THE EFFECTS OF THE LANGUAGE! LITERACY INSTRUCTION ON THE READING COMPREHENSION AND MOTIVATION TO READ OF STRUGGLING MIDDLE SCHOOL READERS

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THE EFFECTS OF THE LANGUAGE! LITERACY INSTRUCTION ON THE READING COMPREHENSION AND MOTIVATION TO READ OF STRUGGLING MIDDLE SCHOOL READERS

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THE EFFECTS OF THE LANGUAGE! LITERACY INSTRUCTION ON THE 
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Julia Barrier-Ferreira, Ed.D.

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Abstract

This study investigated the impact of the LANGUAGE! literacy instruction on the reading comprehension and motivation to read of struggling middle school readers compared to that of a balanced literacy instruction. A convenience sample of sixth, seventh and eighth grade students (n=175) from a small, suburban middle school in Connecticut participated in the study. The sample was chosen from a population of reading and language arts students having scored in the lower 30th percentile (levels 1 and 2) of the reading portion of the Connecticut Mastery Test, as well as below goal (as defined by the district) on the Degrees of Reading Power (DRP) assessment administered during the first month of the school year. The study was quasi-experimental pre- and post-test comparison group design using intact groups. Reading comprehension was measured using the DRP and motivation to read was assessed using the three subscales (value of reading, instruction of reading, and self concept of reader) of the Adolescent Motivation to Read Profile-Revised (AMRP-R). The scores of those students in the LANGUAGE! literacy curriculum (experimental) were compared to those of the students in the balanced literacy curriculum (comparison) to determine whether a statistical difference existed in the mean scores between the two groups after treatment.
An analysis of covariance (ANCOVA) was used to analyze the first research question concerning the impact of instructional program on reading comprehension. The results indicated that there was a significant difference in the reading comprehension scores of the two groups, with the balanced literacy participants scoring higher than those having received LANGUAGE! literacy. However, the effect size indicated only a marginal practical significance between the two groups. A multivariate analysis of covariance (MANCOVA) was used to analyze the mean scores on the three subscales of the AMRP-R. No statistically significant difference was observed for any of the variables between groups. The current study adds to the vast body of extant reading research by exploring the impact of balanced literacy instruction in comparison to LANGUAGE! literacy instruction, and though only nominal differences were observed for reading comprehension, follow-up investigations are merited.
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APPROVAL PAGE

School of Professional Studies
Department of Education and Educational Psychology
Doctor of Education in Instructional Leadership

Doctor of Education Dissertation

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Presented by
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DEDICATION

To my loving parents, to whom I owe all of my success. No accomplishment could grant me a greater sense of pride than I experience every day of my life in being your daughter. I only hope that my actions demonstrate the depth of my love for and gratitude to you.

To my precious daughter, Alexia, for whom I do everything. I hope that I will always be an example and inspiration to you. I love you beyond words, and hope that you understand that this journey was as much for and about you as it was for me.
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CHAPTER ONE: INTRODUCTION TO THE STUDY

The stagnation of literacy skills among American students, particularly as they reach adolescence, continues to be of mounting concern for educators. Biancarosa and Snow (2004) note that as many as 70% of high school students continue to experience reading difficulties in some manner. Furthermore, while much attention is placed on high-risk urban areas, suburban schools face the same challenge.

In (urban areas) only an estimated 20 percent of students are reading at grade level and thus are prepared to master high school-level content. However, schools in nonurban areas and even high-achieving schools have struggling readers and writers; and in such environments, struggling students are more likely to be overlooked. (Biancarosa & Snow, 2004, p. 8)

As students progress in school, the texts to which they are exposed and expected to comprehend increase in difficulty and complexity in terms of vocabulary, genre, and structure. The challenges are exacerbated for struggling readers who enter the secondary level with existing deficiencies in this area. “By the time adolescent-reading disabled students reach middle or high school. They remain sorely deficit in their knowledge of the structure and the function of language” (Greene, 1996, p. 104). Consequently, if the needs of these students, especially those who struggle, are not effectively addressed during this period, they run the risk of falling farther behind their peers academically.

Further complicating the issue is the role that motivation plays in fostering reading skills and strategies. Wigfield et al. (2004) contend that a lack of motivation may deter even the most capable child, “Even the reader with the strongest cognitive skills may not spend much time reading if he or she is not motivated to read” (p. 299). This poses an
even greater dilemma for secondary teachers, as research indicates that motivation decreases with age.

Students are less motivated to read in later grades…a lack of incentive and engagement also explains why even skilled readers and writers often do not progress in reading and academic achievement in middle and high schools. The proportion of students who are not engaged or motivated by their school experiences grows at every grade level and reaches epidemic proportions in high school. (Biancarosa & Snow, 2004, p. 9)

Bandura (1997) maintained that an individual’s self-efficacy, or assessment of one's capability to accomplish a task, is grounded in past experiences and comparison to others' performances. If students have a history of being poor readers, it logically follows that their sense of efficacy toward reading is likely to be low, resulting in a reluctance to engage in the very behaviors needed to improve in this area.

However, motivation alone cannot compensate for reading deficiencies. Guthrie and Wigfield (2000) maintain that a student's reading outcomes result from the interaction of cognitive comprehension strategies, motivational processes, conceptual knowledge, and social interaction among learners. Therefore, research needs to investigate sound instructional reading methods that not only improve reading comprehension, but which increase motivation to read as well. Educators need to determine not only how to remediate those literacy components that keep students reading below grade level, but identify the instructional method that will cause them to take the actions necessary to strengthen these skills beyond the immediate context of the classroom.
Rationale and Related Research

According to a comprehensive review of reading research commissioned by the United States Congress, the National Reading Panel (NRP; 2000) identified five critical components of effective reading instruction and intervention programs: phonemic awareness; phonics; fluency; vocabulary; and comprehension strategies. Shaywitz and Shaywitz (2007) found that instruction focusing on phonemic elements allows children “to develop the skills that will enable them to read and understand the meaning of both familiar and unfamiliar words they encounter so that they may learn to read effortlessly and look forward to a lifetime of enjoyment as readers” (p. 75). The researchers further noted increased metabolic activity in three areas of the brain thought to be largely associated with language and reading acquisition as the result of such instruction, which they termed the “brain glitch theory” (Shaywitz & Shaywitz, 2007).

In response to Shaywitz and Shaywitz’s “brain glitch theory,” Willis (2000), neuroscientist and educator, cautioned that educators must not discount the role that stress plays on comprehension and reading acquisition in the brain. Effective instruction must be that which not only develops the skills and strategies needed to achieve, but increases student motivation to read as well. In fact, she warned that one-dimensional measures of reading achievement such as improved single-word fluency, may not be indicative or transferable to other areas of reading comprehension. “Gains in phonological processing are not necessarily generalizable to the other components of reading…that is why we need research into alternative approaches to improving reading fluency and comprehension” (Willis, 2007, p. 81).
Several studies have been conducted measuring the impact of the LANGUAGE! literacy curriculum on specific components of reading. The author of the program, Jane Fell Greene (1996), researched the effect of this structured language curriculum on the literacy skills of middle and high school juvenile offenders enrolled in a rehabilitation program. The students, who participated in the program for an average of 22.7 weeks, demonstrated significant gains (more than three years growth) in written language expression (composition), encoding (spelling), and decoding (isolated word recognition). Similarly, students in the experimental group demonstrated greater gains on the Gray Oral Reading Test (GORT III) than students in a comparison group not receiving the LANGUAGE! instruction.

Since the inception of the LANGUAGE! literacy program in 1994-95, several evaluations of the literacy curriculum have been conducted in various elementary and secondary schools. The Elf Grove Unified School District in California implemented the LANGUAGE! curriculum in grades 4-12, with 284 students during the 2004-2005 school year for a period of eight months. According to the study, all students demonstrated grade equivalency gains in speed and accuracy of word identification as measured by the Test of Silent Word Reading Fluency. The elementary students demonstrated the greatest improvement with an average grade equivalency gain of 1.3 or 13 months (Sopris West Educational Services, 2006).

Similarly, the LANGUAGE! program was implemented across three middle schools in the Hawthorne School District in California during the 2006-2007 school year with approximately 1,000 students. After eight months of instruction, data from the California Standards Test-English-Language Arts (CST-ELA) and/or the TOSWRF were
compared pre and post implementation of the LANGUAGE! curriculum for 649 of the students for whom these scores were available. The greatest gains were found in the sixth and seventh grades, with sixth grade students demonstrating a gain of 3.7 points, following a 9.4 point loss the year prior to receiving LANGUAGE! instruction; similarly, seventh grade students gained 12.2 points, a 7.5 point loss the year prior to receiving LANGUAGE! instruction. Furthermore, student word reading fluency improvement was both statistically and educationally significant, with sixth, seventh and eighth grade students demonstrating grade equivalent increases of 1.3, 1.7, and 1.5, respectively (Sopris West Educational Services, 2006).

None of these studies, however, used control groups. Furthermore, no research could be found assessing the impact of the LANGUAGE! literacy program on reading motivation or comparing its impact on reading achievement to that of a balanced literacy curriculum. Studies indicate that as students reach adolescence their motivation declines in relation to academic tasks, and that “reading self-efficacy involves confidence in language and comprehension skills” (Wigfield, 2004, p. 300). Therefore, this study is important to identify an instructional method that not only improves reading comprehension, but which also increases reading motivation, so that struggling students will engage in the activity that will encourage them to become life-long readers.

**Statement of the Problem**

In a meta-analysis of 30 years of reading research, Foorman, et al. (2003) concluded that effective instruction consists of "the integration of explicit instruction in phonemic awareness and the alphabetic principle, reading for meaning, and practice in fluent reading and writing. Reading for meaning includes explicit instruction in
vocabulary, spelling and comprehension strategies" (p. 634). While several studies exist examining the impact of the LANGUAGE! literacy program on the specific reading skills such as decoding and word fluency that are targeted in the instruction (Curtis, 2004; Curtis & Longo, 1999; Greene, 1996), little research could be found exploring the effect of such a program on reading comprehension. Furthermore, numerous studies indicate that motivation affects student achievement in a variety of academic areas including reading (Baker & Wigfield, 1999; Oldfather & Wigfield, 1996; Wigfield, 1994; Wigfield & Guthrie, 1995, 1997). However, no empirical research could be found as to the impact of the LANGUAGE! literacy program on the motivation of struggling readers in comparison to a balanced literacy program such as that used in the middle school under study.

The present study addressed these two issues by measuring the impact of a balanced literacy approach to reading instruction compared to the LANGUAGE! literacy program of instruction on the reading comprehension and motivation of struggling middle school readers.

**Potential Benefits of the Research**

With ever increasing demands to demonstrate student growth and increased achievement in the areas of reading and writing, educators must make scrupulous decisions with regard to investing resources into a literacy program that requires training of teachers and new instructional materials. This research study helped determine whether a literacy program focusing on six specific elements of language instruction has a greater impact on the reading comprehension of adolescents who read below grade level, than that of balanced literacy instruction. This research also investigated whether
this same type of instruction has a greater impact on motivation, believed to be a critical component in the development of reading achievement, than that of balanced literacy instruction. Such research will help educators to not only choose instruction that improves the reading comprehension of students who struggle, but which will, perhaps more importantly, help nurture a motivation to read that reaches beyond the immediate educational context in helping to foster life-long readers.

**Definition of Key Terms**

The following key terms are used throughout this study:

1. The *balanced literacy curriculum* consists of instruction focusing on reading and writing strategies and skills taught through mini-lessons (explicit, direct, whole-class instruction) targeting a specific reading or writing strategy, skill, or content; read alouds (a group activity in which the teacher chooses a text that demonstrates a specific focus); guided reading (small, flexible groups of students are explicitly taught a specific skill or strategy based on demonstrated need); teacher/student conferencing (individual conversational session between teacher and student focusing on a specific skill, strategy, or content); and independent reading and/or writing (an extended period of time of independent student reading or writing in which they apply the particular skill, strategy, or content taught in the mini-lesson). Instruction is delivered in 80-minute blocks.

2. *Instructional practices*, a factor in the Adolescent Motivation to Read-Revised (AMRP-R), is a measure of the impact of activities or methods that research suggests enhances student motivation and learning and that are initiated or organized by teachers. These activities take place within an instructional context
3. **LANGUAGE! literacy curriculum** is a comprehensive language curriculum that takes a “cumulative, systematic, and explicit” approach to reading and writing instruction (Greene, 2009).

4. **Reading comprehension** is a measure of a student’s ability to construct meaning while reading a passage (Touchstone Applied Sciences, 2004).

5. **Reading motivation** is a measure of a student’s self-concept as a reader and his or her value of reading (Pitcher, Albright, & McNary, 2008).

6. **Self-concept of reader** is a measure of how students view their own competence in reading and how they view their own performance relative to peer. The focus is on the student’s perception of his or her competence in reading (Pitcher, Albright, & McNary, 2008).

7. **Self-efficacy** refers to an individual’s beliefs about his or her capability to learn or perform the necessary actions to successfully complete a designated task (Bandura, 1997).

8. **Struggling readers** as operationally defined for this study refers to those students reading below grade level as measured by the Degrees of Reading Power test (DRP).

9. **Value of reading** is a measure of the value students place on various reading activities and tasks, particularly in terms of frequency of engagement and reading-related activities. The focus is on the value the student places on reading (Pitcher, Albright, & McNary, 2008).
Methodology

Research Questions

This research assessed the impact on reading achievement and motivation of struggling middle school readers receiving two different types of literacy instruction.

There were two primary research questions for this study:

1. Is there a significant difference in the reading comprehension of struggling middle school readers taught through the LANGUAGE! literacy curriculum and those taught through the balanced literacy curriculum?

2. Is there a significant difference in the reading motivation of struggling middle school readers taught through the LANGUAGE! literacy curriculum and those taught through the balanced literacy curriculum?

Hypotheses

1. There is a significant difference in the reading comprehension of middle school struggling readers taught through the LANGUAGE! literacy program and those taught through the balanced literacy instruction.

2. There is a significant difference in the reading motivation of middle school struggling readers taught through the LANGUAGE! literacy program and those taught through the balanced literacy instruction.

Description of Setting and Subjects

The study took place in a middle school comprised of 706 students in grades 6, 7 and 8 located in a small, suburban community in Connecticut. Demographically, the community has experienced increased racial, ethnic, and economic diversity over the past five years, which is reflected in the school population comprised of 81% white students,
12% Hispanic students, 2% black students, 6% Asian-American students, and less than 1% American Indian students. Approximately 12% of students come from non-English speaking homes (CSDE, 2008).

The target population in this study included all students in the sixth, seventh, and eighth grades reading below grade level on the Degrees of Reading Power (DRP) test as defined by the district. A sample of convenience was chosen for the purpose of comparing the impact of the LANGUAGE! literacy instruction on the reading comprehension and motivation to read of struggling readers compared to that the balanced literacy instruction.

**Research Design**

The research study was a quasi-experimental pre- and post-test comparison group design. There was no random selection of subjects or random assignment to comparison and experimental groups. Intact groups were used. Students scoring in the 30th percentile on the reading section of the Connecticut Mastery Test administered in March 2008 were selected to participate in the LANGUAGE! literacy curriculum. These students were given additional assessments to correctly place them in the appropriate level of instruction. Instructional levels were determined by mastery of skills, rather than by grade level. All reading students were administered the Degrees of Reading Power (DRP) test in September. Those students scoring below grade-level goal on the DRP as defined by the district and not in the LANGUAGE! program were identified as the comparison group. Students in classes taught by first and second year teachers were eliminated from the study, as were the students taught by the researcher.
Two quantitative dependent variables were measured in this study: reading achievement as assessed by the DRP and motivation to read as assessed by the Adolescent Motivation to Read Profile - Revised (AMRP-R).

Instrumentation

**Degrees of Reading Power.** The Degrees of Reading Power (DRP) (Touchstone Applied Sciences, 2004) was used to measure reading comprehension in this study. The DRP assesses text comprehension as defined by the ability to construct meaning while reading a passage. Reliability and validity were established on a sample of 5000 students with parallel forms reliability ranging from $r=.86$ to $r=.91$. The KR 20 measure of internal consistency is .95 for each form. The DRP tests were cross-validated on similar cloze tests with coefficients ranging from .56 to .80; however, the names of those tests are not reported in the documentation. No significant differences in scores have been found across sex and race boundaries.

The DRP consists of multiple non-fiction English prose passages of varying lengths and difficulties. The assessment uses a cloze format in which words or sentences have been deleted from the texts. Five grammatically correct and semantically plausible options are presented for each deletion, all of which are related to the theme of the passage. Students must use their understanding of what they have read to select the best word or sentence for the context.

**Adolescent Motivation to Read Profile-Revised.** The Adolescent Motivation to Read Profile-Revised (AMRP-R) was used to measure reading motivation. The survey consists of 25 items using a four-point scale focusing on three domains: value of reading, self-concept of the reader, and instruction of reading. The instrument is a revision of the
Adolescent Motivation to Read Profile, which was adapted from the Motivation to Read Profile (MRP) created by Gambrell et al. (1996). The AMRP was initially field tested by a team of 11 researchers at 8 sites throughout the United States and Trinidad. Surveys were administered to 384 adolescents. Additionally, 100 students were interviewed (Pitcher, et al, 2007). Based on the findings of this pilot study, the AMRP was again revised. The authors then followed a five-step process to assess validity and reliability. Eight practicing teachers of adolescents were asked to review the instrument for content validity. Following this, factor analyses were conducted on the remaining 44 items. Factor loadings and correlations indicated that 23 of the 24 items on the survey had distinct loadings on one of the three factors that the survey was designed to assess. The instrument was found to be both a valid and reliable assessment of the following constructs: value of reading, self-concept of the reader, and instruction (Pitcher et al., 2008).

**Description and Justification of the Analyses**

All data collected in the study were quantitative. For the first research question, a two-way Analysis of Covariance (ANCOVA) was used to compare the variance in means of the DRP pre and post-test of the comparison and experimental groups, while controlling for initial differences in reading comprehension.

For the second research question, a Multiple Analysis of Covariance (MANCOVA) was used to compare the variance in means of each of the three subscales of the AMRP-R for the experimental groups: value of reading, self concept of the reader, and instruction of reading, while controlling for initial differences in motivation to read. The AMRP-R was administered twice during the course of the study. Each of the
constructs measured on the instrument was examined in addition to students’ scores on the assessment as a whole.

**Data Collection and Timeline**

Teachers received training for the *LANGUAGE!* program in September of 2008. The training was conducted by a representative of the *LANGUAGE!* literacy curriculum and lasted for three consecutive days for approximately six hours each day. The workshop included the following elements: overview of the curriculum; research supporting the efficacy of the literacy instruction in the program; instruction teaching the lessons; instruction in the types of assessments included in the curriculum, including how and when to deliver them. Administrators responsible for supervising these teachers were also in attendance and received the same training.

Teachers responsible for teaching the balanced literacy followed the same curriculum with six specified units of study for each grade level. In addition, reading and language arts teachers met two or three times weekly for 40 minutes per meeting, to discuss and align instruction. They also collaborated to create and deliver common formative assessments in both reading and language arts to inform instruction. Classroom walk-throughs were conducted several times a week by administrators to ensure consistency of instruction and delivery of curriculum. A questionnaire was also administered to all instructors involved in the study to identify any differentiation or alterations of instructional activities and lessons.

The *LANGUAGE!* curriculum began in October 2008. Similarly, the balanced literacy curriculum began with its first unit at the end of September 2008. Both curriculums continued to the end of the school year in June 2009. The first three weeks
of the school year were spent assessing and correctly placing students in the appropriate reading and language arts classes. Instruction for all language arts students focused on introductory activities, review of parts of speech and the basic units of writing: types of sentences and parts of a sentence.

Upon approval of the study and attainment of informed consent, students were identified as being either in the experimental and comparison group. The students in both groups were administered the DRP in September of 2008 as part of district-mandated testing. This was used as the pretest for reading comprehension. The students were again administered the DRP in May 2009, which was used as the post-test to measure impact on reading comprehension. Students in both groups were administered the AMRP-R in January 2009 and in May 2009 to measure the impact on motivation to read.

**Limitations of Study**

There were several limitations to the study. The researcher did not conduct the training of those teachers implementing the *LANGUAGE!* literacy curriculum, as it was done prior to the inception of the study. However, the training was conducted by a representative of the *LANGUAGE!* curriculum. There was no random assignment of students to the comparison and experimental groups. The researcher also was unable to control for differences in class sizes, as intact groups were used in the study. Similarly, variations in teaching style may have existed among those teachers delivering the balanced literacy program, and also, among those teachers implementing the *LANGUAGE!* program, which may have impacted student motivation. Furthermore, while the *LANGUAGE!* literacy curriculum followed prescribed lessons ensuring a heightened probability of consistency between instructors, teachers teaching the balanced
literacy may have used different elements of the program, such as guided reading or student conferences, and differentiated according to student need to varying degrees.
CHAPTER TWO: REVIEW OF THE LITERATURE

This section reviews the theoretical basis for the study. The theoretical framework lies in multiple theories of achievement motivation and learning, and their related constructs; in turn, the chapter explores how these specific constructs, namely expectancy beliefs, subjective task values, self-concept and efficacy, interrelate to impact reading achievement and comprehension. The section then explores the nature of reading comprehension and gives an overview of the elements constituting an effective reading program as suggested by studies and experts in the field, to identify instruction which not only positively impacts reading comprehension, but that also improves motivation given the impact of such on achievement. Finally, the chapter reviews studies related to the impact of the LANGUAGE! literacy program and balanced literacy on reading achievement, and examines how elements of each instructional program relate to the theoretical framework reviewed in the literature.

Theories of Achievement Motivation and Related Constructs

Expectancy-Value Theory of Achievement Motivation

In attempting to explain the impact of past experiences, namely academic successes and failures, on student motivation and achievement, many expectancy-value theorists propose that individuals’ choices of tasks, persistence in carrying out the actions necessary to complete the tasks, and performance can be explained by their expectations for how well they will do on the activity and the value they attribute to the specific task (Eccles et al., 1983; Wigfield, 1994; Wigfield & Eccles, 1992). These projected outcomes, which Eccles (1983) termed expectancies for success, are often shaped by a person’s past performance or experience with a particular task or in a given domain.
Further influencing an individual’s behavior with regard to specific activities are subjective task values, or the importance and utility that the person attributes to a particular task.

Expectancies and values are assumed to directly influence achievement choices. They also influence performance, effort, and persistence. Expectancies and values are assumed to be influenced by task-specific beliefs such as ability beliefs, the perceived difficulty of different tasks, and individual goals, self-schema, and affective memories. These social-cognitive variables, in turn, are influenced by individuals’ perceptions of their own previous experiences and a variety of socialization influences. (Wigfield & Eccles, 2000, p. 69)

When children value activities, either due to a perceived benefit they may attain in pursuing them, the intrinsic rewards that come from success at such, or as a means of achieving a larger goal, they are likely to persist at them; if not, they will discontinue the activity. This perception and perseverance of working at or completing a task may be affected, however, by how well or poorly the child has done with the same or similar activities in the past. Therefore, the student who has a history of struggling with reading, done poorly on measures of achievement in this area, or comparatively to his or her peers, will have little motivation to participate in the activity (Wigfield & Eccles, 2000).

Wigfield & Eccles (2000) conducted three longitudinal studies to determine how children’s expectancies for success, ability beliefs, and subjective values change over their school years, and how these relate to their performance and activity choice. The first, a two-year longitudinal study using a sample of fifth through twelfth grade students, explored gender differences in achievement beliefs and values about mathematics and
English. The second study examined how the transition of a sample of sixth grade students to seventh grade impacted the children’s beliefs and values about different academic subjects, sports, and social activities. The final study spanned 10 years and began with a group of first, second, and forth grade students, following them through high school graduation. In each study, students completed questionnaires regarding their ability beliefs, expectancies for success, and subjective task values of various activities. The subjects were predominantly European-American and came from lower middle class to middle class.

The researchers concluded that “older elementary school-aged children valued math, reading, and instrumental music less than younger children did” (Eccles & Wigfield, 2000, p. 76). In a similar study, Wigfield et al. (1997) found that children’s beliefs about the usefulness and importance of math, reading, instrumental music, and sports activities decreased over the three years of the study. Furthermore, subjects demonstrated a diminished sense of competence in these areas, as well as decreased interest in reading over time. Wigfield & Eccles (2000) attribute these findings to a heightened ability to discern one’s abilities and performances as children age, “Children become much better at understanding and interpreting the evaluative feedback they receive and engage in more social comparison with their peers” (p. 77). Students become more cognizant of their progress, or lack there of, in relation to their peers, especially when heterogeneously grouped in classes with peers of potentially much higher ability and meeting with greater success. “Evaluation (becomes) more salient and competition between students more likely, thus lowering some children’s achievement beliefs” (Wigfield & Eccles, 2000, p. 77).
This becomes of particular importance as children enter adolescence, when their self-concept and expectancy beliefs increasingly impact their performance and choice of activities.

Children’s competence beliefs will become more strongly predictive of good performance if children maintain positive competence beliefs, or of poor performance if children’s competence beliefs become more negative. Similarly, children’s valuing of different activities will increasingly predict their choice either to continue certain activities or discontinue them, when those choices become available in the secondary school years. (Wigfield, 1994, pp. 70-71)

The middle school years become an important crossroads in which educators must counteract an already declining sense of motivation, which has been shown to occur as students progress through school, and the negative impact on such of a history of difficulty and failure at reading. “Children’s achievement beliefs become more negative in many ways as they get older, at least through the early adolescence time period. Children believe they are less competent in many activities, and often value those activities less” (Wigfield, 1994, pp. 70-71). Therefore, classroom instruction must tailor to the needs of struggling readers to not only help them acquire and develop the skills necessary to improve their reading comprehension and achievement, but to nurture in them the motivation necessary to continue to engage in reading.

Social Cognitive Theory of Learning

Bandura’s (1997) social cognitive theory of learning offers insight into the impact of self-efficacy, or the “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments,” on behavior and subsequently,
achievement (p. 3). According to the theorist, an individual’s sense of efficacy affects his or her emotions, thoughts and motivation to complete tasks or take on challenges. Furthermore, he defines “outcome expectations,” which refer to an individual’s belief in his or her capability of achieving a desired outcome (Bandura, 1997). These outcome expectations help to determine whether a person engages in the necessary actions to achieve the specified goal. Positive expectations serve as incentives, whereas negative expectations serve as disincentives. In short, self-efficacy has been shown to influence task choice, effort, persistence, and achievement.

**Self-Efficacy and Reading Achievement**

Schunk and Zimmerman (1997) addressed the impact of self-efficacy on reading achievement and acquisition.

Compared with students who doubt their learning capabilities, those who have a sense of efficacy for acquiring orthographic skills or performing well on a reading or writing task participate more readily, work harder, persist longer when they encounter difficulties, and achieve at a higher level. (p. 36)

Students who have a history of reading difficulties and struggle to complete tasks in the classroom involving literacy skills are likely to give up more quickly. These individuals must be placed in a supportive environment and be given targeted instruction to improve their skills in this domain, so that they may begin to experience success and positive reinforcement. “The major influences on children’s efficacy beliefs are how well they have done on similar tasks or activities and the feedback and encouragement that they receive from others” (Wigfield et al., 2004, p. 301). This may necessitate grouping students in a manner that does not accentuate their weaknesses, as doing so may increase
and reinforce negative self-perceptions, as Wigfield et al. (2004) noted “as children compare their performance to that of others, their sense of competence may decline” (p. 302).

**Self-Concept and Reading Achievement**

Self-concept, a construct related to self-efficacy, plays a similar role in achievement and motivation. Marsh (1993) found that when achievement in a particular subject is compared to the same domain-specific self-concept (e.g. reading achievement and reading self-concept) the relationship is positive and strong. Pajares and Schunk (2001) also examined the potential influence of self-concept, the perceptions an individual holds of him or herself as the result of the appraisal of his or her total self-knowledge, on achievement in a particular domain. The researchers proposed that self-concept is hierarchical in nature and contextually bound. That is, while an individual possesses a global self-concept constituting a general view of one’s self, he also holds discrete self-concepts that are specific to particular domains. Furthermore, how the person perceives him or herself in a given area of life may be different from how he or she does so in another area (Pajares & Schunk, 2001). For instance, an individual not only possesses an academic self-concept, but also one specific to particular subject areas such as reading, writing and math. “Self conceptions can differ across differing domains of functioning, and it is the self-views in discrete and specific areas of one’s life that are most likely to guide an inform behavior in those areas” (Pajares & Schunk, 2001).

Pajares & Schunk (2001) explained that while self-efficacy and self-concept are discrete constructs, they are interrelated in that “because confidence is considered an integral component of self-concept, self-efficacy beliefs are often viewed as requisite
judgments necessary to the creation of self-concept beliefs” (p. 245). Similarly, Bong & Skaalvik (2003) furthered that while self-concept relates more to affective responses and self-efficacy to cognitive processes, when measured at the same level of specificity focusing on a particular subject or domain, they predict performance equally well with each playing a “significant role in enhancing students' intrinsic motivation, positive emotion, and performance” (p. 28).

Both constructs have been found to be positively related to and influence academic achievement, especially when the measures of performance are referent to the same area of self-concept and self-efficacy. Pajares and Schunk (2001) maintained that the same holds true for self-efficacy.

When self-efficacy beliefs correspond to the academic outcome with which they are compared, prediction is enhanced and the relationship between self-efficacy and academic performance is positive and strong. Correlations between self-efficacy and academic performances in investigations in which self-efficacy is analyzed at the item- or task-specific level and closely responds to the criterial task have ranged from .49 to .70. (p. 245)

Rider and Colmar (2006) investigated the relationship between reading self-concept, reading skills and reading achievement, in a study conducted with 80 third grade students in three Australian primary schools. Participants in the study were administered an assessment to measure reading rate, accuracy, and comprehension. The students were also administered an assessment to measure reading self-concept. More specific than general self-concept, reading self-concept refers to the individual’s perceptions of competence, difficulty and attitude toward reading (Chapman & Tunmer, 1997). The
results indicated strong positive correlations between all areas of each assessment, with high levels of reading achievement being associated with high levels of reading self-concept. This is significant given the impact that self-concept is believed to have on motivation, and the implications that these findings hold for instruction.

Interventions with children struggling with learning to read must focus on improving skills and on helping children to develop an understanding of the importance and purpose of reading, before attitudes towards reading, and perceptions of personal ability to read become too negative. Increasing opportunities to be successful in reading is essential, but there must also be an emphasis on changing self-perceptions. (Rider & Colmar, 2006)

According to the authors, effective reading instruction targets changing attitudinal perceptions, as well as literacy components because of their influence upon one another.

**Section Summary**

This section outlined two theories of achievement motivation, expectancy-value theory and social cognitive theory of learning, that serve as the theoretical basis for the study. Both theories stress the impact of past performance on anticipated, or expected performance in a given domain. The section further compared the constructs of self-efficacy and self-concept and their related impact on achievement. Though the constructs differ, they are both strongly correlated to achievement. When children doubt their competency in a given area or do not value a particular activity, they are unlikely to put forth the necessary effort in terms of time and actions needed to succeed in improve in the given domain.
**Motivation and Reading Comprehension**

Aarnoutse & Schellings (2003) defined reading comprehension as the complex interaction of several processes that allow the reader to create meaning within a text.

The perception of letters, rapid recognition of words, detection of the function and meaning of the different words within a sentence and the integration of the parts of a sentence and consecutive sentences into a meaningful whole are important sub processes. The rapid recognition of words and the integration of information into a meaningful whole constitute the core of reading comprehension. (p. 390)

While much attention has focused on the cognitive processes involved in reading, motivation also plays a significant role in text comprehension. “Because reading is an effortful activity that children can often choose to do or not to do, it also requires motivation” (Baker & Wigfield, 1999, p. 452). Guthrie and Wigfield (2000) proposed that motivation enables the reader to successfully apply the cognitive skills and reading strategies necessary to gain understanding, “Motivational processes are the foundation for coordinating cognitive goals and strategies in reading” (p. 408). Therefore, in order to access meaning from text, students must not only have the designate skills to do so, but the motivation to apply these appropriately and successfully.

Moreover, the interaction of motivation and cognitive skills promotes engaged reading, which Guthrie and Wigfield (2000) view as central to reading comprehension and achievement. Engaged readers exhibit behavior that promotes positive learning outcomes in this domain. “They focus on text meaning and avoid distractions…exchange ideas and interpretations of text with peers. Their devotion to reading spans across time, (and) transfers to a variety of genre” (Guthrie & Wigfield, 2000, p. 403). Motivation
plays a key role in fostering reading engagement and thereby, achievement in that “the reader has wants and intentions that enable reading processes to occur. That is, a person reads a word or comprehends a text not only because she can do it, but because she is motivated to do it” (Guthrie & Wigfield, 2000, p. 404). They further suggested that engaged readers “in the classroom or elsewhere coordinate their strategies and knowledge (cognition) within a community of literacy (social) in order to fulfill their personal goals, desires, and intentions (motivation)” (Guthrie & Wigfield, 2000, p. 404). Instruction that promotes reading engagement not only fosters reading competence, but increases motivation in this area as well.

Aarnoutse and Schellings (2003) similarly cited motivation as a key factor in an individual’s ability to access the meaning of a text, “(Reading comprehension) emerges from the interaction between reader and text, between the knowledge, skill and motivation of the reader and the text which has a specific intention, structure and degree of difficulty” (p. 388). Motivation, like the processes involved in comprehension, is multi-dimensional, involving “goals for reading, intrinsic and extrinsic motivation, self-efficacy, and social motivation for reading” (Aarnoutse & Schellings, 2003, p. 387). Therefore, the type of reading instruction delivered in the classroom may potentially impact both reading motivation and reading comprehension.

Biancarosa and Snow (2004), in fact, cited building motivation to read and promoting self-directed learning as 1 of 15 key elements of effective adolescent literacy programs. Infusing student choice into text selections for independent reading and topics for research is noted as one such technique, yet the authors caution that choice alone is insufficient to develop self-regulatory skills, and must be coupled with instructional
support in the application of strategies and skills (Biancarosa & Snow, 2004). Guthrie and Wigfield (2000) referred to this component of instruction as autonomy support, or “teacher’s guidance in making choices among meaningful alternatives relevant to the knowledge and learning goals” (p. 411). The researchers further stated that choice is motivating because it fosters in students a sense of control, noting that “children seek to be in command of their environment, rather than being manipulated by powerful others” (Guthrie & Wigfield, 2000, p. 411).

In both literacy programs under study, students were allowed to self-select texts for independent reading; however, this was done with teacher guidance and final approval, meaning that the instructors either helped the child choose a book at or slightly above his or her instructional level, or approved the book independently selected by the student. The teacher would then help the student correctly apply the strategies and skills taught in the lesson to the independent reading book, and by so doing, not only promoted engagement, but allowed the teacher to assess the child’s application of the specific reading skills and strategies.

Guthrie and Wigfield (2000) cited several other components of instruction necessary to promote student engagement and thus, motivation to read: learning and knowledge goals co-developed by the teacher and student; real world interactions, or the connection of the curriculum with students’ personal experiences; strategy instruction, consisting of direct instruction by the teacher, followed by scaffolding and guided practice; collaboration among the instructor and students, and between students and their peers; praise and rewards to encourage effort and attention; evaluation that does not undermine the purposes of the above components, namely, that includes not only
assessments that are objective and standardized, but those which are student-centered and demonstrate student ownership, such as portfolios; and, teacher involvement, meaning the instructor’s use of individual learners to encourage active participation.

To assess the efficacy of a literacy program embodying such components on reading comprehension and reading motivation, Guthrie et al. (2007) conducted a study involving 31 fourth-grade students. Teachers from eight different classrooms were each asked to select four students of varying reading abilities: one of higher than average reading ability for his/her class, one with lower than average reading ability, and two with average reading abilities. The students in the study participated in the Concept-Oriented Reading Instruction (CORI) program, that encompassed reading strategy instruction, science instruction, and the motivational practices cited in Guthrie and Wigfield’s (2000) engagement model of reading. Strategy instruction consisted of six practices recommended by the National Reading Panel (NRP; 2000) that were shown to improve both reading achievement and intrinsic reading motivation: activating background knowledge, questioning, searching for information, using graphic organizers, and summarizing.

The students were administered a reading comprehension assessment, first in September prior to the implementation of the reading intervention and again in December after the implementation was complete. Students were also administered an assessment of reading motivation in both September and December. At the same time, teachers completed a reading engagement index for each student. Analysis of the data indicated that general motivation significantly predicted growth in reading comprehension, with the General Motivation Composite accounting for 9% of the variance in reading
comprehension scores ($p < .05$). Furthermore, student interest and positive affect were “invariably associated with high cognitive recall and comprehension of text” (Guthrie et al., 2007, p. 305).

As children age they begin to attribute academic achievement less to effort and more to intelligence; that is, while elementary students largely attribute performance outcomes to a question of work and perseverance, secondary students begin to assess these in terms of ability and talent (Nicholls et al., 1986). As students enter the middle school years, their motivation to read declines (Unrau & Schlackman, 2006). This presents potentially crippling consequences in terms of motivation for those students who repeatedly struggle to read. “The reading motivation of children who continually attribute their failures to a lack of capacity (i.e., I’m stupid) enters them into a downward spiral with all the concomitant consequences of such” (Aarnoutse & Schellings, 2003, p. 389). This is further complicated by the changing nature of reading tasks and texts as students transition from the primary grades. “Intermediate and middle school texts are written at a more challenging level than the narrative texts common in primary grades and contain a greater thought and word density and a more specialized vocabulary” (Palumbo & Sanacore, 2009, p. 276).

Baker and Wigfield (1999) conducted a three-year longitudinal study to examine the multiple dimensions of reading motivation and their relationship to reading activity and achievement. The sample consisted of a heterogeneous group of 371 fifth and sixth graders from six elementary schools in a mid-Atlantic urban setting. The students were administered reading motivation assessment. Several measures of reading activity and
achievement were also administered, including two questions assessing students’ self-reported reading activity.

The researchers found self-efficacy and challenge, two factors of motivation, to be most strongly correlated to reading activity with values of .43 and .51 respectively. “Children who believe they are capable of reading well and are intrinsically motivated to read, report that they read more frequently” (Baker & Wigfield, 1999, p. 470). Similarly, children highest in motivation reported reading the most, whereas children lowest in motivation reported reading the least (Baker & Wigfield, 1999). The results further supported the expectancy-value motivational theory that students’ goals and values affect their performance. The study demonstrated that students, who were not highly competitive in this domain, lowest in work avoidance related to reading tasks, and attributed importance to reading, performed highest on the achievement measures (Baker & Wigfield, 1999). Hence, children who were motivated to read, spent more time reading, thereby applying and strengthening the skills, strategies, and sense of competence related to the activity, and consequently, improved their overall reading achievement.

Section Summary

This section examined the construct of motivation and its impact on reading comprehension. Both reading comprehension and motivation are multi-dimensional and complex processes. Studies indicated that children who are motivated to read, spend more time reading, and thus, improve their reading comprehension and achievement. Motivation, in fact, facilitates the appropriate application of cognitive skills and strategies that allow the reader to access meaning in a text. Therefore, instruction must target not
only those skills and strategies that improve reading comprehension, but reading motivation given the impact that one has on the other.

Elements of Effective Reading Instruction

According to a comprehensive review of reading research commissioned by the United States Congress, the NRP (2000) identified five critical components of effective reading instruction and intervention programs: phonemic awareness; phonics; fluency; vocabulary; and comprehension strategies. Similarly, in a meta-analysis of 30 years of reading research, Foorman et al. (2003) concluded that effective instruction in this domain consists of "the integration of explicit instruction in phonemic awareness and the alphabetic principle, reading for meaning, and practice in fluent reading and writing. Reading for meaning includes explicit instruction in vocabulary, spelling and comprehension strategies" (p. 634).

Word-Level Skills

Decoding, a word-level skill that involves the sounding out of words based on graphemic-phonemic relationships, has been identified as critical to comprehension in that the more efficiently children are able to sound out words, the quicker they are able to access meaning (Gough & Tunmer, 1986). Studies indicate that because recognition and comprehension of a word both occur in short term memory, which is limited in capacity, the more effort required to decode a word, the less capacity is left to understand it (Miller, 1956; LaBerge & Samuels, 1974). Based on their studies of elementary-school children, Shankweiler et al. (1999) determined that “deficient skill in mapping between the alphabetic representations of words and their spoken counterparts is the chief barrier to comprehension of text” (p. 70). To this end, each lesson in the LANGUAGE! literacy
program contains instruction in phonemic awareness and phonics; word recognition and spelling; and morphology.

Tan and Nicholson (1997) examined the impact of word automaticity on the reading comprehension below-average readers. The study involved 42 students ranging in ages from 7 to 10 years. The experimental group received training to decode target words through the use of flashcards; they were shown the printed words until they could recognize the words within approximately one second of being shown the card. The control group received training in the meaning of the words through discussion of the words between the student and the experimenter, but were not shown the words themselves. The students were then given the passage from which the target words were taken to read aloud. Following this, they were asked to respond to 12 comprehension questions related to the text and to orally retell the story. The results indicated that students who received word training to improve automatic word-recognition significantly outperformed students in the control group on all measures of comprehension: explicit questions, inferential questions, and total passage scores.

The importance of deficits in phonological awareness was elucidated in Shaywitz and Shaywitz’s (2007) studies of dyslexia and how the brain responds to particular reading interventions. Referred to as the “brain glitch theory,” the researchers found increased metabolic activity in three areas of the brain thought to be largely associated with language and reading acquisition. The disruption in the phonological processing subcomponent of the brain causes the dyslexic reader to have difficulty mapping the alphabetic characters to the spoken word (Shaywitz et al., 2000). They further noted that instruction focusing phonemic elements allows children “to develop the skills that will
enable them to read and understand the meaning of both familiar and unfamiliar words they encounter so that they may learn to read effortlessly and look forward to a lifetime of enjoyment as readers” (p. 75). Torgesen et al. (2001) further emphasized the importance of phonological instruction in reading interventions for struggling readers, contending that “the phonological weaknesses of children with the most common form of reading disability require that they receive reading instruction that is more phonemically explicit and systematic than other children’s” (p. 35). The LANGUAGE! literacy program attempts to address such language deficiencies through direct and scaffolded lessons that move students from speech to sound to written text (Sopris West Educational Services, 2006).

Torgesen et al. (2001) investigated the impact of two reading interventions incorporating phonemic awareness, Auditory Discrimination in Depth (ADD; Lindamood & Lindamood, 1984) and Embedded Phonics (EP), on the reading skills and comprehension of 60 children between the ages of 8 and 10 identified as learning disabled. The programs differed in the degree and method of phonemic instruction, with ADD directly targeting phonemic awareness problems by building phonemic/articulatory awareness and using this knowledge to solve decoding problems with individual words. While also providing direct, explicit instruction in phonemic decoding strategies, the EP program provided much more practice than the ADD program with reading and comprehending meaningful text. In other words, the ADD program focused instruction and practice on phonemic awareness and decoding skills to a much greater extent than did the EP program (Torgesen et al., 2001). The interventions, implemented over a 8-9
week period for a total of 67.5 hours, were delivered by trained instructors on an one-one basis twice a week.

The authors of the study (Torgesen et al., 2001) concluded that both programs were equally as effective in improving reading abilities in children with deficiencies in this area, in spite of key instructional differences in the interventions. Although phonemic awareness was taught systematically and explicitly in both methods, the ADD students:

Spent 85% of their time on activities designed to stimulate phonemic awareness and build phonemic decoding skills using activities that did not involve connected text. In contrast, children in the EP group spent only 20% of their time on broadly similar activities and 50% of their time on reading and writing activities.

(Torgensen et al., 2001, p. 52)

The researchers cited teachers’ expertise as the explanation for the similarity in results despite the clear differences in instructional methods. “The present study employed highly skilled teachers who all had a number of years’ experience teaching children with reading disabilities” (Torgensen et al., 2001, p. 53). The researchers’ conclusion again suggested the importance of skilled instruction by the educators who know the specific needs of their students and how to address them.

Willis (2009) questioned Shaywitz and Shaywitz’s (2007) emphasis on the importance of phonemic awareness, countering that educators must not discount the role that stress plays on comprehension and reading acquisition in the brain. Effective instruction must be that which not only develops skills and strategies needed to achieve, but increases student motivation to read. She warned that one-dimensional measures of
reading achievement such as improved single-word fluency, may not be indicative or transferable to other areas of reading comprehension. “Gains in phonological processing are not necessarily generalizable to the other components of reading…that is why we need research into alternative approaches to improving reading fluency and comprehension” (Willis, 2007, p. 81).

**Comprehension Strategies**

Pressley (2000), focusing more specifically on reading comprehension, identified three areas critical to effective instruction: improving word-level competencies, building background knowledge, and promoting the use of comprehension strategies. He thereby recommended that instruction aimed at building understanding and acquisition of text should target these three areas. Pressley furthered that reading comprehension is a function of both lower-order and higher-order skills, which includes both the recognition of words along with the understanding of words. Through their analysis of existing research on reading comprehension, members of the NRP (2000) also identified specific components of instruction related to successful reading comprehension: vocabulary and vocabulary instruction; engagement in reading, or the active and thoughtful interaction between text and reading; the development of comprehension strategies that enable readers to understand text; and, teacher preparation programs.

Comprehension strategies are cognitive processes by which the reader monitors his or her understanding of the text, and applies specific procedures to self-correct and make meaning of what is read. Because “meaning resides in the intentional, problem-solving, thinking processes of the reader that occur during an interchange with a text,” specific cognitive strategies must be taught and applied in order to develop competent
and self-regulated readers (NRP, 2000, p. 4-39). Furthermore, the NRP (2000) suggested that “readers who are not explicitly taught these procedures are unlikely to learn, develop, or use them spontaneously” (p. 4-40). Strategy instruction entails the teacher first instructing, modeling and facilitating use of the strategies, with the reader then attempting to apply them with guided practice from the instructor, until he or she is able finally able to effectively interact with the text independently to acquire meaning (Guthrie & Wigfield, 2000). Students become more actively involved with the activity when they are able to deliberate the actions necessary to acquire meaning and thus, improve their reading. “The cognitive side of engagement emphasizes that effective readers are deliberately making choices within a context and selecting strategies for comprehending text content” (Guthrie & Wigfield, 2000, p. 404). As Biancarosa and Snow (2004) explain, “competency in reading is necessary but insufficient by itself to engender better academic performance. Students need to be self-regulating not only to become more successful academically, but also to be able to employ their skills flexibly long after they leave school” (p. 16).

While the LANGUAGE! literacy program includes some strategy instruction in each lesson, balanced literacy focuses much more heavily on the application of such strategies. Every lesson focuses on a particular reading strategy, with the teacher modeling the use of such on an in-class text. The instructor then monitors and assesses the student’s independent use of this strategy through the child’s application of such to his or her independent reading book. Given that strategy instruction is only one of six elements included in each LANGUAGE! lesson, the emphasis is much less comparatively.
Section Summary

The section gave an overview of elements of effective reading instruction as informed by meta-analysis of extant reading research and subsequent recommendations made by the NRP. Recommendations focused on similar literacy components and included: phonemic awareness; phonics; fluency; vocabulary; and comprehension strategies. The section further examined related research to word-level skills and comprehension strategies, both of which are key elements to the treatments under study.

Treatment Related Research

LANGUAGE! Literacy Related Research

The LANGUAGE! literacy curriculum (Greene, 2000) is a comprehensive language program focusing on six specific elements of reading instruction: phonemic awareness and phonics; word recognition and spelling; vocabulary and morphology; grammar and usage; listening and reading comprehension; and speaking and writing. These components encompass and align with all those cited by the NRP (2000) and Foorman et al. (2003) as constituting effective reading instruction.

Several studies have been conducted measuring the impact of the LANGUAGE! literacy curriculum on individual components of reading. The author of the program, Jane Fell Greene (1996), researched the effect of this structured language curriculum on the literacy skills of middle and high school juvenile offenders enrolled in a rehabilitation program. The students, who participated in the program for an average of 22.7 weeks, demonstrated significant gains (more than three years growth) in written language expression (composition), encoding (spelling), and decoding (isolated word recognition). Similarly, students in the experimental group demonstrated greater gains on the Gray
Oral Reading Test (GORT III) than students in a comparison group not receiving the LANGUAGE! instruction.

Since the inception of the LANGUAGE! literacy program in 1994-95, several evaluations of the literacy curriculum have been conducted in various elementary and secondary schools. The Elf Grove Unified School District in California implemented the LANGUAGE! curriculum in grades 4-12, with 284 students during the 2004-2005 school year for a period of eight months. According to the study, all students demonstrated grade equivalency gains in speed and accuracy of word identification as measured by the Test of Silent Word Reading Fluency (TOSWRF). The elementary students demonstrated the greatest improvement with an average grade equivalency gain of 1.3 or 13 months (Sopris West Educational Services, 2006).

Similarly, the LANGUAGE! program was implemented across three middle schools in the Hawthorne School District in California during the 2006-2007 school year with approximately 1,000 students. After eight months of instruction, data from the California Standards Test-English-Language Arts (CST-ELA) and/or the TOSWRF was compared pre and post implementation of the LANGUAGE! curriculum for 649 of the students for whom these scores were available. The greatest gains were found in the sixth and seventh grades, with sixth grade students demonstrating an increase of 3.7 points, up from a 9.4 point loss the year prior to receiving LANGUAGE! instruction; similarly, seventh grade students gained 12.2 points, up from a 7.5 point loss the year prior to receiving LANGUAGE! instruction. Furthermore, student word reading fluency improvement was both statistically and educationally significant, with sixth, seventh and
eighth grade students demonstrating grade equivalent increases of 1.3, 1.7, and 1.5, respectively (Sopris West Educational Services, 2006, pp. 35-36).

None of these studies, however, used control groups. Furthermore, no research could be found assessing the impact of the LANGUAGE! literacy program on reading motivation or comparing its impact on reading achievement to that of a balanced literacy curriculum. Studies indicated that as students reach adolescence their motivation declines in relation to academic tasks. Furthermore, “reading self-efficacy involves confidence in language and comprehension skills” (Wigfield et al., 2004, p. 300). Therefore, students' specific reading problems must be targeted not only improve their reading achievement, but also improve their self-concept as readers and increase the value that they place on reading so they may become life-long readers.

**Balanced Literacy Related Research**

Balanced literacy is grounded in the whole-language philosophy, which focuses less on word level skills and more on strategy instruction, discourse related to text, scaffolded instruction and learning, the analysis of text structure, and the process of reading and writing (Manning & Manning, 1993). Reading develops through continual interaction with text and in the application of skills and strategies taught and modeled by the instructor, until the student is able to apply these independently to acquire meaning from the text.

Accomplished reading ability develops gradually through engagement in meaningful learning activity in which students receive explicit instruction, guided and independent practice, and assistance of teachers and more accomplished peers
to support their gradual transition to independence in the self-regulation of reading. (Pearson & Gallagher, 1983)

Proponents of this instructional philosophy often reject the emphasis placed on graphemic-phonemic analyses as primary to word recognition (Pressley, 2000). Reading difficulties are attributed less to decoding and word-level skills, and more to disengagement of the reader and the ramifications of such on motivation to read. Aside from demonstrating limited cognitive skills and abilities related to reading comprehension, word recognition, and reading fluency, the struggling reader is perceived as “notably unmotivated” and “likely to have low confidence in their reading” (Guthrie & Davis, 2003, p. 60). Consequently, these students exhibit what researchers term self-handicapping strategies.

These struggling students often procrastinate and deliberately avoid putting forth effort by not studying. By avoiding academic tasks, they can protect their self-image…These self-handicappers are concerned about how they are viewed by others, but do not try to change their status through increasing their literacy skill related to school tasks. (Guthrie & Davis, 2003, p.60)

Guthrie and Davis (2003) noted that struggling adolescent readers and their diminished capacity for reading may be a function of motivational shifts and instructional changes that occur during the transition between elementary and middle school. Harter et al. (1992) noted that as students enter middle school, they become more influenced by extrinsic motivators, such as an increased emphasis on grades and competition. Furthermore, they develop a heightened awareness of their competence in relation to that which they had in elementary school. According to the researchers, this phenomenon is
even more pronounced for lower achievers, whose level of intrinsic motivation, or personal pleasure or satisfaction achieved from the activity, diminishes at a more rapid rate than their more competent counterparts (Harter et al., 1992).

Guthrie and Davis (2003) summarized the instructional shift that occurs in middle school reading as the “detachment of reading instruction from content; formidable texts and textbook structures; formal, non-personal response expectations; diminished student choice; isolation of students from teachers; and, minimal linkage of real-world interaction with reading” (p. 66). In spite of the negative impact that these changes seem to incur upon children with reading difficulties, Guthrie and Davis (2003) maintained that “given the right (context), with an attractive text and peer or teacher support, students who are otherwise considered struggling can be seen to read attentively and skillfully” (pp. 65-66).

Ivey (1999) investigated this supposition in a qualitative investigation of three adolescent readers studied over a five-month period. Ivey concluded that irrelevant of his or her identified reading ability (struggling, moderately successful, and successful), each student displayed varying degrees of success in reading depending on the particular materials, purposes, and contexts. He attributes this to the premise that middle school readers are not one dimensional and should not be addressed as such in terms of instruction.

(Middle school students) are complex and multidimensional as readers; a notable degree or variability exists among middle school readers; and their reading performance and their dispositions toward reading are dependent upon the kind of instructional environments in which they are asked to read. (Ivey, 1999, p. 190)
Given these findings, Ivey (1999) suggested that middle school readers be treated as individuals, rather than categorized by arbitrary labels suggesting ability or performance levels that may be inaccurate. “It is clear that the complexities of middle school readers can be unfolded when teachers come to know individual students through watching them, listening to them, and interacting with them in the context of meaningful literacy activities” (Ivey, 1999, p. 190).

Each student in Ivey’s (1999) study demonstrated unique needs unlikely to be addressed in a traditional, whole-class format; one student, for instance, needed instruction in development of word knowledge and decoding skills, while another student needed support in developing fluency. The researcher furthered that while a student may demonstrate deficiencies with a particular aspect of reading, he or she also possesses abilities that will aid in reading acquisition, as by one of the subjects in his research.

It would be a mistake to characterize (the struggling reader) solely by the observation that she stumbles over words in her oral reading. Her strengths as a reader including her strong listening comprehension, her curiosity about stories and information in the text, are equally important. Moreover, when she read materials on her instructional level, oral reading became less of a problem. (Ivey, 1999, pp. 187-188)

Instruction must, therefore, be tailored to the particular needs of the students in the class.

Reading workshop, a modified version of the balanced literacy curriculum used in the study, was cited by Ivey (1999) as “a viable option because it serves a variety of purposes for diverse middle school readers” (p. 189). The two programs share important elements such as mini-lessons focusing on specific reading strategies and skills, student
choice in the selection of independent reading materials, and differentiation in grouping and activities. Furthermore, balanced literacy instruction incorporates six specific classroom practices believed to promote engaged reading.

(Teachers ought to) construct rich knowledge goals as the basis of reading instruction; use real-world interactions to connect reading to student experiences; afford students an abundance of interesting books and materials; provide some choice among material to read; give direct instruction for important reading strategies; and encourage collaboration in many aspects of learning. (Guthrie & Davis, 2003, p. 59)

All reading teachers who implemented the balanced literacy curriculum in the middle school in the current study had classroom libraries containing several hundred books of varying genres, topics and reading levels. Students were allowed to choose an independent reading book from this selection or from the media center, which also contained a wide-variety of materials. Every year the district provides several workshops on differentiation and promotes flexible grouping as expected classroom practice, which teachers use on a weekly basis. This was evident in administrative walk-throughs, formal and informal observations; teachers also noted this as common practice in the survey of instructional practices administered to all reading who participated in the study (see appendix A).

In a longitudinal study that analyzed the impact of balanced literacy instruction on reading achievement, Bitter et al. (2009) found that specific instructional practices related to this method led to increased reading comprehension. The study, spanning 3 years, involved 101 classrooms in 9 high-poverty elementary schools in the San Diego school
district. The researchers focused on four particular aspects of instruction consistent with the balanced literacy approach used in the schools under study: supporting higher-level thinking about the text, both orally and in writing; encouraging independent use of word recognition and comprehension strategies during reading activities; using a student support stance; and, promoting active involvement in literacy activities. Students were administered several measures of reading achievement including the Degrees of Reading Power (DRP) to measure reading comprehension in grades 3 through 5, English-language arts (ELA) California Standards Test (CST) to assess a broader range of literacy skills in grades 2 through 11, and the Developmental Reading Assessment (DRA) to gauge reading accuracy, fluency and comprehension levels in early elementary grades.

Three instructional methods were found to have a statistically significantly positive relationship to reading comprehension as measured by the DRP: higher-level questioning and discussion of text; writing instruction; and accountable talk (Bitter et al., 2009). Accountable talk is “an approach to engagement with text that seeks to foster student responsibility; interactive learning; and sustained, idea-focused, evidence-based discourse” used to “motivate student engagement, facilitate connections between the text and students’ prior knowledge, and engender meaningful interplay among reader” (Bitter et al., 2009, p. 19). More specifically, DRP scores increased 1.61 Norm Curve Equivalent (NCE) points for instruction related to higher-level meaning of text; 1.63 NCEs for writing instruction; and 1.04 NCEs for accountable talk. The cumulative effect of the all three instructional practices represented an increase of 1 standard deviation, or 4.28 NCEs, in reading comprehension.
Like the balanced literacy curriculum used in this study, the instructional method implemented in the San Diego school district used a gradual release model and scaffolding approach to learning in which the teacher acts as the facilitator, gradually relinquishing increased control to students as they begin to take responsibility for their learning by applying those skills and strategies modeled by the teacher during mini-lessons (Bitter et al., 2009).

Section Summary

This section examined studies pertaining to the efficacy of each literacy program were discussed. A comparison of the two instructional programs was made including discussion of their fundamental philosophical and instructional differences. The LANGUAGE! literacy instruction focused on the explicit and systematic instruction of language from sound to the structure of language to the written word, while balanced literacy is founded in the whole language approach to literary, which focuses less on word-level skills and more on strategy instruction and the process of reading and writing. While studies exist relating to specific elements of each reading intervention or the program itself, no studies were found comparing the impact of the two on reading motivation and reading comprehension.
CHAPTER 3: METHODOLOGY

The purpose of this study was to determine the impact of the LANGUAGE! literacy program in comparison to balanced literacy instruction on reading comprehension and motivation to read of struggling middle school readers. This chapter describes the methodology used to conduct the investigation including the research questions and respective hypotheses, the setting and sample, the research design, the instrumentation, the data collection procedures and timeline, the data analysis used and justification for such, the limitations of the study, and an ethics statement.

Research Questions and Hypotheses

1. Is there a significant difference in the reading comprehension of struggling middle school readers taught through the LANGUAGE! literacy curriculum and those taught through the balanced literacy curriculum?

H₁: There is a significant difference in the reading achievement of struggling middle school readers taught through the LANGUAGE! literacy program and those taught through the balanced literacy instruction.

2. Is there a significant difference in the reading motivation of struggling middle school readers taught through the LANGUAGE! literacy curriculum and those taught through the balanced literacy curriculum?

H₂: There is a significant difference in the reading motivation of struggling middle school readers taught through the LANGUAGE! literacy program and those taught through balanced literacy instruction.
Setting and Sample

Research Setting

The study took place in a middle school located in a small, suburban community in Connecticut. The town has a population of 18,000 with a median income of $74,000. The school population is comprised of 706 students in grades 6, 7, and 8. Demographically, the community has experienced increased racial, ethnic, and economic diversity over the past five years due to an influx of students from foreign countries and surrounding towns. These changes are reflected in the demographic profile of the school, which currently has a population comprised of 81% white students, 12% Hispanic students, 2% black students, 6% Asian-American students, and less than 1% American Indian students. Furthermore, approximately 12% of students come from non-English speaking homes (CSDE, 2008).

The target population in this study included all students in the sixth, seventh, and eighth grades, reading below grade level as measured by the Degrees of Reading Power (DRP) test. The sample was one of convenience chosen for the purpose of comparing the impact of the LANGUAGE! literacy instruction on the reading comprehension and motivation to read of struggling readers compared to that of those students receiving balanced literacy instruction.

Research Sample

A total of 175 students from grades 6, 7 and 8 participated in this study. Participants in the experimental group were spread across six classes, and participants in the comparison group were spread across eleven classes. There were seven instructors delivering the balanced literacy curriculum and five instructors delivering the
LANGUAGE! literacy curriculum. While all teachers had a reading or English background, three of the teachers implementing the LANGUAGE! program also had a special education background. None of the instructors of the balanced literacy classes had special education background. Student demographic data were collected for the experimental and comparison groups. These data included gender, special education identification (SPED), and English Language Learner (ELL) identification. Table 1 depicts the demographic data collected on the participants.

Table 1

*Student Demographic Data as a Percentage for each Instructional Program*

<table>
<thead>
<tr>
<th></th>
<th>LANGUAGE! Literacy</th>
<th>Balanced Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>59</td>
<td>56</td>
</tr>
<tr>
<td>Female</td>
<td>41</td>
<td>44</td>
</tr>
<tr>
<td>Language Classification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Language Learners</td>
<td>67</td>
<td>10</td>
</tr>
<tr>
<td>non-English Language Learners</td>
<td>33</td>
<td>90</td>
</tr>
<tr>
<td>Special Needs Identification</td>
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<td></td>
</tr>
<tr>
<td>Special Education</td>
<td>19</td>
<td>0</td>
</tr>
<tr>
<td>Non-Special Education</td>
<td>81</td>
<td>100</td>
</tr>
</tbody>
</table>

\(^a n = 70; ^b n = 105\)

**Research Design**

The research study was a quasi-experimental pre- and post-test comparison group design. Table 2 outlines the research design for this study.
Table 2

Delineation of the Quasi-experimental Design

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Treatment</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(DRP and AMRP-R)</td>
<td>(DRP and AMRP-R)</td>
<td></td>
</tr>
<tr>
<td>Experimental Group</td>
<td>O₁</td>
<td>X</td>
<td>O₂</td>
</tr>
<tr>
<td>Comparison Group</td>
<td>O₁</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There was no random selection of subjects or random assignment to comparison and experimental groups as intact groups were used. A two-pronged approach was used to define the population for the study. First, all students scoring in the 30th percentile (levels 1 and 2) on the reading section of the Connecticut Mastery Test (CMT) administered in March 2008 were identified. The second level of selection consisted of teacher recommendation, based on such considerations as district assessments consisting of the Degree of Reading Power test (DRP), and open-ended and multiple-choice tests administered in September 2008. Students scoring below goal on one or more of the district assessments were placed in the LANGUAGE! literacy program. All other students scoring below goal on the DRP and not in the LANGUAGE! program were considered for the comparison group (balanced literacy). Of the three district assessments administered to students, the only instrument with validity and reliability was the DRP, therefore, the researcher chose to use this as the comparative measure for struggling readers in the study. Therefore, all participants in the study, whether in the comparison or experimental group scored below goal on the DRP, a measure of reading comprehension. Students in classes taught by first year teachers were eliminated from the study to control for the
impact of lack of experience on the part of the instructor. Students taught by the researcher were also eliminated from the study to control for bias and coercion.

Two quantitative dependent variables were measured in this study: reading comprehension as assessed by the DRP and motivation to read as assessed by the Adolescent Motivation to Read Profile - Revised (AMRP-R).

Treatment

LANGUAGE! Literacy

LANGUAGE! literacy curriculum is a comprehensive language curriculum that takes a cumulative, systematic, and explicit approach to reading and writing instruction (Greene, 2009). Each lesson included six elements: phonemic awareness and phonics; word recognition and spelling; vocabulary and morphology; grammar and usage; listening and reading comprehension; and speaking and writing. Teachers follow the same sequence of instruction in each lesson. First, the teacher models or explains while the students watch and listen. Secondly, students work along with the teacher on the specific skill or strategy. Next, the students work with each other in pairs or small groups while the teacher monitors for understanding. Lastly, the students applied the skills and/or strategies independently. Instruction was delivered in 80-minute blocks. There were 54 units in the curriculum divided into 6 books. Once in the program, students were placed according to their level of mastery of specific literacy skills and content, as opposed to grade level. The curriculum spanned the full school year (Greene, 2009).

The LANGAUGE! curriculum began in October 2008. Similarly, the balanced literacy curriculum began with its first unit at the end of September 2008. Both curricula continued to the end of the school year in June 2009.
year were spent assessing and correctly placing students in the appropriate reading and language arts classes. Instruction for all language arts students focused on introductory activities, review of parts of speech and the basic units of writing: types of sentences and parts of a sentence.

**Balanced Literacy**

The balanced literacy curriculum consisted of instruction that focused on reading and writing strategies and skills taught through mini-lessons (explicit, direct, whole-class instruction) that targeted a specific reading or writing strategy, skill, or content; read alouds (a group activity in which the teacher reads a text to the students with a specific focus); guided reading (small, flexible groups of students are explicitly taught a specific skill or strategy based on demonstrated need); teacher/student conferencing (individual conversational session between teacher and student focusing on a specific skill, strategy, or content); and independent reading and/or writing (an extended period of time of independent student reading or writing in which they apply the particular skill, strategy, or content taught in the mini-lesson). Instruction was delivered in 80-minute blocks.

Teachers responsible for teaching the balanced literacy curriculum followed the same curriculum with six specified units of study for each grade level. In addition, reading and language arts teachers met between two and three times weekly for 40 minutes per meeting, to discuss and align instruction. They also collaborated to create and deliver common formative assessments in both reading and language arts to inform instruction.
Instrumentation

Degrees of Reading Power

The Degrees of Reading Power (DRP) instrument (Touchstone Applied Sciences, 2004) was used to measure reading achievement in this study. The DRP assesses text comprehension as defined by the ability to construct meaning while reading a passage. Reliability and validity were established on a sample of 5,000 students with parallel forms reliability. Values ranged from $r = .86$ to $r = .91$. The KR 20 measure of internal consistency is .95 for each form. The DRP tests were cross-validated on similar cloze tests with coefficients ranging from .56 to .80; however, the names of those tests are not reported in the documentation. No significant differences in scores have been found across sex and race boundaries.

The DRP consists of multiple non-fiction English prose passages of varying lengths and difficulties. The assessment uses a cloze format in which words or sentences have been deleted from the texts. Five grammatically correct and semantically plausible options are presented for each deletion, all of which are related to the theme of the passage. Students must use their understanding of what they have read to select the best word or sentence for the context. There are a total of 70 items on each test and students are untimed when taking the assessment.

Every homeroom teacher was involved in administering the DRP as it was part of the district testing given in the fall and spring. Two alternate forms of the DRP were used in the fall and spring to control for test familiarity. Each instructor was given written directions for administering the test prior to the date of administration. The teacher read the directions and sample items aloud to his or her homeroom. Students
were given an opportunity to ask questions regarding how to take the DRP. The children then took the instrument in silence, recording their answers on individual scantron sheets. The teachers were given an overlay that allowed them to score the assessment by counting the number correct. The DRP tests were then returned to the appropriate reading teacher, who in turn converted the raw score into a DRP score using a table provided by the publishing company. Each instructor then entered the data for his or her students into a central database. A printout of these data was given to the researcher for statistical analysis for the purposes of the study.

**Adolescent Motivation to Read Profile-Revised**

The Adolescent Motivation to Read Profile-Revised (AMRP-R) instrument (Pitcher, Albright, & McNary, 2008) was used to measure student motivation to read. Motivation to read is a measure of a student’s self-concept as a reader and his or her value of reading (Pitcher, Albright, & McNary, 2008). The survey consisted of 25 items using a four-point scale focusing on three domains: value of reading, self-concept of the reader, and instruction of reading. Value of reading refers to the value students place on various reading activities and tasks, particularly in terms of frequency of engagement and reading-related activities (Pitcher, Albright, & McNary, 2008). Self-concept as a reader refers to how students view their own competence in reading and how they view their own performance relative to peers (Pitcher, Albright, & McNary, 2008). Instruction of reading refers to student preference for specific instructional strategies (Pitcher, Albright, & McNary, 2008). There was also a supplemental conversational interview that could have been used in conjunction with the survey to elicit additional information concerning
what impacts student motivation to read in and out of school; however, this part of the instrument was not used in the study.

The AMRP-R is a revision of the Adolescent Motivation to Read Profile, which was adapted from the Motivation to Read Profile (MRP) created by Gambrell et al. (1996). The AMRP was initially field tested by a team of 11 researchers at 8 sites throughout the United States and Trinidad. Surveys were administered to 384 adolescents. Additionally, 100 students were interviewed (Pitcher, et al, 2007). Based on the findings of this pilot study, the AMRP was again revised. The authors then followed a five-step process to assess validity and reliability. Eight practicing teachers of adolescents were asked to review the instrument for content validity. Following this, a series of factor analyses was conducted on the remaining 44 items. Factor loadings and correlations indicated that 23 of the 24 items on the survey had distinct loadings on one of the three factors that the survey was designed to assess. The instrument was found to be both a valid and reliable assessment of the following constructs: value of reading, self-concept of the reader, and instruction (Pitcher et al., 2008).

The AMRP-R was administered by instructors in all reading classes in the middle school, regardless of whether or not their students were in the study. This decision was made after the researcher presented the survey to the administrator responsible for overseeing the reading and language arts department and the teachers in the department. The teachers found that the information obtained through the survey provided valuable insight, and so consented to administer it to all students. During a monthly department meeting, the researcher trained the teachers in administering the instrument. The researcher again reviewed the procedures when she personally distributed the instrument.
to each instructor. The instructors were directed to explain the purpose of the survey, and to read the directions and each item aloud to the students. For both the winter and spring administrations of the instrument, the teachers were given a period of a week to give the AMRP-R. Upon completion, the surveys were returned to the researcher who then scored each survey herself according to the directions provided by the authors of the instrument. The researcher was solely responsible for inputting all data the AMRP-R into SPSS for analysis.

**Data Collection Procedures and Timeline**

1. In September 2008, all middle school students were administered the Degrees of Reading Power (DRP) assessment, and multiple choice (eight item) and open-ended (four item) reading assessment.

2. During the fall of 2008, teachers of the *LANGUAGE!* literacy program and school administrators received three consecutive days, six hours each, of training by a representative from the company. The workshop included the following elements: overview of the curriculum; research supporting the efficacy of the literacy instruction in the program; instruction teaching the lessons; instruction in the types of assessments included in the curriculum, including how and when to deliver them. Administrators responsible for supervising these teachers were also in attendance and received the same training. The teachers and administrators were given follow-up training in January of 2009 with a representative from the Sopris West, the publisher of the *LANGUAGE!* literacy program.

3. The first week of October 2008, the *LANGUAGE!* literacy program commenced.
4. In December of 2009, the proposed research was approved by Western Connecticut State University’s Institutional Review Board.

5. During the winter of 2009, consent and assent forms were distributed to participants in the sample to acquire permission to use their scores in the study.

6. At the end of January 2009, all participants were administered the Adolescent Motivation to Read Profile-revised (AMRP-R). During this time, the researcher also collected September DRP scores to be used as pretest scores to measure initial reading comprehension levels of each group.

7. In May of 2009, all participants were administered the DRP and the AMRP-R.

8. In May of 2009, all literacy teachers in the study were administered the Teacher Instruction Questionnaire to assess consistency of instruction among instructors.

**Description and Justification of Data Analysis**

**Analysis of Research Question One**

All data collected in the study for the purposes of responding to the research questions were quantitative. A two-way Analysis of Covariance (ANCOVA) was used to determine the impact of each level of the independent variable (instructional program) on the dependent variable (reading comprehension). This type of statistical analysis allowed the researcher to assess differences in mean scores on the dependent variable between the two levels of the independent variable, while controlling for initial differences in reading comprehension (covariate) between the groups (Gall et al., 2006). Additionally, a Bonferroni correction was used to adjust the alpha to a more stringent level in the post hoc comparisons of groups, thereby diminishing the probability of making a Type I error (Meyers et al., 2006). As stated, the independent variable, instructional program,
contained two levels: \textit{LANGUAGE!} literacy and balanced literacy. The dependent variable was reading comprehension as measured by the DRP.

\textbf{Analysis of Research Question Two}

A Multiple Analysis of Covariance (MANCOVA) was used to determine whether the two groups differed significantly in their motivation to read as measured by each of the three subscales contained in the AMRP-R. This type of statistic is useful when the more than one dependent variable is being examined. The MANCOVA can be used to determine whether groups differ on one or more of these dependent variables (Gall et al., 2006). A Bonferroni correction was used to adjust the alpha to a more stringent level in the post hoc comparisons of groups, thereby diminishing the probability of making a Type I error (Meyers et al., 2006).

Though research question two had one dependent variable, motivation to read, the instrument contained three subscales: value of reading, self concept of the reader, and instruction of reading. The researcher compared the difference in means of the two groups for each of these three subscales using SPSS.

\textbf{Limitations of the Study}

To appropriately attribute the effects on a dependent variable to a specific treatment, the researcher must be cognizant and control for possible threats to the internal validity of the study. Internal validity refers to the degree to which \textquotedblleft extraneous variables have been controlled by the researcher, so that any observed effect can be attributed solely to the treatment variable\textquotedblright (Gall et al., 2006, p. 383). Differential selection of the research participants may have posed a potential threat to the internal validity of the study. Participants may have varied in degree and type of reading deficiencies, given the
disparities between the number of Special Education students (SPED) and English language learners (ELL) in the experimental group compared to the comparison group. The percentage of ELL and SPED students differed significantly between instructional groups. The LANGUAGE! literacy group was comprised of approximately 19% SPED students and 67% ELL students, whereas the balanced literacy group contained no SPED students and only 10% ELL students (see Table 1). However, the researcher purposefully chose not to measure discrete skills such as fluency, because while related to reading comprehension, they are but a single facet of the construct and directly taught to in the LANGUAGE! program. In practice, an effective literacy program should impact reading comprehension as a whole, and not simply isolated skills.

Because of the number of experimenters involved in the study, treatment fidelity, or the degree to which both the experimental and comparison programs were implemented with consistency, was a potential threat to the study. Consequently, the researcher took several steps to control for this possibility. First, all teachers implementing the experimental treatment participated in three consecutive six-hour training sessions conducted by a consultant from the LANGUAGE! program. They again received training for a full day mid-year. Furthermore, these teachers met bi-weekly to discuss and coordinate their lessons. The LANGUAGE! literacy curriculum follows prescribed lessons ensuring a heightened probability of consistency between instructors. Additionally, administrators, who also underwent the training, conducted weekly walk-throughs to monitor implementation of the literacy program. Similarly, teachers delivering the balanced literacy instruction (comparison) followed the same curriculum and pacing map, which had been approved by the school district as the regular education
language arts and reading curriculum. These teachers also met two to three times a week to monitor progress on the pacing map, create common assessments, and ensure fidelity to the curriculum. Administrators also conducted weekly walk-throughs of these classrooms as well. The researcher further met with all teachers as a group and individually to explain the study, administration of the instruments and collection of data. Additionally, at the culmination of the study, the researcher administered a questionnaire to all teachers in the study to identify any digressions from either the experimental or comparison programs. Nevertheless, because teachers are encouraged to differentiate instruction to best meet the needs of their students, the potential exists that their actions in doing so may have influenced the results of the study as opposed to the independent variable itself.

Furthermore, in evaluating the efficacy of the two programs, the potential impact of instructors’ familiarity with each program must be considered. Though all teachers of the LANGUAGE! literacy received multiple training sessions and were given common meeting times, the fact remains that the balanced literacy curriculum, though having undergone yearly revisions, had been in practice in the district in its current form for the past five years, whereas the LANGUAGE! literacy program was in its first year of implementation.

There may also have been a testing threat related to the AMRP-R as the students took the same version of the instrument pre and posttest, meaning that students’ familiarity with the assessment may have affected their responses on the posttest. However, this threat would have been true of both the comparison and experimental groups. There was also a potential statistical regression threat for participants in the study.
related to the reading comprehension, particularly for those in the experimental group as the mean scores of the pretest on the DRP were lower than those of the comparison group. Statistical regression refers to the “tendency for research participants whose scores fall at either extreme on a measure to score nearer the mean when the variable is measured a second time” (Gall et al., 2006, p. 385).

Likewise, for the study to be of practical value to educators, the results should be applicable to populations other than that contained in the study. The degree to which “the findings of an experiment can be applied to individuals beyond those that were studied” is referred to as external validity (Gall et al., 2006, p. 388). Finally, there was no random assignment of participants, thus violating the assumption of independence. To control for this limitation, the researcher used multiple teachers and classes in her study. Furthermore, no student participating in the experimental group participated in the comparison group.

**Statement of Ethics and Confidentiality**

The researcher adhered to the strict ethical procedures required by the Western Connecticut State University (WCSU) Institutional Review Board (IRB). Permission to conduct the study was obtained from the school administration and associate superintendent of the school district. Prior to commencing the study, permission was sought from the WCSU IRB. Upon approval, written informed consent was requested from the parents of those students participating in the study. Written assent was also sought from all students in the sample. To insure confidentiality, student names were not reported in the study. Individual DRP scores were stored on the school database as they are part of the district testing. The remaining data were stored in a locked filing cabinet.
in the home of the researcher. Data are accessible only to the researcher, school administrators, and other researchers for whom the data proved useful in further comparative analyses and who were enrolled in Western Connecticut State University’s Doctor of Education in Instructional Leadership Program.
CHAPTER FOUR: ANALYSIS OF THE DATA AND FINDINGS

The purpose of this study was to determine the impact of the LANGUAGE! literacy program on the reading comprehension and motivation to read of struggling middle school readers. This chapter reviews the research questions and hypotheses, and explicates the statistical procedures that were done for each research question; namely, the discussion includes the data cleansing methods, statistical analyses used, alterations made to control for threats to validity, as well as the results of all procedures. Post hoc comparisons of each level of the independent variable were conducted as appropriate to identify which, if any, level of treatment had the greatest effect on the respective dependent variable or variate. The first research question relating to reading motivation was analyzed using an Analysis of Covariance (ANCOVA). The second research question examining motivation to read as delineated by value of reading, instruction of reading, and self-concept of reader was analyzed using a Multivariate Analysis of Covariance (MANCOVA). Summaries of all results are displayed in tables and figures throughout the chapter.

Research Questions and Hypotheses

1. Is there a significant difference in the reading comprehension of struggling middle school readers taught through the LANGUAGE! literacy curriculum and those taught through the balanced literacy curriculum?

   H₁: There is a significant difference in the reading achievement of struggling middle school readers taught through the LANGUAGE! literacy curriculum and those taught through the balanced literacy curriculum.

2. Is there a significant difference in the reading motivation of struggling middle
school readers taught through the LANGUAGE! literacy curriculum and those taught through the balanced literacy curriculum?

H2: There is a significant difference in the reading motivation of struggling middle school readers taught through the LANGUAGE! literacy curriculum and those taught through balanced literacy instruction.

Results for Research Question One

Research question one measured the impact of the LANGUAGE! literacy program (experimental group) compared to the balanced literacy program (comparison group) on the reading comprehension of struggling readers. Reading comprehension was assessed through the Degrees of Reading Power test administered in September (DRP-pre) prior to the inception of the treatment and again in May (DRP-post).

Data Cleansing and Coding

The study began with 175 participants. Before proceeding with data analyses, the researcher screened the dependent variables (reading comprehension and motivation to read) for missing values, outliers, and statistical assumption violations. As these missing values did not correspond systematically to a particular variable, but rather, resulted from teacher error in administering the instruments to all participants, either pre or post-treatment, as well as to student attrition, they were determined to be missing at random (MAR), and thereby eliminated from the study (Meyers et al., 2006). Participants missing values on either of the two dependent measures were thereby eliminated from the study, leaving a sample of 166.
**Data Analyses**

Participants’ pre-treatment reading comprehension scores (DRP-pre) were analyzed prior to running analysis on post-treatment reading comprehension scores (DRP-post). Median scores on the dependent variable (DRP-pre) were examined for univariate outliers. Using a box and whiskers plot, one outlier was identified and removed from the experimental group. The box and whiskers plot identifies scores that lie beyond the first and third quartiles, known as the interquartile range (IQR) (Meyers et al., 2006). Data points falling outside ±1.5 IQRs are identified as outliers and thereby removed so as not to adversely affect the results of the study. Figure 1 displays the box and whisker plots for the univariate outliers on the DRP-pre scores. No univariate outliers were observed in the DRP posttest scores. Further screening processes were conducted for the multivariate analysis of motivation to read and will be discussed later in the chapter under research question two.
Participants’ DRP-pre scores were then analyzed to assess for initial differences in reading comprehension between groups. The researcher ran an independent samples t-test to compare the mean scores of the two levels of the independent variable on the pre-test. The comparison was found to be statistically significant, $t(99.77) = 10.71, p < .001$, indicating that the mean pretest DRP scores of the comparison (balanced literacy) and experimental (LANGUAGE!) groups were unequal. The results of the independent samples t-test are displayed in Table 3. In order to control for initial differences in reading comprehension between groups, the DRP pretest scores were used as a covariate in an analysis of covariance (ANCOVA).

Table 3
**Independent Samples t – Test for DRP-pre**

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig</th>
<th>Mean Diff</th>
<th>Std Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10.71</td>
<td>99.77</td>
<td>.00</td>
<td>12.65</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Before proceeding with the ANCOVA, the researcher analyzed the DRP posttest scores to determine whether all assumptions for the statistical analysis had been met. Skewness and kurtosis values were examined to determine normality of the distribution of scores across the sample (n=166). Skewness refers to the symmetry of a distribution, and kurtosis refers to the clustering of scores toward the center of a distribution for a given variable (Meyers et al., 2006). The skewness and kurtosis values were found to be within the acceptable limits of ±1.0 for each level of the independent variable as well as the total scores combined, indicating a relatively normal distribution of scores (Meyers et al., 2006). Table 4 displays the descriptive statistics for the reading comprehension scores as measured by the DRP.

**Table 4**

**Descriptive Statistics for DRP Post-Test Scores**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Kurtosis</th>
<th>Skewness</th>
<th>Minimum to Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison</td>
<td>98</td>
<td>63.65</td>
<td>8.85</td>
<td>.17</td>
<td>.32</td>
<td>43 to 87</td>
</tr>
<tr>
<td>Experimental</td>
<td>66</td>
<td>52.68</td>
<td>8.25</td>
<td>-.04</td>
<td>.15</td>
<td>36 to 72</td>
</tr>
<tr>
<td>DRP-post</td>
<td>164</td>
<td>59.25</td>
<td>10.66</td>
<td>.39</td>
<td>.18</td>
<td>36 to 87</td>
</tr>
</tbody>
</table>
A Levene’s Test for Equality of Variances was used to assess for homogeneity of variance of the DRP posttest scores of the comparison and experimental groups. The test was non-significant at \( p \leq .05 \), indicating that the variance in mean scores of the dependent variable (i.e. DRP-post) across levels of the independent variable (instructional program) was equal. The results of the Levene’s Test for Equality of Variances are displayed in Table 5.

Table 5

*Levene’s Test Of Equality of Error Variances for Dependent Variable: DRP-post*

<table>
<thead>
<tr>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>.264</td>
<td>1</td>
<td>161</td>
<td>.61</td>
</tr>
</tbody>
</table>

The researcher then tested the assumption for homogeneity of regression slopes to assess the interaction of the covariate with the dependent variable. The interaction was not statistically significant, \( F(1, 159) = 3.69, p = .06 \) (\( p < .05 \)), indicating that no significant interaction existed between the DRP-pre scores and the outcome variable, and therefore, the assumption had not been violated. Results are displayed in Table 6.
Table 6

*Analysis of Homogeneity of Regression Slopes*

<table>
<thead>
<tr>
<th>Type of Squares</th>
<th>Type III Sum</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>125.91</td>
<td>1</td>
<td>125.91</td>
<td>2.08</td>
<td>.15</td>
</tr>
<tr>
<td>DRP-pre</td>
<td>2172.20</td>
<td>1</td>
<td>2172.20</td>
<td>35.90</td>
<td>.00</td>
</tr>
<tr>
<td>Group*DRP-pre</td>
<td>223.71</td>
<td>1</td>
<td>223.71</td>
<td>3.69</td>
<td>.06</td>
</tr>
<tr>
<td>Error</td>
<td>19619.45</td>
<td>159</td>
<td>60.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>590809.00</td>
<td>163</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>16303.91</td>
<td>162</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Given that these assumptions had been met, the researcher proceeded with the ANCOVA. The dependent variable was reading comprehension (DRP-post) and the independent variable was instructional program with two levels: balanced literacy (comparison) and LANGUAGE! literacy (experimental). The DRP-pre scores were used as the covariate to control for initial differences in reading comprehension. A statistically significant effect was observed for reading comprehension (DRP-post) between the two levels of the independent variable, $F(1, 160) = 6.78, p = .01$ ($p < .025$). Table 7 displays the results of the ANCOVA.
Table 7

*Results of One-Way ANCOVA, Tests of Between-Subjects Effects (Dependent Variable: DRP-post)*

<table>
<thead>
<tr>
<th></th>
<th>Type III Sum</th>
<th>Partial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>of Squares</td>
<td>df</td>
</tr>
<tr>
<td>Corrected Model</td>
<td>6461.40$^a$</td>
<td>2</td>
</tr>
<tr>
<td>Intercept</td>
<td>3442.04</td>
<td>1</td>
</tr>
<tr>
<td>DRP-pre</td>
<td>1949.13</td>
<td>1</td>
</tr>
<tr>
<td>Group</td>
<td>416.79</td>
<td>1</td>
</tr>
<tr>
<td>Error</td>
<td>9842.52</td>
<td>160</td>
</tr>
<tr>
<td>Total</td>
<td>590809.00</td>
<td>163</td>
</tr>
<tr>
<td>Corrected Total</td>
<td>16303.91</td>
<td>162</td>
</tr>
</tbody>
</table>

a. $R^2 = .396$ (Adjusted $R^2 = .389$)

Pairwise comparisons further indicated that the comparison group scored higher ($MD = 4.39, SE = 1.69$) on the DRP posttest than the experimental group. Therefore, the non-directional hypothesis that instructional program has a statistically significant effect on the dependent variable of reading comprehension was accepted. The results of the pairwise comparisons are summarized in Table 8.
Table 8

Pairwise Comparisons (Dependent Variable: DRP-post)

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Sig.ª</th>
<th>97.5% Confidence Interval for Differenceª</th>
</tr>
</thead>
<tbody>
<tr>
<td>comparison</td>
<td>experimental</td>
<td>4.39</td>
<td>1.69</td>
<td>.01</td>
<td>1.06 - 7.73</td>
</tr>
<tr>
<td>experimental</td>
<td>comparison</td>
<td>-4.39</td>
<td>1.69</td>
<td>.01</td>
<td>-7.73 - -1.06</td>
</tr>
</tbody>
</table>

ªthe difference is significant at the .025 level; a. Adjustment for multiple comparisons: Bonferroni

Although there was a significant difference in the mean scores of the comparison and experimental groups, the effect size (partial $\eta^2 = .04$) indicated that only 4% of the variance in scores could be attributed to the independent variable (instructional program).

Results for Research Question Two

The second research question assessed how the instructional program impacted student motivation to read in terms of value of reading, self-concept as a reader, and instruction of reader. The motivation to read variable was chosen by the researcher because of its relationship to reading achievement explained in the literature related to these two constructs. The scores for the AMRP-R were collected and each subscale was calculated, establishing the three dependent variables listed above, in addition to a composite score for motivation to read. The three dependent variables were compared across the two levels of the independent variable (instructional program).
Data Cleansing and Coding

Each dependent variable was analyzed for missing values and SPSS listwise deletion was used to eliminate these data from the analysis. Four participants were deleted from the comparison group and four were eliminated from the experimental group. The researcher then assessed the data for univariate outliers with a box and whisker plot for each dependent variable. No outliers were identified on any of the dependent variables for the experimental group. While no outliers were identified for the comparison group on the value of reading or self concept of reader dependent variables, one outlier was identified for instruction of reading (see Figure 2). This case was deleted from all subsequent analyses. The data were then screened for multivariate outliers using a Mahalanobis distance measure. No multivariate outliers were observed.

Figure 2. Box and Whisker Plots of Univariate Outliers for Instruction of Reading
Data Analyses

Descriptive statistics on each of the dependent variables indicated no normality violations across any level of the independent variable (group), indicating that the data were normally distributed for all subscales of the AMRP-R for all participants. Skewness and kurtosis values were below the acceptable limits of ±1.0 for each dependent variable. Table 9 displays the descriptive statistics for each of the dependent variables by group. Before proceeding with further analyses, the researcher conducted an independent samples \( t \)-test on the composite motivation to read variate pre-test, to determine whether the mean scores of the comparison and experimental groups were equal. The comparison was found to be statistically significant, \( t(153) = 2.34, p < .05 \), indicating that the initial motivation to read the of the comparison and experimental groups was unequal. To control for these initial differences, the researcher conducted a MANCOVA using each dependent variable pre-test as the covariate. The results of the independent samples \( t \)-test are displayed in Table 9.

Table 9

Independent Samples \( t \)-Test for Motivation to Read Pre-Test

<table>
<thead>
<tr>
<th>( t )</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.34</td>
<td>153</td>
<td>.02.</td>
<td>.03</td>
<td>.01</td>
</tr>
</tbody>
</table>

The use of more than one quantitative dependent variable further required an assessment of homoscedasticity, or the assumption of equality of covariance matrices. A Box’s Test of Equality of Covariance Matrices tests the null hypothesis that the observed
covariance matrices of the dependent variables are equal across levels of the independent variable. The results of the Box’s Test, $F(6, 88068) = 1.906, p = .076$, were non-significant ($p > .05$) indicating that the assumption of equality of covariance matrices had
Table 10

*Descriptive Statistics for Motivation Subscales*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Minimum to Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of Reading</td>
<td>Comparison</td>
<td>.63</td>
<td>.14</td>
<td>-.25</td>
<td>-.54</td>
<td>.25 to .91</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>.58</td>
<td>.14</td>
<td>-.02</td>
<td>-.87</td>
<td>.34 to .84</td>
</tr>
<tr>
<td>Instruction of Reading</td>
<td>Comparison</td>
<td>.74</td>
<td>.11</td>
<td>-.41</td>
<td>-.29</td>
<td>.45 to .95</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>.70</td>
<td>.10</td>
<td>-.26</td>
<td>-.49</td>
<td>.45 to .90</td>
</tr>
<tr>
<td>Self-Concept of Reader</td>
<td>Comparison</td>
<td>.73</td>
<td>.11</td>
<td>.40</td>
<td>-.10</td>
<td>.43 to .96</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>.67</td>
<td>.13</td>
<td>-.02</td>
<td>-.22</td>
<td>.36 to .96</td>
</tr>
</tbody>
</table>
been met. Additionally, the dependent variables should be moderately correlated when running a MANCOVA (Field, 2005). Bartlett’s Test of Sphericity was statistically significant (approximate chi square = 32.67, \( p < .001 \)), indicating sufficient correlation between the dependent variables. Furthermore, a Levene’s Test of Equality of Error Variances was non-significant, indicating that all dependent variables met the assumption of homogeneity of variance. Results for the Levene’s Test are displayed in Table 11.

Table 11

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of Reading</td>
<td>3.41</td>
<td>1</td>
<td>140</td>
<td>.07</td>
</tr>
<tr>
<td>Instruction of</td>
<td>0.70</td>
<td>1</td>
<td>140</td>
<td>.41</td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-concept of</td>
<td>4.45</td>
<td>1</td>
<td>140</td>
<td>.06</td>
</tr>
<tr>
<td>Reader</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All properties of the data, therefore, met the necessary statistical assumptions to proceed with the MANCOVA. The researcher evaluated the composite dependent variate of motivation to read for group differences, using the Wilks’s Lambda test statistic. As evidenced in Table 12, the dependent variate was not statistically significant (\( p < .025 \)).
Table 12

*Multivariate Tests Effects on Motivation to Read*

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis</th>
<th>Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>Wilks’s Lambda</td>
<td>.86</td>
<td>7.56\textsuperscript{a}</td>
<td>3.00</td>
<td>135.00</td>
</tr>
<tr>
<td>Group</td>
<td>Wilks’s Lambda</td>
<td>.96</td>
<td>2.00\textsuperscript{a}</td>
<td>3.00</td>
<td>135.00</td>
</tr>
</tbody>
</table>

*Note: a. Exact statistic; b. Design: Intercept+Group*

The researcher further examined the Tests of Between-Subjects Effects for each of the dependent variables (value of reading, instruction of reading, self-concept of reader), and as expected based on the Multivariate Tests Effects, found no statistical significance. Results for the Tests of Between-Subjects Effects are displayed in Table 23. Because the multivariate test was not statistically significant, the researcher rejected the non-directional hypothesis that instructional program has an impact on motivation to read.
<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent Variable</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>Instruction of Reading-post</td>
<td>.854&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4</td>
<td>.214</td>
<td>33.66</td>
<td>.000</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>Self-Concept of Reader-post</td>
<td>1.154&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4</td>
<td>.289</td>
<td>47.35</td>
<td>.000</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>Value of Reading-post</td>
<td>.1.526&lt;sup&gt;c&lt;/sup&gt;</td>
<td>4</td>
<td>.382</td>
<td>44.78</td>
<td>.000</td>
<td>.02</td>
</tr>
<tr>
<td>Intercept</td>
<td>Instruction of Reading-post</td>
<td>.105</td>
<td>1</td>
<td>.105</td>
<td>16.62</td>
<td>.000</td>
<td>.98</td>
</tr>
<tr>
<td></td>
<td>Self-Concept of Reader-post</td>
<td>.067</td>
<td>1</td>
<td>.067</td>
<td>11.03</td>
<td>.001</td>
<td>.97</td>
</tr>
<tr>
<td></td>
<td>Value of Reading-post</td>
<td>.021</td>
<td>1</td>
<td>.021</td>
<td>2.43</td>
<td>.122</td>
<td>.95</td>
</tr>
<tr>
<td>Group</td>
<td>Instruction of Reading-post</td>
<td>.022</td>
<td>1</td>
<td>.022</td>
<td>3.48</td>
<td>.064</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>Self-Concept of Reader-post</td>
<td>.021</td>
<td>1</td>
<td>.021</td>
<td>3.39</td>
<td>.068</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>Value of Reading-post</td>
<td>.000</td>
<td>1</td>
<td>.000</td>
<td>.04</td>
<td>.837</td>
<td>.02</td>
</tr>
<tr>
<td>Error</td>
<td>Instruction of Reading-post</td>
<td>.869</td>
<td>137</td>
<td>.006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-Concept of Reader-post</td>
<td>.835</td>
<td>137</td>
<td>.006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Value of Reading-post</td>
<td>1.167</td>
<td>137</td>
<td>.009</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 13 (continued)

Tests of Between-Subjects Effects on Motivation to Read Variables

<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent Variable</th>
<th>Type III Sum</th>
<th>df</th>
<th>Mean</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta of Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>Instruction of Reading-post</td>
<td>75.387</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-Concept of Reader-post</td>
<td>73.675</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Value of Reading-post</td>
<td>54.627</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>Instruction of Reading-post</td>
<td>1.85</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-Concept of Reader-post</td>
<td>2.25</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Value of Reading-post</td>
<td>2.96</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: a. $R^2 = .567$ (Adjusted $R^2 = .554$); b. $R^2 = .496$ (Adjusted $R^2 = .481$); c. $R^2 = .580$ (Adjusted $R^2 = .568$)
CHAPTER FIVE: SUMMARY AND CONCLUSIONS

The purpose of this study was to determine the impact of the LANGUAGE! literacy program on the reading comprehension and motivation to read of struggling middle school readers in comparison to balanced literacy instruction. Much research has been done identifying specific elements of effective reading instruction and the impact of such on reading comprehension. Furthermore, studies indicate a strong relationship between motivation to read and reading achievement. However, no empirical studies could be found comparing the impact of instructional programs that emphasize these recommended elements to varying degrees, on reading comprehension and motivation to read.

This chapter includes a review of the findings as they relate to each research question and hypothesis. The chapter also relates the present study to the review of the literature. Next, the chapter discusses the limitations and implications of the study. Finally, suggestions for future research are given at the conclusion of the chapter.

Review of the Findings

Research Question One

An ANCOVA was used to analyze the effect of the independent variable (instructional program) on the dependent variable (reading comprehension), using DRP-pre scores as a covariate to control for initial differences in reading comprehension between the two groups. The experimental group participated in the LANGUAGE! literacy program, while the comparison group received balanced literacy instruction. The dependent variable, reading comprehension, was measured using participants’ DRP posttest scores. Participants’ DRP scores from September were used as pretests to assess
for initial differences in reading comprehension between the two groups. As differences in mean scores were found to exist on the pretest, these scores were used as a covariate to equate the groups on their level of reading comprehension when conducting the ANCOVA.

As hypothesized by the researcher, a statistically significant effect was observed for reading comprehension (DRP-post) between levels of the independent variable, $F(1, 160) = 6.78, p = .01 (p < .025)$. Pairwise comparisons indicated that those students taught through balanced literacy had a statistically higher mean score than did those students taught through the LANGUAGE! literacy program.

**Research Question Two**

To assess the impact of each instructional program on motivation to read, the researcher conducted a MANCOVA, that included each of the subscales of the AMRP-R: value of reading, instruction of reading, and self-concept of reader. As initial difference in motivation to read pretest scores were found, pretest scores of these subscales were used as covariates. The AMRP-R was administered to all participants at the inception of the study (pretest) and at the conclusion of the study (posttest). Analysis of the pretest showed no statistically significant differences on any of the subscales of the dependent variables. No statistically significant effect was observed on the dependent variate between levels of the independent variable, Wilks’s Lambda = .96, $F(3, 135) = 2.00^a$, $p = .12$.

**Relationship to Review of the Literature**

Much research has been devoted to identifying effective elements of reading instruction to promote reading comprehension and achievement (Biancarosa & Snow,
The NRP (2000) cited five critical components of effective reading instruction and interventions: phonemic awareness; phonics; fluency; vocabulary; and comprehension strategies. Proponents of the LANGUAGE! literacy program claim that reading deficiencies lie with deficiencies in understanding the form and function of language, as well as how to apply specific strategies when reading (Greene, 1996).

Consequently, each lesson included six elements: phonemic awareness and phonics; word recognition and spelling; vocabulary and morphology; grammar and usage; listening and reading comprehension; and speaking and writing.

Advocates of balanced literacy view strategy instruction and engaged reading as central to promoting reading comprehension and achievement, and while not discounting the importance of word-level knowledge, they promote a balanced approach focusing on building background knowledge and improving the use of comprehension strategies, in addition to building word-level competencies (Pressley, 2000). The NRP (2000) furthered that specific cognitive strategies must be learned and applied to develop competent and self-regulated readers, and that students “who are not explicitly taught these procedures are unlikely to learn, develop, or use them spontaneously” (p. 4-40).

While many studies exist assessing the impact of each type of instruction on specific elements of reading comprehension, no empirical studies were found comparing the two programs.

One possible explanation relates to the use of the DRP to measure reading comprehension in the present study. In a longitudinal study spanning three years in nine high poverty elementary schools in San Diego, Bitter et al. (2009) found that balanced literacy instruction led to increased reading comprehension as measured by the DRP.
Instruction focused on supporting higher level thinking about a text, both orally and in writing; encouraging independent use of word recognition and comprehension strategies during reading activities; using a student support stance; and, promoting active involvement in literacy activities. However, three specific instructional methods used in the program were found to have a statistically significant positive relationship to reading comprehension as measured by the DRP: higher-level questioning and discussion of text; writing instruction; and accountable talk (Bitter et al., 2009). While the LANGUAGE! literacy program included some strategy work, it focused more intensely on word-level knowledge skills, which may be equally as important in improving reading comprehension over time, but not as readily apparent on this type of instrument over a period of 10 months, as was the case in the current study.

Furthermore, the theoretical foundation upon which this study was based, namely, expectancy-value theory of achievement motivation and the social cognitive theory of learning, emphasized the influence of expectancies for success, ability beliefs, subjective task values, self-concept and self-efficacy, on achievement. Furthermore, research indicates that as children approach middle school, their motivation to read declines, and the nature of reading becomes more difficult and complex; these issues are exacerbated for struggling readers as they must cope with a history of difficulty and failure in this area. While many studies have been done on the impact of such programs on discrete skills, no empirical studies were found measuring the influence of motivation and reading comprehension.
Limitations of the Study

To appropriately attribute the effects on a dependent variable to a specific treatment, the researcher must be cognizant and control for possible threats to the internal validity of the study. Internal validity refers to the degree to which “extraneous variables have been controlled by the researcher, so that any observed effect can be attributed solely to the treatment variable” (Gall et al., 2006, p. 383). Differential selection of the research participants may have posed a potential threat to the internal validity of the study. Though all participants scored below goal on the DRP scores, this was but a single measure of their reading comprehension. Other factors may have contributed to student placement in the LANGUAGE! literacy program, which may have impacted their reading difficulties and performance. However, the researcher chose not to use the multiple choice and open-ended format because the instruments had no validity and reliability data. Similarly, the researcher purposefully chose not to measure isolated skills such as fluency, because while related to reading comprehension they are but a single facet of the construct and directly taught to in the LANGUAGE! program. In reality, an effective literacy program should impact reading comprehension as a whole, and not simply isolated skills.

There may have also been a testing threat related to the AMRP-R as the students took the same version of the instrument pre and posttest, meaning that students’ familiarity with the assessment may have affected their responses on the posttest. However, this threat would have been true of both the comparison and experimental groups. There was also a potential statistical regression threat for participants in the study related to the reading comprehension, particularly for those in the experimental group as
the mean scores of the pretest on the DRP were lower than those of the comparison group. Statistical regression refers to the “tendency for research participants whose scores fall at either extreme on a measure to score nearer the mean when the variable is measured a second time” (Gall et al., 2006, p. 385).

Likewise, for the study to be of practical value to educators, the results should be applicable to populations other than that contained in the study. The degree to which “the findings of an experiment can be applied to individuals beyond those that were studied” is referred to as external validity (Gall et al., 2006, p. 388). Because of the number of experimenters involved in the study, treatment fidelity, or the degree to which both the experimental and comparison curricula were implemented with consistency, was a potential threat to the study. Consequently, the researcher took several steps to control for this possibility. First, all teachers implementing the experimental treatment participated in three consecutive six-hour training sessions conducted by a consultant from the LANGUAGE! program. They again received training for a full day mid-year. Furthermore, these teachers met bi-weekly to discuss and coordinate their lessons. The LANGUAGE! literacy curriculum follows prescribed lessons ensuring a heightened probability of consistency between instructors. Additionally, administrators, who also underwent the training, conducted weekly walk-throughs to monitor implementation of the literacy program. Similarly, teachers delivering the balanced literacy instruction followed the same curriculum and pacing map, which had been approved by the school district as the regular education language arts and reading curriculum. These teachers also met two to three times a week to monitor progress on the pacing map, create common assessments, and ensure fidelity to the curriculum. Administrators also
conducted weekly walk-throughs of these classrooms as well. The researcher further met with all teachers as a group and individually to explain the study, administration of the instruments and collection of data. Additionally, at the culmination of the study, the researcher administered a questionnaire to all teachers in the study to identify any digressions from either the experimental or comparison programs. Nevertheless, because teachers are encouraged to differentiate instruction to best meet the needs of their students, the potential exists that their actions in doing so may have influenced the results of the study as opposed to the independent variable itself. Similarly, the balanced literacy curriculum had been in effect for five years prior to the commencement of the study, as opposed to the LANGAUGE! literacy program which was in its first year of implementation. Consequently, the instructors’ familiarity and comfort with each of the respective programs was undoubtedly different and therefore, a limitation to consider, the impact of which could not be empirically assessed within the confines of the current study. Finally, there was no random assignment of participants.

**Implications of the Study**

The present study reinforced the need for continued research related to interventions and literacy instruction for students who struggle with reading. Though there was a statistical difference between the two groups in the study with students in balanced literacy scoring slightly higher on the reading comprehension measure after controlling for initial differences in this area, both groups made growth in this area. Though the difference was significant, from a practical standpoint, it was marginal with an effect size of .04, indicating that only 4% of the variance in mean scores between the two groups could be accounted for by instructional program.
Furthermore, the effectiveness of the LANGUAGE! literacy program should not be immediately discredited. Balanced literacy has been part of the language arts curriculum in the district for the past five years, adapted from reader’s and writer’s workshop that had been in place five years prior to that. Consequently, the degree of familiarity, expertise, and comfort that teachers have with the balanced literacy curriculum logically is far greater than expected with a program that is in its initial year of implementation, as is the LANGUAGE! literacy program. These are all factors that could have influenced the effectiveness of the program. Had there been a large difference in the adjusted mean score between the two groups, a decline in reading comprehension scores of the LANGUAGE! students, or significant differences in the attitudinal measures between the participants, then perhaps one could draw more definitive conclusions about the effectiveness of one program over the other; however, since the results of the study indicated none of these issues, both programs should be considered viable options for literacy instruction targeting struggling readers, pending further investigation.

Reading comprehension is a complex process made up of discrete cognitive skills and strategies that work together to allow the reader to derive meaning from text. The researcher chose to measure reading comprehension as a whole rather than discrete skills, as the former is ultimately the goal of literacy instruction. Nevertheless, because reading comprehension is a function of these skills and strategies, perhaps progress on these specific elements do need to be measured individually, as together they lead to reading comprehension. Because reading deficiencies are so comprehensive and vast, perhaps the students in the two groups had different deficits, which were better addressed with a
specific type of instruction. For instance, perhaps the students reading below goal in the balanced literacy struggle with literacy not because they had a problem with word-level skills such as decoding, but with comprehension strategies, such as questioning or inferring. Then, the balanced literacy would have been more effective in improving their reading comprehension as instruction focuses largely on reading strategies and the application of such, whereas, the LANGUAGE! literacy program focuses more heavily on the structure and function of language, and how these work together to form meaning in a text.

Further complicating the issue are the motivational influences that may very well be the determinant of whether the individual partakes in the activity and appropriately applies the skills necessary to meet with success in this area. Though the results of the study yielded no statistically significant difference in motivation to read though improvement was made in reading comprehension, this is not surprising given the nature of the student in the study. Participants were chosen for the study because they scored below their grade level peers on multiple assessments. In addition to facing the natural decline in motivation to read that studies have shown to occur as students enter the middle school years, students with low reading achievement are likely to have a history of reading difficulties. Consequently, the value they place on the activity, as well as their reading self-concept are likely to be compromised at this point. The reversal of the negative impact of years of struggling in this domain is likely to take more than six months in a reading intervention, which is why further research is necessary before eliminating any program.
Suggestions for Future Research

The findings of this study indicated a significant impact on the reading comprehension of struggling middle school readers in a balanced literacy program, as well as those in the LANGUAGE! literacy program. While there was a statistically significant difference in the adjusted mean scores of the comparison group and of the experimental group, the practical significance of a three point difference on the DRP score, may in fact be insignificant relative to where the students began. Therefore, continued research is needed to further assess the effectiveness of each literacy program on the reading comprehension of struggling readers. The following recommendations are made based on the findings from this study:

1. Longitudinal studies should be conducted to assess the long-term impact on reading comprehension and motivation to read of struggling readers of students receiving LANGUAGE! literacy instruction and balanced literacy instruction. The results indicated significant growth in the reading comprehension of both groups, but further research is needed to determine whether this growth continues over the long-term. Furthermore, attitudinal variables may take longer to change, and therefore, would better be assessed over a longer period of time.

2. A replication of this study is recommended with the following alterations: (a) random assignment of participants to the control or treatment group; (b) analysis of data by subgroup (i.e., gender, language classification, special needs identification); (c) additional comprehensive measures of reading comprehension should be included in the study to assess this dependent
variable; (d) additional measure of discrete reading skills (i.e., fluency) to assess growth in specific areas; and (e) administration of the AMRP-R only at the end of treatment to eliminate familiarity with the instrument, a potential threat to validity, or use of an alternate research design such as the Solomon four-group design (Gall et al., 2006).

The current study added an important contribution to reading research by exploring the impact of balanced literacy instruction to that of structured, language-based instruction on the reading comprehension and motivation to read of struggling readers. Though a significant difference was observed for the adjusted mean reading comprehension scores between the two levels of the independent variable, the effect size was minimal warranting further investigation of the two types of literacy programs. Though all participants in the study scored below district goal on reading comprehension, students in the LANGUAGE! group potentially faced greater literacy challenges than those in the balanced literacy group given its higher percentage of special education students and English language learners. This should be considered when comparing the impact of the two programs. Finally, though no motivational differences were observed between the two levels of the independent variable, attitudinal constructs such as self-concept may take longer to change than academic constructs such as reading comprehension. Further investigation is merited in this area as well.
REFERENCES


Appendix A: Letter of Student Assent
June 1, 2009

Dear Student,

As you know, during the course of this year, you have taken and will again take in May the Degrees of Reading Power test that measures your level of reading comprehension. You will also be taking a survey called the Adolescent Motivation to Read Profile-Revised. As part of a research project that I am doing at Western Connecticut State University, I will be collecting and analyzing your scores to determine how your language arts instruction affects your reading comprehension and motivation to read. Your identity and individual scores will not be reported to anyone. Only the group’s scores will be reported as part of the study.

If you agree to have your scores be part of the study, please complete the following information. Your grade will not be affected if you choose to not have your scores by part of the project.

__________________________________
Name (print)

__________________________________  ________
Signature                Date

If you have any questions, you can ask your language arts teacher or come talk to me directly in room 229.

Sincerely,

Mrs. Ferreira
Appendix B: Letter of Parental Consent
June 1, 2009

Dear Parent or Guardian,

As part of a doctoral research study entitled, The Effects of the LANGUAGE! Literacy Program on the Reading Comprehension and Reading Motivation of Struggling Middle School Readers, I will be assessing the impact of the LANGUAGE! literacy program on reading comprehension and student motivation to read. In addition to the district testing administered to track growth in reading and writing, students will be administered the Adolescent Motivation to Read Profile-Revised. This survey measures attitudes toward reading and self-perceptions as a reader. I will be collecting and analyzing scores from both the survey and the Degrees of Reading Power assessment, which measures reading comprehension. All information collected will be reported based on group results, rather than individual student results. No individual student scores or identifying information will be reported in the study.

If you agree to have this information collected about your child, please complete the following information and return to your child’s language arts teacher by Friday, June 5th.

________________________________________  __________________________________________
Name of Child (print)  Name of Parent/Guardian (print)

________________________________________  __________________________________________
Name of Parent/Guardian (print)  Signature of Parent/Guardian
Date

This research project has been reviewed and approved by the WCSU Institutional Review Board. If you have questions concerning the rights of the subjects involved in research studies, please call WCSU Assurances Administrator, at (203) 837-8281.

If you have any further questions regarding the study or the information being collected, please feel free to contact me:
Phone: (203) 830-7327
ferreiraj@bethel.k12.ct.us

Sincerely,

Julie Ferreira
Reading and Language Arts Curriculum Leader
Appendix C: Adolescent Motivation to Read Profile - Revised
Adolescent Motivation to Read Survey- Revised

Name ___________________________________ No. ____________

Sample 1: I am in ________.  
1. Sixth grade  
2. Seventh grade  
3. Eighth grade  
4. Ninth grade  
5. Tenth grade  
6. Eleventh grade  
7. Twelfth grade

Sample 2: I am a ________.  
1. Female  
2. Male

Sample 3: My race/ethnicity is ________.  
1. African-American  
2. Asian/Asian American  
3. Caucasian  
4. Hispanic  
5. Native American  
6. Multi-racial/Multi-ethnic  
7. Other: Please specify ____________
1. When teachers encourage me to ask myself questions as I am reading, I _____.
   1. have never been taught this so I don't know
   2. am bored
   3. find this somewhat helpful
   4. find this very helpful

2. I think reading books is ______.
   1. a boring way to spend time
   2. an ok way to spend time
   3. an interesting way to spend time
   4. a great way to spend time

3. When I read out loud, I am _____.
   1. a very good reader
   2. a good reader
   3. an ok reader
   4. a poor reader

4. When teachers let me use computers to complete my homework, reports, or projects, I _____.
   1. cannot answer since this is not done in my classes
   2. am not more motivated
   3. like having the choice
   4. am very motivated

5. Reading magazines or newspapers is something I like to do.
   1. never
   2. not very often
   3. sometimes
   4. often

6. I read books ______.
   1. a lot better than my friends
   2. a little better than my friends
   3. about the same as my friends
   4. not as well as my friends

7. When teachers teach me to summarize what I have read and think about what I’ve learned, I _____.
   1. have never been taught this so I don't know
   2. am bored
   3. find this helpful
   4. find this very helpful
8. When I use the computer to stay in touch with others (email, instant messages, blogging, etc.), I think it is 
   1. a boring way to spend time
   2. an ok way to spend time
   3. an interesting way to spend time
   4. a great way to spend time

9. My friends think I am 
   1. a very good reader
   2. a good reader
   3. an ok reader
   4. a poor reader

10. When teachers teach us how to read the different parts of our textbook, such as graphs, headings, and the index, I 
    1. have never been taught this so I don't know
    2. am bored
    3. find this helpful
    4. find this very helpful

11. I think searching and reading information on the Internet for school projects is 
    1. a boring way to spend time
    2. an ok way to spend time
    3. an interesting way to spend time
    4. a great way to spend time

12. When it comes to reading books, I am 
    1. a very good reader
    2. a good reader
    3. an ok reader
    4. a poor reader

13. When teachers encourage me to think about connections between what I am reading and what I already know, I 
    1. have never been taught this so I don't know
    2. am bored
    3. find this helpful
    4. find this very helpful

14. I tell my friends about good magazines or newspapers I read. 
    1. I never do this
    2. I almost never do this
    3. I do this some of the time
    4. I do this a lot

15. When using the computer by myself, I understand 
    1. 

105
1. almost everything I read
2. some of what I read
3. almost none of what I read
4. none of what I read

16. Having a choice of what I am reading in class or for homework is_____.
   1. not done in my classes
   2. not something I care about
   3. okay
   4. very motivating for me

17. When someone gives me a book for a present, I feel_____.
   1. unhappy
   2. sort of unhappy
   3. sort of happy
   4. very happy

18. When answering a question about what I have read, I_____.
   1. always think of an answer
   2. can sometimes think of an answer
   3. often have trouble thinking of an answer
   4. can never think of an answer

19. When I have the opportunity to use the computer during class time, it is_____.
   1. not done in my classes
   2. boring
   3. okay
   4. very motivating for me

20. As an adult, I will spend_____.
   1. none of my time reading magazines or newspapers
   2. very little time reading magazines or newspapers
   3. some of my time reading magazines or newspapers
   4. a lot of my time reading magazines or newspapers

21. When I am reading a book by myself, I understand_____.
   1. almost everything I read
   2. some of what I read
   3. almost none of what I read
   4. none of what I read
22. Teachers reading aloud in my classes is _____.
   1. not done in my classes
   2. boring
   3. okay
   4. very motivating for me

23. I tell my friends about good books I read.
   1. I never do this
   2. I almost never do this
   3. I do this some of the time
   4. I do this a lot

24. When teachers have their own websites or email addresses, it _____.
   1. is not done in my classes
   2. is not helpful for me
   3. is sometimes helpful
   4. really helps me to learn

25. Reading a book is something I like to do.
   1. never
   2. not very often
   3. sometimes
   4. often
Adolescent Motivation to Read Survey - Revised

Administrators Directions

Distribute copies of the Adolescent Motivation to Read Survey and Answer Sheet. Have the students fill in their name and date.

**Directions:** Say: I am going to read some sentences to you. I want to know how you feel about your reading. *There are no right or wrong answers. I really want to know how you honestly feel about reading. I will read each item. Do not mark your answer until I tell you to. As I read the sentence, I want you to think about the best answer for you. When I am finished reading all of the answers, I want you to circle the number of your best answer on the answer sheet. Mark only one answer. Do not answer on the survey. Only circle answers on the answer sheet. Remember: Do not mark your answer until I tell you to. Ok, let's begin.

Read the first sample item: Say:
Sample 1: I am in (pause) 1. sixth grade, (pause) 2. seventh grade, (pause) 3. eighth grade, (pause) 4. ninth grade, (pause) 5. tenth grade, (pause) 6. eleventh grade, (pause) 7. twelfth grade. Now choose the best answer and circle it on your answer sheet.

Read the second sample item. Say:
Sample 2: I am a (pause) 1. female, (pause) 2. male. Now choose the best answer and circle it on your answer sheet.

Read the third sample item: Say:

**Directions for the administrator:** You read aloud the remaining items in the same way (e.g., number_, sentence stem followed by a pause, each option followed by a pause, and then give specific directions for students to mark their answers on the answer sheet

*If you want to assess students’ motivation in a specific content area, you may want to include the following at this point in the directions “I want to know how you feel about reading in this social studies class.”*
Adolescent Motivation to Read Survey-R

Directions for Scoring

Value of Reading

1. Add up the number of the answer choice for questions 2, 5, 8, 14, 17, 0, 23, 25.
2. Divide the total by 32 to calculate a percentage.

Instruction of Reading

1. Add up the number of the answer choice for questions 1, 4, 7, 10, 11, 13, 16, 19, 22, 24.
2. Divide the total by 40 to calculate a percentage.

Self-Concept of Reader

1. For questions 3, 6, 9, 12, 15, 18, 21, reverse the number of the answer of these questions (1 is 4, 2 is 3, 3 is 2, 4 is 1).
2. Add up these reversed numbers.
3. Divide the total by 28 to calculate a percentage.

Value of Reading – How the student values reading in different resources and at different times.

Instruction of Reading – Is the instruction that the student is participating in motivating the student? The answers to many of these questions will help the teacher to determine some research-based strategies.

Self-Concept of the Reader – How the student feels about his/her own reading abilities.
Directions: Listen as each item and choices are read. Then circle the number of the answer that you choose.

<table>
<thead>
<tr>
<th>Sample 1</th>
<th>1</th>
<th>2</th>
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| 1. | 1 | 2 | 3 | 4 |
| 2. | 1 | 2 | 3 | 4 |
| 3. | 1 | 2 | 3 | 4 |
| 4. | 1 | 2 | 3 | 4 |
| 5. | 1 | 2 | 3 | 4 |
| 6. | 1 | 2 | 3 | 4 |
| 7. | 1 | 2 | 3 | 4 |
| 8. | 1 | 2 | 3 | 4 |
| 9. | 1 | 2 | 3 | 4 |
| 10. | 1 | 2 | 3 | 4 |
| 11. | 1 | 2 | 3 | 4 |
| 12. | 1 | 2 | 3 | 4 |
| 13. | 1 | 2 | 3 | 4 |
| 14. | 1 | 2 | 3 | 4 |
| 15. | 1 | 2 | 3 | 4 |

| 16. | 1 | 2 | 3 | 4 |
| 17. | 1 | 2 | 3 | 4 |
| 18. | 1 | 2 | 3 | 4 |
| 19. | 1 | 2 | 3 | 4 |
| 20. | 1 | 2 | 3 | 4 |
| 21. | 1 | 2 | 3 | 4 |
| 22. | 1 | 2 | 3 | 4 |
| 23. | 1 | 2 | 3 | 4 |
| 24. | 1 | 2 | 3 | 4 |
| 25. | 1 | 2 | 3 | 4 |
Appendix D: Teacher Questionnaire (Balanced Literacy)
Name: ______________________

Teacher Questionnaire (Balanced Literacy)

1. What criteria do you use to identify the struggling readers in your classes?

2. Do you change your instructional strategies and activities to specifically address the needs of these struggling readers? If so, how often do you differentiate for these specific students (once a day, once a week, etc.)?

3. List the types of activities that you have used to specifically address the needs of struggling readers in your classes (please give specific examples if possible).
Appendix E: Teacher Questionnaire (LANGUAGE! Literacy)
Name: ______________________

Teacher Questionnaire (LANGUAGE! Literacy)

1. Please identify any instructional activities that you have done differently from those stated in the LANGUAGE! program (for example, novels, writing activities, etc.)? How often did you do these? Please be as specific as possible.

2. How closely did you follow the lessons prescribed in the LANGUAGE! program? Please be as specific as possible.

3. Please identify the level of book with which you began and with which you ended.

   a. Began with Book _______

   b. Ended with Book _______