cognitive perspective (Bandura, 1997). Research on self-efficacy indicates that one's feelings about effectiveness and beliefs about success are closely tied to one's actual success. However, the potential for success is often mitigated by the presence of negative emotions, such as anxiety.

Reading anxiety. While psychological research confirms that a moderate amount of anxiety sometimes helps learning, (Cassady & Johnson, 2002), high levels of anxiety can hinder the process of developing as a reader. Generalized anxiety gets a lot of popular media attention, and it is commonly believed to have a negative effect on school performance. These negative effects are particularly strong when researchers examine domain-specific anxiety. The authors of the Reading Anxiety Scale (Zbornik & Wallbrown, 1991) found that the correlation between reading anxiety and reading achievement is stronger than that between general anxiety and reading achievement.

In addition to examining the impact of reading anxiety on students' school performance, researchers have studied how reading anxiety affects boys and girls differently and how it develops as students age. In one study of reading anxiety, an age effect was found, indicating that reading anxiety may actually increase as elementary-school students age (Parker & Paradis, 1983; Parker & Paradis, 1986). In order to support the academic and personal development of students, it is important to reduce the impact that excessive reading anxiety has on the elementary-school student's development.

Motivation, Self-Regulation, and Flow While Reading

When a student's personal beliefs and attitudes about reading are aligned, the student will be able to exhibit motivation, self-regulation, and the psychological state of flow while reading. In this section, these elements of reading engagement are explored more thoroughly and connections among them are discussed from a social-cognitive perspective.

Reading motivation. Motivation is one of the most frequently studied aspects of reading. Guthrie and Wigfield (1999) define reading motivation as "the individual's goals and beliefs with regard to reading… [which] then influences the individual's activities, interactions, and learning with text" (p. 199). These resulting interactions with the text are often understood as reading engagement. Ainley (2004) describes the distinction between motivation and engagement as a difference between the *why* and the *what.* Motivation is *energy and direction*, or "why we do what we do" (p. 2), whereas engagement is *energy in action* and describes the connection between a person and an activity.

So how does this motivation, or *energy and action,* appear in the U.S.? One international study found that U.S. students ranked 33rd out of 35 countries in motivation for reading (Mullis, Martin, Gonzales, & Kennedy, 2003). In order to address this troubling finding, U.S. researchers

strive to understand what comprises motivation. Many reading teachers and parents agree that reading for its own sake, or intrinsically-motivated reading is preferable to extrinsically-motivated reading during which students read simply to receive a grade or other external reward. One way to promote intrinsic motivation is to help students feel like they have choices in the reading classroom (Sweet & Guthrie, 1998).

Motivation has important links to reading frequency. Wigfield and Guthrie (1995) initially reported significant positive correlations between reading frequency and both extrinsic and intrinsic motivation. However, Wigfield, Wilde, Baker, Fernandez-Fein, and Scher (1996) found a stronger positive correlation between intrinsic motivation and reading frequency. In line with previous knowledge about the types of motivation, intrinsic motivation was once again found preferable to extrinsic motivation. In a study by Wigfield and Guthrie (1997), intrinsic motivation predicted students' amount and breadth of reading more strongly than extrinsic motivation. Additionally, several factors of the Motivation for Reading Questionnaire, *curiosity-challenge*, *recognition-efficacy*, and *social*, showed strong positive correlations with fifth- and sixth-grade students' self-reported reading frequency (Wigfield, 1996a).

Research suggests strong relationships between reading motivation and reading achievement. In one study of adolescent readers, motivation directly predicted text comprehension. For elementary-school students, a similar benefit to comprehension was found in a moderate relationship where motivation predicted reading amount which, in turn, predicted text comprehension (Guthrie, Wigfield, Metsala, & Cox 1999). Reading performance was positively predicted by the *recognition-efficacy* scale of the Motivation for Reading Questionnaire (Wigfield, 1996a).

The benefits of motivation are evident not only with formal assessment methods like the Motivation for Reading Questionnaire, but can also be illuminated using individual interviews. Based on interviews, motivation was found to predict reading-comprehension growth (Guthrie et al., 2007). Wang and Guthrie (2004) found that when previous reading achievement, extrinsic motivation, and amounts of reading were controlled for, intrinsic motivation was positively related to text comprehension for fourth-grade students in both the U.S. and China.

The existing research has shown that reading motivation is a critical characteristic of successful readers. Although U.S. students are ranked very low in reading motivation internationally, there is some hope for U.S. students' future success. Researchers have an ever-increasing understanding of motivational processes, including how different types of motivation affect success differently. Intrinsic motivation, or the desire to do something for its own sake, is an especially important characteristic of engaged readers (Oldfather & Dahl, 1994; Turner, 1995). When the impetus to read comes from an external source, extrinsic motivation is in operation. Although intrinsic motivation is a preferable form of motivation, extrinsic motivation is not necessarily undesirable. Gambrell and Marinak (1997) advise that appropriately used incentives can enhance intrinsic motivation itself, which leads to increased reading engagement.

Reading self-regulation. Each student has a *self-regulation system*, according to the social-cognitive framework (Bandura, 1986). This regulatory system affects a student's behavior, cognition, and academic achievement. Self-regulation, as part of Bandura's social-cognitive theory, is described as "the process of influencing the external environment by engaging in the functions of self-observation, self-judgment, and self-reaction" (Schunk, 2008, p. 465). Zimmerman (2002) defined self-regulation as the processes individuals use to reach goals. When the goal is learning, self-regulated learning describes one's modulation of thoughts and behaviors

to achieve a learning goal. Self-regulated learning is a combination of strategy use, motivational self-regulation, and cognitive self-regulation (Pintrich, 2000; Souvignier & Mokhlesgerami, 2006). In the context of reading, Souvignier and Mokhlesgerami (2006) found that these three elements of self-regulated learning, motivational, cognitive, and strategy, produced longer-term learning than strategy instruction alone.

The achievement of self-regulation is theorized to happen in four levels of development: observational, emulative, self-controlled, and self-regulated (Schunk & Zimmerman, 1997). From a social-cognitive perspective, emotional and contextual factors also play an important role in self-regulated learning. It is crucial that all of these elements be included in a conception of self-regulation (Zeidner, Boekaerts, & Pintrich, 2000) to understand how students learn to self-regulate while reading.

Flow states and reading. When a balance between skill and challenge is achieved, readers are able to "get in the zone" with their reading, a state which Csikszentmihalyi (1988) has termed *flow*. This state is also achieved by athletes, artists, and even video game players engaging with their respective tasks (Funk, Chan, Brouwer, & Curtiss, 2006). Reading and these creative pursuits share the common characteristic promoting deep involvement, a psychological construct that is closely linked to the flow state. In one qualitative research study on involvement (Reed, Schallert, & Deithloff, 2002), "students reported that the experience of being involved occurred when they were able to concentrate deeply and understand the task and its content" (p. 54). Involvement and flow become available mental states when concentration and comprehension are both operating. The link between flow states and motivation was examined using the Flow Short Scale (Vollmeyer & Rheinberg, 2006). The authors of the scale found that

flow states, as measured by their scale, is a mediator between initial motivation, and college student performance.

Assessments

Many outcomes for which teachers strive, including learning itself, are latent constructs, meaning they cannot be observed directly by rather must be inferred. For example, it is difficult to know if a child has actually learned the material covered by his or her teacher and, as a result, a pencil-and-paper test of knowledge is used to infer whether learning has taken place. Reading engagement is also a latent construct which means that it is an elusive outcome when it comes to measurement. However, without understanding if students want to read, like to read, or feel efficacious as readers, it is very difficult for teachers to direct the course of students' reading education. Thus, assessments measuring attitudinal and cognitive aspects of reading engagement have been developed and refined in recent decades.

During the late 1980s and 1990s, the importance of attitudinal and other non-skill-based assessments gained prominence. Many assessment tools for engagement-related constructs were developed in quick succession. Each one focused on a different construct, theoretical perspective, or assessment method. One approach of early assessments was to focus on attitude and interest. McKenna and Kear (1990) developed the Elementary Reading Attitude Survey, a reading attitude scale designed to assess how much children like to read, both inside and outside of school. The Elementary Reading Attitude Survey is sometimes informally known as the "Garfield Reading Attitude Survey" because it uses sketches of the *Garfield* cartoon character to understand children's perspectives on reading.

Subsequent research moved away from interest and attitude towards more clearly defined psychological constructs, like self-concept and self-perception. Chapman and Tunmer's (1995)

reading self-concept questionnaire assesses students' perceptions about their competence in reading, difficulty of reading, attitudes about reading, and feelings toward reading. Reading self-perception, which is very closely related to self-concept, was examined by Henk and Melnick's (1995) Reader's Self-Perception Scale. These assessments appealed to teachers' desires to use scientific instruments to influence their reading instruction, but they generally provided little information on validity or reliability. This may have contributed to the fact that no one of these instruments ever dominated the field with widespread use.

Two distinct assessments dealing with reading motivation emerged at the same time as the self-concept and self-perception assessments. Both of these questionnaires were an improvement over the assessments discussed above because the authors of each attempted to address reliability and validity concerns not addressed by other assessments. Gambrell, Palmer, Codling, and Mazzoni (1995) developed the Motivation to Read Profile using *expectancy-value theory* (Wigfield & Eccles, 1992), which holds that expectations about success or failure combined with the value an individual places on a task determine motivation and engagement. The Motivation to Read Profile (Gambrell, 1995) assesses children's self-concept as readers and the value they place on reading using both quantitative and qualitative methods. No empirical data have been published by the authors or other researchers to confirm the validity of this structure. However, the Motivation to Read Profile was indisputably influential in the development of subsequent motivation assessments because it was the first of its kind to address a common flaw in previous assessments. Traditionally, similar assessments required that students read the questions silently to answer each question. In order to minimize the interference of reading skill upon students' survey answers, the Motivation to Read Profile instructs assessors to

read each question in the survey portion aloud to the students, although students also can read silently along with the questions in front of them.

The Motivation to Read Questionnaire (Wigfield, 1996b) was developed under two theoretical positions: the *engagement perspective* and *achievement motivation theory*. The *engagement perspective* integrates cognitive, motivational, and social aspects of reading and views readers as individuals with different purposes for reading, coming from different previous experiences, and existing in different social settings and who generate knowledge based on an interaction of all these aspects (Guthrie, Wigfield, Metsala, & Cox, 1999). The Motivation for Reading Questionnaire assesses 11 dimensions. These 11 dimensions can be grouped into three categories. The first category examines students' perceived competence and efficacy and comprises two dimensions: Reading Efficacy and Reading Challenge. The second category looks at intrinsic vs. extrinsic motivation and comprises five dimensions: Reading Curiosity, Aesthetic Enjoyment of Reading, Importance of Reading, Compliance, and Reading Recognition. The third category looks at social aspects and comprises four dimensions: Reading for Grades, Social Reasons for Reading, Reading Competition, and Reading Work Avoidance. Scale reliability, as reported by the Motivation for Reading Questionnaire's authors, ranged from adequate (.68-.69) to good (.70-.81) for only six of the scales. Reliability for the other five scales was less than adequate (.43-.68).

The Motivation for Reading Questionnaire is the only assessment of its kind to have undergone a detailed critique of its construct validity. Watkins and Coffey (2004) analyzed its construct validity using confirmatory factor analysis and found that the 11-factor structure did not fit the data in either of two samples of third- through fifth-grade students. Watkins and Coffey concluded that the Motivation for Reading Questionnaire (Wigfield, 1996b) should be

revised. Rather than revise the Motivation for Reading Questionnaire, the goal of the present study is to develop a new questionnaire that achieves the goals of the Motivation for Reading Questionnaire, yet improves upon the questionnaire by responding to the recommendations of Watkins and Coffey (2004) and incorporating into the design of the new questionnaire theoretical advances in researchers understanding of motivation that have occurred in the recent years.

CHAPTER 3

THE PRESENT STUDY

Theoretical Framework

Within a social-cognitive framework, behavioral, environmental, and cognitive, or personal characteristics all interact to influence an individual's development (Bandura, 1986; Bandura, 2001). Behavioral characteristics include observable actions or performance; environmental characteristics include an individual's immediate environment such as their home, school, family, and friends, and the broader environment such as their city or nation. Personal characteristics include individual differences in temperament, physical characteristics, cognitive processes, attitudes, and beliefs. Consideration of the complex and reciprocal interactions of cognitive, behavioral, and environmental characteristics motivated the examination of reading engagement as a metaconstruct. Viewed through a social-cognitive lens, it is expected that both personal beliefs, and their cognitive and behavioral applications to reading, will be synthesized into one metaconstruct according to their common element: reading engagement.

Assessment of Reading Engagement

Reading engagement was once considered an easily quantifiable aspect. It was measured by observing a student's time-on-task, as demonstrated by overt behaviors like looking at the intended page. However, when reading engagement is viewed as a metaconstruct, covert measurements are necessary. It is not possible to accurately assess a student's reading engagement by observation, nor is it reasonable to ask "are you an engaged reader?" Instead, a self-report technique of data collection can be used to try to understand a student's perspective. A

self-report method was chosen over parental or teacher reports because a student's own belief system about reading is closely related to his or her reading engagement (Schraw & Bruning, 1999). Self-report assessments offer a glance into the way a student feels about reading, in a way that questionnaires completed by an adult teacher or parent can not.

The three most common ways of measuring children's responses are a Likert scale, a visual-analogue scale, and a numeric visual-analogue scale. A recent study examined children's preferences for these three response types as well as their perceived ease of completion. Children aged 6 to 18 showed a statistically significant preference for the Likert scale in both regards (van Laerhoven , van der Zaag-Loonen, & Derkx, 2004).

Variables and Questions

In this section the variables examined in this study will be introduced. Prominent findings in each of these areas will be summarized. Finally, the five major research questions of this study will be presented.

Gender. With regard to reading, girls have higher motivation, task-value, and self-concept than boys (Cloer & Dalton, 2001). This echoes what many teachers report anecdotally from their classroom experiences. Similar gender differences, in favor of girls, are seen in cross-cultural research (Malloy & Botza, 2005), suggesting that such differences may not be solely the result of societal and cultural influences. In fact, gender effects seem to be stronger with younger students. Cloer & Dalton's (1999) study found gender effects with second grade students, while gender effects decreased as students got older. Martin (2007) found invariance across gender when examining motivation and engagement in high-school students.

Age. Research on a variety of reading engagement's subconstructs demonstrates a robust age effect. Generally, students begin school with a positive relationship to reading, which

dwindles as they age. Using the Motivation to Read Profile (Gambrell, 1995), Cloer and Dalton (1999) found that fourth-grade students scored significantly lower than second-grade students on *self-concept as a reader*, *value placed on reading,* and total score on the Motivation to Read Profile.

   Reading achievement. Students with high reading achievement are usually more engaged and motivated readers (Guthrie, 2004; Wang, 2004). Morgan and Fuchs (2007) conducted a review of 15 studies about reading motivation and reading skill. Their findings suggested that not only is there a relationship between reading motivation and reading skill, but that relationship may be bidirectional. Some of the studies examined by Morgan and Fuchs showed that reading skill predicted reading motivation and some of the studies showed that reading motivation predicted reading skill. But the majority of the studies they examined showed evidence of both of these relationships.

   Research questions. The research questions explored in this study were: (1) Is the Reading Engagement Survey (RES) a valid and reliable measure of elementary-school students' reading engagement? (2) What reading-engagement constructs, or factors, underlie the structure of the RES as perceived by the students themselves? (3) How are students' responses to the RES related to their reading achievement? (4) Does the age and gender of students influence their RES responses?

CHAPTER 4

METHODS

In this section the participants' demographics and recruitment strategies are described. Then, the tests and questionnaires used in this study are presented, and specific procedures for administering tests and obtaining scores are outlined.

Participants

The sample was comprised of 172 elementary-school students in third ($n = 33$), fourth ($n = 31$), fifth ($n = 83$), and sixth ($n = 24$) grades. Ages ranged from eight years to twelve years ($M = 9.92$, $SD = 1.01$). Girls comprised 50.3% of the sample. Students were enrolled in one of three schools in the southeastern United States: a rural public-school ($n = 105$), a suburban parochial school ($n = 43$), and a private suburban Montessori school ($n = 23$). Teachers who were willing to have their students participate, invited all students to be part of the study. Teachers collected signed parental-consent forms from approximately 50% of all students in their classrooms. All sixth-grade participants were enrolled in the parochial and Montessori schools, where sixth-grade was considered part of elementary-school. Neither ethnic nor socioeconomic demographics were available on the participants.

Reading Engagement Survey

This section explains how the Reading Engagement Survey (RES) was developed. Research on self-report assessments and the most effective type of questionnaires for use with children influenced the choices made in developing the RES. The development of this initial pool of items was based on social-cognitive theory, as it included behavioral, environmental, and

cognitive questions. Questions related to each of the constructs discussed in the literature review were included. These included questions about reading attitude, reading anxiety, reading efficacy, reading motivation, and self-regulation. Theory and research on children's reading behavior guided the development of the initial RES pool of 38 Likert-type items.

A pilot study was conducted with the pool of 38 potential Likert-type items developed for the RES. The scale was developed with a total of five response choices because an odd number of choices allows for a middle response. In the pilot study, videotaped cognitive interviews were conducted individually with two students, following the guidelines laid out by Shafer & Lohse (2006). The students were girls, one was 9 years old and entering fourth-grade and the other was 10 years old and entering fifth-grade and both were enrolled in public schools. The items were reworded and clarified based on feedback from the cognitive interviews.

Procedures and Measures

Reading engagement was measured using the Reading Engagement Survey (RES). Administration took place in groups of 6-20 students, depending on teacher preference and classroom availability. After signing the assent form, the students provided background information including age and grade. Next, students completed two practice items to assure familiarization with the Likert-scale format.

The students were given an opportunity to ask questions before the questionnaire was administered. They were then asked to remain silent and to follow along with the items as each was read out loud rather than working ahead on their own. The researcher told the students "this is a scientific study, so I need to make sure that I do it exactly the same with every group."

In order to accommodate varying developmental stages and attention levels, a silent "stretch break" was provided for all groups, about halfway through the survey. The students

spent approximately 25 minutes on the survey from start to finish including background information. After completion of the study, student participants received a small, inexpensive item from a selection of school supplies including decorative erasers, pencils, and pencil grips.

The type of reading achievement data included in this study varied across the three schools because of school policies. Policies at the Montessori school did not allow for the release of students' standardized test scores. Consequently, alternative means of measuring students' reading achievement were sought. A recent in-depth examination of the predictive validity of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) reading measures suggested that its subtests significantly predicted third-grade students' reading achievement on the Iowa Test of Basic Skills (ITBS) Reading Total subtest (Schilling, Carlisle, Scott, & Zeng, 2007). A subtest of DIBELS, the Oral Reading Fluency (ORF) measure, was administered to each participating Montessori student. Although the results were not used in formal analyses, the corresponding subtest, the Retell Fluency (RTF) measure was also administered as a comprehension check for each student. Preliminary evidence suggests that in order for students to be on track with reading comprehension they should have an RTF of at least 25% of their ORF score (University of Oregon Center on Teaching and Learning). All Montessori participants met this criterion.

The public-school students' scores on the Criterion-Referenced Competency Test (CRCT) were obtained for analysis. The principal provided each student's scores on all reading-related portions of the state's standardized test. Similarly, scores from the parochial school's major yearly standardized test were included as a measurement of reading achievement for those students. The principal provided each student's scores on all reading-related subtests of the ITBS. These two standardized tests are widely used as measurements of reading achievement

(Easton et al., 2003; Georgia State Dept. of Education, Atlanta, 2001; Joireman & Abbott, 2001;

Livingston & Livingston, 2003) .

CHAPTER 5

RESULTS

In this section, descriptive statistics of the RES and the scale reliability and validity are

reported. The process of the factor analysis, including factor extraction, rotation, retention, and

interpretation is described. Finally, correlations among the factors, achievement measures,

gender, and grade level are examined.

Descriptive Statistics, Mean Comparisons, and Correlations

All data analyses were conducted using SPSS version 16.0. An alpha level of .05 was

established as an appropriate cut-off for statistical tests. Data were screened for outliers by

examining skewness and kurtosis using DeCarlo's screening macro. The outliers identified by

DeCarlo's macro were individuals who showed highly inconsistent or incomplete response

patterns and all thirteen were removed from the sample. The final sample to undergo analyses

consisted of 159 students.

Reliability

Those items in the initial pool of 38 that were redundant and did not contribute to the

reliability (internal consistency) of the inventory, as measured by Cronbach's coefficient alpha

(Cronbach, 1951), were eliminated. The result was an 18-item scale, with a Cronbach's

coefficient alpha of .88, which is considered quite reliable.

Factorability

Factorability was examined in two ways. The KMO Measure of Sampling Adequacy

(Kaiser, 1974) resulted in a value of .80, indicating that the matrix is appropriate for factoring.

Bartlett's test of sphericity confirmed that the correlation matrix is not the identity matrix,

supporting the factor analyzability of the matrix. Means, standard deviations, skewness and

kurtosis for each item are reported in Table 1.

Table 1

Mean, Standard Deviation, Skewness, and Kurtosis, of Each Item of the RES

Item	M	SD	Skewness	Kurtosis
I have fun looking at books.	3.98	1.064	-.951	.064
It is hard to pay attention to what I'm reading.[a]	3.68	1.347	-.593	-.991
I feel happy when I understand what I read.	4.21	1.142	-1.319	.627
I get worried when I do reading homework.[a]	3.96	1.287	-.993	-.285
I worry about what people say about my reading.[a]	3.58	1.502	-.534	-1.234
I work hard to become a better reader.	4.19	.982	-1.403	1.735
I can read almost anything if I try hard.	4.35	1.061	-1.696	2.168
I want to have the best reading grades of anyone in my class.	3.96	1.255	-.987	-.159
I practice reading so that I get better at it.	3.95	1.190	-1.021	.050
I get worried when I take reading tests.[a]	3.42	1.544	-.315	-1.513
I think it is important to understand what I read.	4.38	.967	-1.816	2.983
I feel scared when I have to read out loud in class.[a]	3.00	1.619	.018	-1.627
I work hard to understand what I read.	4.03	1.150	-1.049	.054
I think reading is important.	4.39	.987	-1.691	2.166
When I read, I do not think about what's going on around	3.87	1.303	-.986	-.204

Table 1 continued

Item	*M*	*SD*	Skewness	Kurtosis
I worry what other students will say if I mess up reading out loud.[a]	3.07	1.584	-.028	-1.584
It is important to me to be a good reader.	4.24	1.088	-1.296	.588
I enjoy reading.	4.55	.824	-2.005	3.709

[a] Items were reverse-coded before factor analysis.

Factor Analysis

An exploratory factor analysis was conducted using SPSS version 16.0 with the goal of uncovering the underlying dimensions of reading engagement. Details of the factor extraction, rotation, and retention are provided. Factor loadings and the assignment of factor names are discussed.

Factor Extraction

A principal-component analysis (PCA) was performed on the 18-item scale in order to extract factors. PCA is used to summarize the relationships amongst a set of original variables in terms of a smaller set of uncorrelated *principal components,* which are combinations of the original variables (Goddard & Kirby, 1976).

Rotation and Factor Retention

Rotation was performed using the Varimax procedure. A scree plot was also examined. Both the Varimax procedure and the scree plot supported a three-factor solution.

Factor Loadings and Factor Interpretation

The factor structure which resulted from the analysis was a relatively clean structure with all items loading at least .5 or higher on their respective factor. The items that loaded onto each factor were examined to aid in interpretation of the factors.

Factors 1 and 2 contained items that related to the first section of the literature review— attitudes and emotions about reading. Factor 1 contained 8 items which examined students' likelihood to find reading and reading well important and satisfying. Consequently, this factor was named *Task-Value,* a construct also examined by Gambrell (1995) using her Motivation for Reading Questionnaire. This factor was the most important in understanding the students' reading engagement, as it accounted for 30.19% of the total variation in responses. In the literature reviewed for this study, Task-Value was examined in the context of personal beliefs and attitudes about reading.

Factor 2 contained items about personal attitudes about reading. It contained 5 items which examined feelings of fear and worry in relation to reading out loud, doing reading homework, and performance on reading tests. Factor 2 was named *Anxiety* and accounted for 16.07% of the total variation in responses. Anxiety has been determined to play a role in school success and student-engagement (Appleton, Christenson, Kim, & Reschly, 2006).

The third factor captured items that related to the second section of the literature review—what happens when personal beliefs and attitudes are put into practice. Like the Anxiety factor, this factor also contained 5 items. These items examined enjoyment, efficacy, and absorption in the act of reading. These three elements in combination are theorized to lead to a state called Flow, according to Flow Theory (Csikszentmihalyi, 1991). Consequently, the third factor was named *Flow.*

The factor loadings for each item are provided in Table 2. These loadings were obtained by performing a principal-component analysis with Varimax rotation. Taken together, the three factors cumulatively explain 53.31% of the variability in RES responses. Table 3 contains the Eigenvalue, percent of variance explained by each factor, the cumulative percent of variance explained, and Cronbach's alpha for each factor. Figure 1 provides a graphic representation of the percent of variance explained by each factor. The Cronbach's coefficient alphas for the Task-Value, Anxiety, and Flow factors were 87, 77, and .65, respectively; the first two are satisfactory in size, but the third is low.

RES scores were calculated for each student. A value of .4 was established as a cut-off for double loadings. Using this criterion there were two items that double loaded. The first was "I think reading is important." This item, which loaded primarily on Task-Value, also loaded on the Flow factor at .47. The second item was "I enjoy reading" an item that loaded primarily on the Flow factor, also loaded on the Task-Value Factor at .48. These double loadings imply the items need to be reworded to address one factor, not two.

Table 2

Factor Loadings of Each Item of the RES

Item	Task-Value	Anxiety	Flow
I think it is important to understand what I read.	0.794	0.058	0.218
I work hard to become a better reader.	0.788	-0.140	0.130
I work hard to understand what I read.	0.763	0.052	0.129
It is important to me to be a good reader.	0.703	0.063	0.385
I want to have the best reading grades of anyone in my class.	0.667	-0.001	-0.059

Table 2 continued

Item	Task-Value	Anxiety	Flow
I think reading is important.	0.629	0.066	0.470
I feel happy when I understand what I read.	0.599	-0.228	0.094
I practice reading so that I get better at it.	0.595	-0.105	0.373
I worry what other students will say if I mess up reading out loud.[a]	0.100	0.756	-0.242
I feel scared when I have to read out loud in class.[a]	0.033	0.719	-0.091
I get worried when I take reading tests.[a]	-0.073	0.716	0.269
I worry about what people say about my reading.[a]	-0.128	0.694	0.081
I get worried when I do reading homework.[a]	-0.091	0.692	0.207
When I read, I do not think about what's going on around me.	-0.014	-0.029	0.642
I enjoy reading.	0.475	0.071	0.622
I have fun looking at books.	0.165	-0.055	0.560
It is hard to pay attention to what I'm reading.[a]	0.266	0.297	0.527
I can read almost anything if I try hard.	0.332	0.227	0.504

[a] Items were reverse-coded before factor analysis.

Table 3

Eigenvalue, Percent of Variance Explained, and Cronbach's Coefficient Alpha for Each Factor

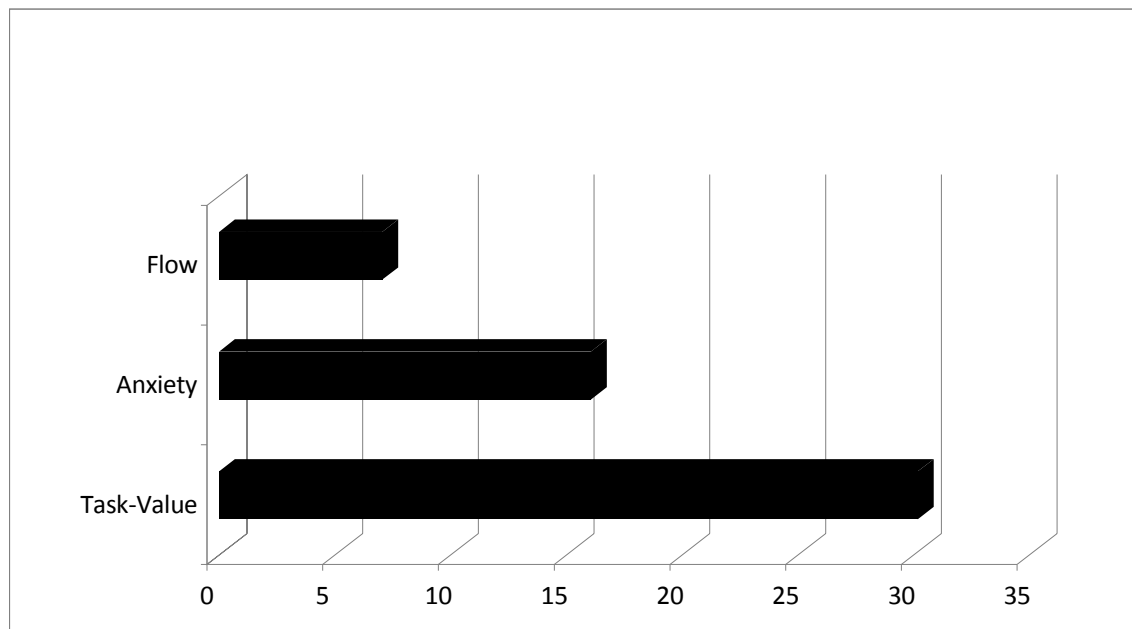| Factor	Eigenvalue	% variance	Cumulative % variance	Cronbach's alpha
Task-Value	5.43	30.19	30.19	.87
Anxiety	2.89	16.07	46.26	.77
Flow	1.27	7.05	53.31	.65

Figure 1. Percentage of variance accounted for by each factor of the RES

Correlations among the Factors and Reading Achievement

Composite scores were calculated for each factor in order to examine relationships among factors and between factors and reading achievement. Factor-based scales were constructed by summing the scores for each item within a factor. The 5 response choices in the Likert scale were categorized as 1, 2, 3, 4, or 5, with 1 as *not at all like me* and 5 as *a lot like me.* For example, The Task-Value factor had 8 items, so the resulting factor-based scale ranges from a minimum of 8 and a maximum of 40. This type of composite score was chosen over factor scores because factor-based scales are more easily interpreted and can be used to make comparisons from one study to another (Pett et al., 2003). Each individual's total RES score was calculated by summing the three factor-based scale values.

The correlations among the scores and the criterion variables are presented in Tables 4, 5, and 6. Each factor-based scale correlated significantly, with the two standardized tests used. The factor-based scales and the DIBELS scores were not significantly correlated. The low correlation of the DIBELS test with the factor-based scales may be due to the nature of the DIBELS test, which has a narrow purpose of assessing "reading fluency" as opposed to the ITBS and CRCT, which both purport to measure "reading skill."

As expected, some of the factor-based scales correlated with each other. Notably, the factor-based scale for Flow, correlated significantly, $p < .05$, with the other factor-based scales. The correlation between Flow and the factor-based scale for Anxiety was significant, $p < .05$. The correlation between Flow and the factor-based scale for Task-Value was also significant, $p < .01$.

Table 4

Correlations between Factor-Based Scales and CRCT Total Reading Scores

	Task-Value	Anxiety	Flow	CRCT
Task-Value	1.0	-.03	.72**	.23*
Anxiety		1.0	.12	.09
Flow			1.0	.16
CRCT				1.0

Note. n = 77

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

Table 5

Correlations between Factor-Based Scales and ITBS Total Reading Scores

	Task-Value	Anxiety	Flow	ITBS
Task-Value	1.0	-.28	.36*	-.36*
Anxiety		1.0	.11	.38*
Flow			1.0	.02
ITBS				1.0

Note. n = 36

Table 6

Correlations between Factor-Based Scales and DIBELS-ORF Scores

	Task-Value	Anxiety	Flow	DIBELS
Task-Value	1.0	.54**	.60**	-.03
Anxiety		1.0	.52*	.37
Flow			1.0	.35
DIBELS				1.0

Note. n = 23

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

Gender

     An independent samples *t*-test was conducted to compare the RES scores and factor-based scale scores for girls and boys. For the RES Total scores there was a significant difference in scores for girls (*M* = 72.75, *SD* = 9.33) and boys (*M* = 68.68, *SD* = 11.58), $t(157) = -2.45$, $p <$ .05. For the Task-Value scores, there was also a significant difference between girls (*M* = 35.18, *SD* = 4.40) and boys (*M* = 31.34, *SD* = 7.49), $t(157) = -3.89$ $p < .01$. Boys (M = 17.68, SD = 5.14) scored higher than girls in Anxiety, which was a factor comprised of reverse-coded items (*M* = 16.45, *SD* = 5.72), $t(157) = 1.43$, $p > .05$. This means that after scores were re-coded, higher scores were more desirable because they identified less anxious reading. This means that girls were significantly more anxious than boys. In the final factor-based scale, Flow, girls (M = 21.12, SD = 3.14) scored significantly higher than boys (*M* = 19.66, *SD* = 3.94), $t(157) = -2.57$, $p \leq .01$. Table 7 shows further details of the t-tests including the effect sizes, measured in Eta squared.

Table 7

Means, Standard Deviations, and Effect Sizes for Boys' and Girls' RES Total and Factor-Based Scale Scores

	Gender	*M*	*SD*	Eta squared
RES Total	Boys	68.68	11.58	.02
	Girls	72.75	9.33	
Task-Value	Boys	31.34	7.50	.03
	Girls	35.18	4.40	
Anxiety	Boys	17.68	5.14	.01
	Girls	16.45	5.72	
Flow	Boys	19.66	3.94	.02
	Girls	21.12	3.24	

Grade Level

A one-way between-groups analysis of variance (ANOVA) was conducted in order to examine the impact of grade level on RES Total score and each of the three factor scores. Participant data were divided into four groups depending on student grade level, with third-grade ($n = 27$), fourth-grade ($n = 30$), fifth-grade ($n = 78$), and sixth-grade ($n = 24$) all included in the ANOVA.

There was a statistically significant difference in RES Total scores, $F(3, 155) = 3.69$, $p < .01$. The effect size, calculated using eta squared, was .07, which indicates a moderately-sized effect (Cohen, 1988). Post-hoc comparisons using the Tukey HSD test indicate that the mean RES Total score for sixth-grade students ($M = 76.04$, $SD = 7.13$) was significantly different from that of fourth-grade students ($M = 72.7$, $SD = 11.17$).

There were also statistically significant differences found for two of the three factors. Grade level had a statistically significant effect on the Anxiety factor $F(3, 155) = 4.99$, $p < .01$ The effect size for this finding, measured using eta squared, was .09, which according to Cohen's (1988) guidelines is a moderate to large effect. A post-hoc Tukey HSD test indicated that the mean Anxiety score for sixth-grade students ($M = 20.75$, $SD = 4.19$) was significantly different from third-grade students ($M = 16.44$, $SD = 4.99$), fourth-grade students ($M = 15.57$, $SD = 5.05$), and fifth-grade students ($M = 16.67$, $SD = 5.72$). Because Anxiety was reverse-coded, these results actually indicate that sixth-grade students are significantly less anxious than their younger peers.

Grade level also had a statistically significant effect on the Flow factor, $F(3, 155) = 2.86$, $p < .05$. The effect size for this finding, using eta squared, was .05, which is approaching a moderate effect size, according to Cohen's guidelines. A post-hoc Tukey HSD test indicated that the mean Flow score for sixth-grade students ($M = 22.17$, $SD = 3.00$) was significantly different from fifth-grade students ($M = 19.91$, $SD = 3.74$).

Time constraints imposed by the administrators of the schools precluded follow-up interviews of the students; however, the two students who participated in the pilot study were interviewed at length and videotaped to provide additional insight into students' responses to the RES. These participants, both female students attending suburban public schools, were entering fourth-grade and fifth-grade, respectively, at the time of the interviews. Their interview responses are used to illustrate and discuss the findings of the present study.

Gender and Grade Level

A two-way between-groups analysis of variance was conducted to explore the impact of gender and grade level on reading engagement, as measured by the RES. There was a

statistically significant main effect for grade level $F(3,151) = 3.24$, $p < .05$. According to

Cohen's (1988) guidelines there was a moderate effect (partial eta squared = .06). Post-hoc

comparisons using the Tukey HSD test showed that the mean score for fourth-grade ($M = 67.27$,

$SD = 11.06$) was significantly different from the mean score for sixth-grade ($M = 76.04$, $SD = $

7.13). The mean score for fifth grade ($M = 69.91$, $SD = 10.62$) also differed significantly from

the mean score for sixth grade. The main effect for gender $F(1,151) = 3.05$, $p > .05$ and the

interaction effect $F(3,151) = 1.56$, $p > .05$ did not reach statistical significance.

CHAPTER 6

DISCUSSION

A reliable, valid, and efficient questionnaire to measure elementary-school students'

reading engagement was developed. This instrument, the Reading Engagement Survey (RES),

can help researchers and teachers assess and gain insight into individuals' reading engagement.

The RES was based on social-cognitive theory, which is highly applicable to examining

students' reading engagement. In addition to being founded on this strong theoretical basis, the

RES's development was further facilitated by an organizational structure derived from the

student- engagement literature.

In this study, reading engagement was operationalized as a metaconstruct subsuming

subconstructs of reading including task-value, anxiety, and flow. The relationships with standard

measures of reading achievement helped to establish criterion-related validity for the RES. In

this section the effects of gender and grade level will be discussed, each of the three reading

engagement factors will be discussed, recommendations for future research will be made, and

implications for educators will be examined. Each of three reading engagement factors will be

discussed and illustrated by quotations from the pilot study interview participants.

Gender and Grade Level

Many researchers have cited strong gender effects when examining subconstructs of

reading engagement (Cloer & Dalton, 2001; Malloy & Botza, 2005). Similar results were found

here, with girls scoring significantly higher than boys on the RES total score and all three of the

factors. Although this finding is in line with prevailing research findings and anecdotal reports

from teachers, it is still important to explore the relative impacts of biological, social, emotional, and cognitive differences that may be seen between girls and boys. Social-cognitive theory suggests that all four characteristics influence students' behavior in a domain such as reading.

Although many researchers have found that reading engagement decreases as students age, in this sample there was not a consistent age trend. For the RES total score, sixth-grade students scored significantly higher than fourth-grade students. For the Anxiety factor, there were significant differences between sixth-grade students and each of the other grade levels. Sixth-grade students were significantly less anxious than students in each of the other grades. While the impact of increased testing across students' school careers would be expected to produce a continuous increase of anxiety, these finding suggests otherwise. On first glance, this seems to suggest that anxiety is not a problem for older students. It is possible that upon reaching sixth-grade, students become so used to assessments or oral reading that it fails to trigger anxiety. However, this does not mean that sixth-grade students feel no anxiety about reading. It only means that the items on the questionnaire, such as items about getting nervous before reading out loud, fail to address the true triggers of their anxiety.

For the Flow factor, sixth-grade students scored significantly higher than fifth grade students. Although this was not evident as a consistent age trend across the four grade levels studied, it is possible that this finding suggests a developmental progression. Perhaps it is in that transitional period between fifth-grade and sixth-grade that most students develop the reading skills and self-regulatory skills necessary to access levels of deep absorption in a text.

There was not a significant interaction effect between age and gender. Interpretation of any age effects in the study should be tempered with an understanding that the same survey format and wording were used across four grade levels. If the language and content of the items

were modified to fit different grade levels, it is possible that age effects could be weaker, stronger, or entirely different.

Engagement Factors

The factor analysis revealed three factors of reading engagement in the present study: Task-Value, Anxiety, and Flow. This factor structure was clearly established by data analysis and is also consistent with the existing research on attitudinal and state-related reading constructs.

The Task-Value factor was comprised of the most items and also accounted for the most variance in scores. This means that an important part of students' perception of reading engagement was due to the impact of Task-Value, or believing that the task of reading has an inherent value. This factor was measured by 8 items on the RES. The majority of these items concerned students' thoughts on the importance of reading and comprehension, and the feelings experienced from reading well and comprehending. Although not specifically addressed by the final questionnaire, some of the underlying reasons for valuing reading were explored in the pilot study interviews. One student reported how she suddenly realized reading was important to her because it would allow her to read anything she wanted for fun:

> "I used to never like to read, but then I found this book that I really liked, and I thought to myself 'Wow! There are all these other books out there that I might like!' So I started to want to get good at reading so that I could read any book."

Other students might find more task-value from the role reading can play in finding an enjoyable job, like this student:

"I want to read so then I can be anything when I grow up. Because if you don't know how to read, or you don't know many words or have a good vocabulary, then you may not be able to understand some words they use in your job."

Task-Value's strength in predicting variance in RES scores demonstrates that, for students, one of the most important elements in engaging with reading material is caring about the importance of reading. It has been suggested that task-value plays a mediating role between a student's emotions and achievement (Bong, 2001). This means that while emotional state and achievement may not be directly linked, it is possible that task-value serves an intermediary purpose between them. This may help explain why Task-Value was such a strong factor in the RES.

The factor that was the second best predictor of variance in RES scores was Anxiety. In pilot-study interviews, students had more to say about these items than any other items. Due to the ever-increasing number of standardized tests administered in schools, it is not surprising that one student referred specifically to her state's major standardized test:

"I always get really stressed out, especially with the CRCT. All the teachers keep saying don't stress out, like they're trying to make the kids not stress out. But telling us not to stress out is making us more likely to stress out. If they just wouldn't talk about it and tell us it's a regular test, it would be better. But it's this big thing, this separate test from all our other tests. So I think, 'Oh man, this is a big test, what will I do? It's my final score!'"

It is important to understand the perspective of both anxious readers and non-anxious readers to be able to influence the reading engagement of all students. Another student, without any evident anxiety about reading, asserted that reading tests do not worry her:

"We take our reading tests on Friday; so on Thursday [the teacher] lets us take our

reading books home and re-read the stories. It helps because I get to study."

This student interpreted the item about reading tests to be about weekly classroom tests, while

the former student interpreted the item to be about the yearly state standardized test. This

discrepancy may be due to the fact that the student with more reading anxiety is older, and thus

has been exposed to more standardized testing. The variation in these two students'

interpretations of the items is reflected in the full sample of students. Students' recent

experiences with reading tests are likely to influence their responses greatly, and any knowledge

about these experiences should be taken into consideration when interpreting findings.

The final factor identified, Flow, represents a cognitive state while reading, in which a

student is cognitively and behaviorally absorbed in reading. It is known that in the flow state,

enjoyment and deep involvement are experienced (Csikszentmihalyi, 1988). Consequently, many

of the items in this factor addressed enjoyment or involvement with the act of reading. An

example of a deep state of flow was exhibited by one pilot-study participant's description of her

reading involvement: "In my classroom my teacher calls us to the front of the room sometimes.

If I'm not listening because I'm absorbed in a book, she has to say my name about twenty

times!" Another student reported a lower level of involvement. "I still hear what's going on

around me [when I'm reading]. It's kind of hard to concentrate because if I'm in my room

reading and my mom's on the phone, I will hear her." Although this student does not display the

involvement-related characteristics of flow, she still reports a deep level of enjoyment. When

asked if she ever enjoyed reading, she replied proudly, "I read even when I don't have to. I love

to read!"

Recommendations for Future Research

In the present study, three factors of reading engagement were identified: Task-Value, Anxiety, and Flow. Based on the interviews conducted in the pilot study and the factor analysis results, several specific recommendations can be made to clarify the Anxiety and Flow factors. First, based on the disparity among comments by the two pilot study participants, the Anxiety factor items about assessment may be interpreted in relation to two distinct manners of assessment: yearly standardized reading tests and regular classroom tests. While it is not certain that these two modes of assessment produce different anxiety outcomes, future research with the RES should seek to examine these differences explicitly. Secondly, there may be room for improvement in the items for the Flow factor. Flow is theorized to contain elements of both enjoyment and involvement, which are both represented by the items that grouped together on the Flow factor. The factor may be strengthened if items that address enjoyment and involvement together are added, to counter any critiques about enjoyment and involvement representing two separate subconstructs. These changes will provide a clearer identification of Anxiety and Flow.

Future research should also explore ways of cross-validating the three-factor structure of the RES. One possible method of cross-validation is to administer an improved version of the RES to a new sample to see if the same factor structure occurs. A confirmatory factor analysis would be conducted to cross-validate the findings. This is the most commonly used follow-up procedure when exploratory factor analysis is conducted during scale development.

In addition to the instrument and analysis recommendations made above, a number of data-collection recommendations can be made. Three types of schools were included in the present study: a private secular school, a parochial school, and a public school. Socioeconomic data, however, were not collected on the participants. Presumably these schools included

students from a variety of socio-economic backgrounds, but all were from the southeastern U.S. and residents from a small town or small city. Future testing with the RES should examine different and wider populations to test the generalizability of the results found here.

It is recommended that alternative methods to measure reading engagement be used in future research with the RES. Such alternative methods could include qualitative data collection methods such as interviews and classroom observation. In the present study, due to time restrictions imposed by school administrators, it was not possible to interview the students: Only the students who participated in the pilot study were interviewed.

In future research, teachers and parents could be asked to respond to the RES, providing their opinion of their students. The responses of teachers, parents, and the students themselves could be compared. While a student is ultimately the expert on his or her own internal states and processes, the variations in interpretations between students, parents, and teachers might offer insight into the disparities between the ways in which adults perceive reading engagement, and students experience it.

Implications for Educators

The present findings suggest that operationalizing reading engagement as a metaconstruct is a useful approach to help understand students' reading behavior. Teachers should use the RES to determine how engaged students are as readers, in what ways they are engaged, and how to improve their engagement. This knowledge should inform the strategies teacher implements.

The present findings suggest that teachers, in order to improve students' reading engagement, should focus their attention on three components of reading engagement: task value, anxiety, and flow. Pilot-study interviews provided insight into how students think about task-value, which can then be used to suggest instructional approaches. The pilot-study

participants reported discovering the value of reading on their own, based on conclusions they made about reading for fun, or reading with a specific career goal in mind.

Upon finding students with low Task-Value scores in a class, a teacher could help students to discover the importance of reading, with activities designed to promote task-value. These activities might include having students explore the value that reading plays in others' lives. Students could conduct interviews with successful people in their lives about reading's contributions to their personal success. Alternatively, students could nominate successful readers from higher grades in the school to talk about the value that reading plays in their lives.

The present study found that decreased anxiety is related to increased student engagement. If, after using the RES, it becomes evident that reading anxiety is a problem for a particular student, a teacher might take measures such as reducing public reading and reading assessment, both of which are known to induce anxiety. Helping students to feel confident that help is available is another effective way to alleviate anxiety. One student in the pilot study reported, "My teacher will help us get the word right or tell us nicely if we mess up on a word or skip a line. So I don't worry because my teacher is helpful." This student's words demonstrate that with an appropriately supportive environment, it is possible to keep students from succumbing to the high-pressure of high-stakes testing.

Flow is perhaps the most difficult factor for a teacher to encourage in students. Whereas task-value represents a belief and anxiety represents an emotional state, flow is an internal state. Much like engagement itself, flow tends to manifest itself in certain behaviors such as attentiveness to a task, but deep involvement is neither easy to measure nor easy to observe. While flow itself can not be instigated any more than a teacher can demand to a student "Engage with that text!" teachers can pave the way for making flow states more accessible to students.

The two dimensions of flow identified by Reed, Schallert, & Deithloff (2002), concentration and comprehension, should be addressed by the classroom teacher. Creating an environment for concentration can be achieved by asking students what helps their concentration and then implementing these suggestions in the entire classroom and in reading corners. Such implementation might include background music, comfortable seating, warm colors, or quiet. A large part of classroom reading instruction is already focused on giving students the skills necessary for effective reading, but a missing component may be figuring out whether students can access this reading skill in a setting other than a reading test. To promote flow states, teachers should actively consider concentration and comprehension in their reading instruction.

Conclusion

This study began with the case of Josie, who said she liked reading, but did not behave as though she liked it. Understandably, Josie's teacher, Ms. Jenkins, had difficulty telling if Josie was really engaged by her reading. Anecdotally, many teachers have acknowledged that it is difficult to tell whether students are truly engaged by their reading assignments. In order to help teachers determine this for students such as Josie, the RES was developed: A reliable, valid, and efficient questionnaire to measure elementary-school students' reading engagement, based on social-cognitive theory. The RES is also based on a view of reading engagement that unites behavioral, cognitive, and emotional student characteristics. By viewing reading engagement as a metaconstruct, the theoretical understanding of engaged reading will continue to evolve. A theoretical understanding of engagement, combined with an accurate method of assessing it, will help identify those students, like Josie, who require help to become fully engaged readers.

REFERENCES

Ainley, M. (2004). *What do we know about student engagement and motivation?* Retrieved November 1, 2008, from http://www.aare.edu.au/04pap/ain04760.pdf

Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the student engagement instrument. *Journal of School Psychology, 44*(5), 427-445.

Baker, L., Dreher, M. J., and Guthrie, J. T. (Eds.). (2000). *Engaging young readers: Promoting achievement and motivation.* New York, NY: Guilford Press.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman/Times Books/ Henry Holt & Co.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1-26.

Bong, M. (2001a). Between- and within-domain relations of academic motivation among middle and high school students: Self-efficacy, task-value, and achievement goals. *Journal of Educational Psychology, 93*(1), 23.

Bong, M. (2001b). Role of self-efficacy and task-value in predicting college students' course performance and future enrollment intentions. *Contemporary Educational Psychology, 26*, 553-570.

Cassady, J., & Johnson, R. (2002). Cognitive test anxiety and academic performance. *Contemporary Educational Psychology, 27*(2), 270-295.

Cazden, C. B., & Children's Television Workshop, New York, NY. (1973). *Watching children watch "The Electric Company": An observational study in ten classrooms. Final report*

Chapman, J. W., & Tunmer, W. E. (1995). Development of young children's reading self-concepts: An examination of emerging subcomponents and their relationship with reading achievement. *Journal of Educational Psychology, 87*(1), 154-167.

Cloer, T., & Dalton, S. (1999). *Gender and grade differences in motivation to read.* Retrieved January 16, 2009, from

http://americanreadingforum.org/Yearbooks/99_yearbook/pdf/14_cloerrevised_99.pdf

Cloer, T.,Jr., & Dalton, S. R. (2001). Gender and grade differences in reading achievement and in self-concept as readers. *Journal of Reading Education, 26*(2), 31-36.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Hillsdale, NJ: L. Erlbaum Associates.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*, 297-334.

Csikszentmihalyi, M. (1988). The flow experience and its significance for human psychology. In M. Csikszentmihalyi & I. S. Csikszentmihalyi (Eds.), *Optimal experience: Psychological studies of flow in consciousness.* (pp. 15-35). New York, NY: Cambridge University Press.

Csikszentmihalyi, M. (1991). Literacy and intrinsic motivation. In S. Graubard (Ed.), *Literacy* (pp. 115--140). New York, NY: Noonday.

Easton, J. Q., Correa, M., Luppescu, S., Park, H., Ponisciak, S., Rosenkranz, T., et al. (2003). *How do they compare? ITBS and ISAT reading and mathematics in the Chicago public schools, 1999 to 2002. Research data brief.* Consortium on Chicago School Research, IL. Retrieved December 1, 2008, from http://ccsr.uchicago.edu/content/publications.php?pub_id=24.

Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research, 59*(2), 117-42.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59-109.

Freeman, G. D., & Lucius, L. B. (2008). Student engagement and teacher guidance in meaningful mathematics: Enduring principles. *Mathematics Teacher, 102*(3), 164-167.

Gambrell, L. B., National Reading Research Center, Athens, GA., National Reading Research Center, College Park, MD., et. al. (1995). *Assessing motivation to read. Instructional resource no. 14.*

Gambrell, L.B. & Marinak, B. (1997). Incentive and intrinsic motivation to read. In J.T. Guthrie and A. Wigfield (Eds.), Reading engagement: Motivating readers through integrated instruction. 205-217. Newark, DE: International Reading Association.

Georgia State Dept. of Education, Atlanta. Office of Research, Evaluation, and Assessment. (2001). *Evaluation of the Reading First program. Final report.*

Graham, J., Tisher, R., Ainley, M., & Kennedy, G. (2008). Staying with the text: The contribution of gender, achievement orientations, and interest to students' performance on a literacy task. *Educational Psychology, 28*(7), 757-776.

Goddard, J. & Kirby, A. (1976). *An introduction to factor analysis.* Norwich: Geo Abstracts.

Guthrie, J. T. (2001). Contexts for engagement and motivation in reading. *Reading Online, 4*(8).

Guthrie, J.T. (2002). Preparing students for high-stakes test taking in reading. In A.E. Farstrup and S.J. Samuels (Eds.), *What research has to say about reading instruction.* (pp. 370-391). Newark: DE: International Reading Association.

Guthrie, J.T. (2004). Teaching for literacy engagement. *Journal of Literacy Research 36*(1), 1-29.

Guthrie, J. T., Hoa, A. L. W., Wigfield, A., Tonks, S. M., Humenick, N. M., & Littles, E. (2007). Reading motivation and reading comprehension growth in the later elementary years. *Contemporary Educational Psychology, 32*(3), 282.

Guthrie, J. T., & Humenick, N. M. (2004). Motivating students to read: Evidence from classroom practices that increase reading motivation and achievement. In P. McCardle, & V. Chhabra (Eds.), *The voice of evidence in reading research* (pp. 329--324). Baltimore, MD: Paul H. Brooks.

Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H., et al. (2004). Increasing reading comprehension and engagement through concept-oriented reading instruction. *Journal of Educational Psychology, 96*(3), 403.

Guthrie, J. T., Wigfield, A., Metsala, J. L., & Cox, K. E. (1999). Motivational and cognitive predictors of text comprehension and reading amount. *Scientific Studies of Reading, 3*(3), 231-56.

Guthrie, J. T., Wigfield, A., & Perencevich, K. C. (2004). *Motivating reading comprehension: Concept-oriented reading instruction.* Mahwah, NJ: Lawrence Erlbaum Associates.

Henk, W. A., & Melnick, S. A. (1995). The reader self-perception scale (RSPS): A new tool for measuring how children feel about themselves as readers. *Reading Teacher, 48*(6), 470-82.

Hess, R. D., Takanishi, R. (1974). *The relationship of teacher behavior and school characteristics to student engagement.* Stanford Center for Research and Development in Teaching. Technical report no. 42. Stanford, CA: National Institute on Education.

Holmes, K., Russell, W. B., III, & Movitz, A. (2007). Reading in the social studies: Using subtitled films. *Social Education, 71*(6), 326-330.

Hulleman, C., Durik, A., Schweigert, S., & Harackiewicz, J. (2008). Task values, achievement goals, and interest: An integrative analysis. *Journal of Educational Psychology, 100*(2), 398-416.

Joireman, J., Abbott, M. L., & Seattle Pacific Univ., Lynnwood, WA.Washington School Research Center. (2001). *The relationships between the Iowa Test of Basic Skills and the Washington Assessment of Student Learning in the State of Washington. Technical report.*

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39*(1), 31-36.

Livingston, D. R., & Livingston, S. (2003). *Unbraiding the rhetoric about student achievement and teacher quality in Georgia.*

Malloy, J. A., & Botza, S. (2005). International reports on literacy research: France, United Kingdom, Brazil. *Reading Research Quarterly, 40*(4), 514-518.

Martin, A. I. (2004). School motivation of boys and girls: Differences of degree, differences of kind, or both? *Australian Journal of Psychology, 56*(3), 133-146.

Martin, A. J. (2007). Examining a multidimensional model of student motivation and engagement using a construct validation approach. *British Journal of Educational Psychology, 77*(2), 413.

Martin, A. J., & Marsh, H. W. (2003). Fear of failure: Friend or foe? *Australian Psychologist, 38*(1), 31-38.

Martin, A. J., Marsh, H. W., & Debus, R. L. (2001). A quadripolar need achievement representation of self-handicapping and defensive pessimism. *American Educational Research Journal, 38*(3), 583-610.

McKenna, M. C., & Kear, D. J. (1990). Measuring attitude toward reading: A new tool for teachers. *Reading Teacher, 43*(9), 626-39.

Morgan, P. L., & Fuchs, D. (2007). Is there a bidirectional relationship between children's reading skills and reading motivation? *Exceptional Children, 73*(2)

Mullis, I. V. S., Martin, M. O., Gonzales, E. J., & Kennedy, A. M. (2003). *PIRLS 2001 international report: IEA's study of reading literacy achievement in primary schools in 35 countries*. Chestnut Hill, MA: Boston College.

Oldfather, P., & Dahl, K. (1994). Toward a social constructivist reconceptualization of intrinsic motivation for literacy learning. *Journal of Reading Behavior, 26*(2), 139.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66*(4), 543-578.

Parker, A., & Paradis, E. (1986). Attitude development toward reading in grades one through six. *Journal of Educational Research, 79*(5), 313-15.

Parker, A., & Paradis, E. (1983, October). *An examination of attitude development toward reading in grades one through six*. Paper presented at the meeting of the Northern Rocky Mountain Educational Research Association, Jackson Hole, WY.

Pett, M., Lackey, N., & Sullivan, J. (2003) Making sense of factor analysis: The use of factor analysis for instrument development in health care research. Thousand Oaks, CA: Sage Publications.

Pintrich, P. R. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology, 92*(3), 544-55.

Reed, J.H., Schallert, D.L., & Deithloff, L.F. (2002). Investigated the interface between self-regulation and involvement processes. *Educational Psychologist 37*(1), 53-57.

Rueda, R., MacGillivray, L., Monzo, L., Arzubiaga, A. *Engaged reading: A multilevel approach to considering sociocultural factors with diverse learners.* Center for the Improvement of Early Reading Achievement, Ann Arbor, MI. (2001). *CIERA report.*

Schraw, G., & Bruning, R. (1999). How implicit models of reading affect motivation to read and reading engagement. *Scientific Studies of Reading, 3*(3), 281-302.

Schilling, S. G., Carlisle, J. F., Scott, S. E., & Zeng, J. (2007). Are fluency measures accurate predictors of reading achievement? *Elementary School Journal, 107*(5), 429-448.

Schooler, J. W., RESchle, E. D., & Halpern, D. V. (2004). Zoning out while reading: Evidence from dissociations between experience and metaconsciousness. In D. T. Levin (Ed.), *Thinking and seeing: Visual metacognition in adults and children* (pp. 203-226). Cambridge, MA: MIT Press.

Schunk, D. (2008). Metacognition, self-regulation, and self-regulated learning: Research recommendations. *Educational Psychology Review, 20*(4), 463-467.

Schunk, D. H., & Rice, J. M. (1993). Strategy fading and progress feedback: Effects on self-efficacy and comprehension among students receiving remedial reading services. *The Journal of Special Education, 27*(3), 257-276.

Schunk, D. H., & Zimmerman, B. J. (1997). Social origins of self-regulatory competence. *Educational Psychologist, 32*(4), 195-208.

Schunk, D. H., & Zimmerman, B. J. (2007). Influencing children's self-efficacy and self-regulation of reading and writing through modeling. *Reading & Writing Quarterly, 23*(1), 7-25.

Shafer, I., Lohse, B. (2006). How to conduct a cognitive interview: A nutrition education example. Retrieved August 1, 2008, from http://www.csrees.usda.gov/nea/food/pdfs/cog_interview.pdf

Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology, 85*(4), 571.

Souvignier, E., & Mokhlesgerami, J. (2006). Using self-regulation as a framework for implementing strategy instruction to foster reading comprehension. *Learning and Instruction, 16*(1), 57-71.

Sweet, A. P., Guthrie, J. T., & Ng, M. M. (1998). Teacher perceptions and student reading motivation. *Journal of Educational Psychology, 90*(2), 210.

Turner, J. C. (1995). The influence of classroom contexts on young children's motivation for literacy. *Reading Research Quarterly, 30*(3), 410.

U.S. Census Bureau. (2006). *Housing and household economic status.* Retrieved January 20, 2008, from http://www.census.gov/hhes/www/eeoindex/page_c.html?

University of Oregon Center on Teaching and Learning. *Technical adequacy of the ORF and RTF measures.* Retrieved January 15, 2008, from https://dibels.uoregon.edu/measures/orf.php

van Laerhoven, H., van der Zaag-Loonen, H. J., & Derkx, B. H. F. (2004). A comparison of Likert scale and visual analogue scales as response options in children's questionnaires. *Acta Paediatrica, 93*, 830-835.

Venturini, P. (2007). The contribution of the theory of relation to knowledge to understanding students' engagement in learning physics. *International Journal of Science Education, 29*(9), 1065-1088.

Vollmeyer, R., & Rheinberg, F. (2006). Motivational effects on self-regulated learning with different tasks. *Educational Psychology Review, 18*(3), 239-253.

Wang, J. H., & Guthrie, J. T. (2004). Modeling the effects of intrinsic motivation, extrinsic motivation, amount of reading, and past reading achievement on text comprehension between U.S. and Chinese students. *Reading Research Quarterly, 39*(2), 162.

Watkins, M. W., & Coffey, D. Y. (2004). Reading motivation: Multidimensional and indeterminate. *Journal of Educational Psychology, 96*(1), 110.

Wigfield, A. (1994). Expectancy-value theory of achievement motivation: A developmental perspective. *Educational Psychology Review, 6*(1), 49-78.

Wigfield, A., National Reading Research Center, Athens,GA., National Reading Research Center, College Park,MD., & And Others. (1996a). *The nature of children's motivations for reading, and their relations to reading frequency and reading performance. Reading research report no. 63.*

Wigfield, A., National Reading Research Center, Athens,GA., National Reading Research Center, College Park,MD., & And Others. (1996b). *A questionnaire measure of children's motivations for reading. Instructional resource no. 22.*

Wigfield, A. (1997). Reading motivation: A domain-specific approach to motivation. *Educational Psychologist, 32*(2), 59.

Wigfield, A., & Eccles, J. S. (1992). The development of achievement task values: A theoretical analysis. *Developmental Review, 12*(3), 265-310.

Wigfield, A., Guthrie, J. T., National Reading Research Center, Athens,GA., & National Reading Research Center, College Park, MD. (1995). *Dimensions of children's motivations for reading: An initial study. Reading research report no. 34.*

Wigfield, A., Guthrie, J. T., Tonks, S., & Perencevich, K. C. (2004). Children's motivation for reading: Domain specificity and instructional influences. *Journal of Educational Research, 97*(6).

Wigfield, A., & McCann, A. D. (1997). Children's motivations for reading. National Reading Research Center). *Reading Teacher, 50*(4), 360.

Zbornik, J., & Wallbrown, F. (1991). The development and validation of a scale to measure reading anxiety. *Reading Improvement, 28*(1), 2-13.

Zeidner, M., Boekaerts, M., & Pintrich, P. R. (2000). Self-regulation: Directions and challenges for future research. In M. Boekaerts, P. R. Pintrich, M. Zeidner, M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.), *Handbook of self-regulation.* (pp. 749-768). San Diego, CA: Academic Press.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice, 41*(2), 64-72.

APPENDIX

Reading Engagement Survey

I will read each question to you. After I read the question, put your answer next to it.

What is your name? _____

When were you born? Month_____ Day_____, Year_____

What grade are you in?   3rd grade   4th grade   5th grade   6th grade   (circle one)

Are you a: Boy   or   Girl   ?   (circle one)

I will read each sentence to you. Each sentence is something a different kid said. Your job is to decide how much each sentence is like YOU. Decide if it is a lot like you, a little like you, not much like you, or not at all like you. If you really cannot decide, circle the choice in the middle, *Can't decide.*

Practice questions:

I think making food is fun.

a.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

I like to play basketball.

b.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

If you have any questions, raise your hand.

Now we will start. CIRCLE the ONE answer that is BEST FOR YOU. Remember, there are no right or wrong answers! We are just trying to learn more about what kids think about reading.

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1. I have fun looking at books.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

2. It is hard to pay attention to what I'm reading.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

3. I think reading is hard.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

4. I feel very happy with myself when I understand what I read.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

5. I think I can be a good reader.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

6. I only read stories that look easy.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

7. I get worried when I do reading homework.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

8. I will get good grades in reading next year.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

9. I worry about what people say about my reading.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

10. I work hard to become a better reader.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

11. When a book looks hard, I do not try to read it.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

12. I can read almost anything if I try hard.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

13. I only read if I have to.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

14. I do not like to go to the bookstore.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

15. I want to have the best reading grades of anyone in my class.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

16. I practice reading so that I get better at it.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

17. Understanding what I read is important to me.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

18. I get worried when I take reading tests.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

…………..TIME FOR A STRETCH BREAK!………….

19. I think it is important to understand what I read.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

20. I get to choose what I read for fun.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

21. I feel scared when I have to read out loud in class.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

22. I work hard to understand what I read.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

23. I feel like I have some choice of what to read for assignments.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

24. I get nervous when I read something new.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

25. I like to read about people.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

26. I sometimes pause when I am reading to make sure I understand what I have just read.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

27. I think reading is important.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

28. When I read I do not think about what's going on around me.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

29. I think it is important to be good at reading.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

30. I feel like I have a choice of what to read for fun.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

31. I plan how I am going to read something before I read it.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

32. I think reading is important.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

33. I worry about what other students will say if I mess up reading out loud.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

34. It's important to me be a good reader.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

35. I try to get more answers right than other kids in class about what we read.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

36. I know what questions to ask for help with hard reading.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

37. I have trouble finding interesting things to read.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

38. I like to learn new things about my hobbies when I read.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

39. I like to have choices of what I read.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!

40. I enjoy reading.

Not at all like me!   Not much like me   Can't decide   Kind of like me   A lot like me!