A Regression Study: Middle School Literacy Leadership Practices in Virginia

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Dedication

To Kim, my beautiful bride, without your constant support and reminders that I could do this, I am not sure I could have ever finished. You took care of what needed to be done, so that I could persevere. Thank you for always believing in me, even when I did not believe in myself. You are my rock, and I love you!

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To my Mom and Dad, you laid the foundation for the person I am today. Thank you for giving me every opportunity to succeed. Your lessons in life have helped me to reach my potential as a student, worker, friend, husband, and father. You both taught me that nothing is impossible! Thank you, and I love you!

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Abstract

A Regression Study: Middle School Literacy Leadership Practices in Virginia

The National Assessment of Educational Progress (NAEP) reported that, in 2013, only 35% of Virginia's eighth grade students tested at or above the proficient level on the grade level assessment for reading (National Center for Education Statistics, 2013). *The Virginia State Report Card*, published each year by the Virginia Department of Education (VDOE), reported that during the 2012-2013 school year, 29% of all tested eighth grade students failed to meet expectations in reading (VDOE, 2014). The Alliance for Excellent Education (2011) reported that a large number of students leave high school every year without the necessary skills to succeed and that reading and writing instruction across all grades must be addressed. Students are failing to graduate on time, and postsecondary and career goals of young students are suffering. This study looked specifically at how middle level principals might address the literacy needs of their schools and students.

Several experts in the field of education have developed literacy leadership models to address the demands currently facing school leaders (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003). Based on a thorough examination and analysis of four literacy leadership models, five literacy leadership practices common to all models were identified. Survey data were collected in the following areas: literacy action planning, data-driven decision making, capacity building, instructional support, and resource allocation. Through descriptive statistics and multiple regression analysis, this nonexperimental study assessed the extent to which middle school principals in Virginia employed the identified literacy leadership practices

and the relationship of those practices to student achievement as measured by the Virginia Grade 8 Reading Standards of Learning (SOL) assessment. Although principals across the study identified that they did, in fact, employ the identified practices, the regression analyses resulted in nonsignificant findings at all levels.

Table of Contents

Dedication iii

Acknowledgments iv

Abstract vi

Table of Contents viii

List of Figures xiv

List of Tables xiv

Chapter 1: Introduction 1

Statement of the Problem 7

Purpose and Research Questions 10

Statement of Potential Significance 12

Conceptual Framework 13

Educational leadership 14

Adolescent literacy instruction 14

Literacy leadership 14

Summary of the Methodology 15

Limitations 16

Definition of Key Terms 17

Summary 188

Chapter 2: Critical Review of the Literature 20

Research Process 21

Description and Critique of Scholarly Literature 23

Educational leadership 23

Instructional leadership 25
Transformational leadership 29
Adolescent literacy research 34
Adolescent literacy practices 36
Literacy leadership 43
Literacy leadership models. 52
Taylor and Collins, 2003. 52
Guth and Pettengill, 2005 57
Phillips, 2005 61
Irvin, Meltzer, and Dukes, 2007. 65
Inferences for Forthcoming Study 69
Conceptual Framework for Forthcoming Study 71
Summary 74
Chapter 3: Methodology 76
Research Questions 77
Design 78
Participants 81
Instrument 83
Procedures 87
Data Handling 89
Data Analysis 90
Ethical Considerations 91
Summary 91

Chapter 4: Results 92
Description of the Population 93
Reliability of the Data 95
Survey Results: Sample Characteristics 95
School configuration 95
School enrollment 96
Division enrollment 96
Years of experience as principal 97
Years of experience as principal at current school 98
Standards of Learning Data 99
Presentation of the Data: Research Questions 99
Research question 1 99
Research question 2 100
Summary 105
Chapter 5: Interpretations, Conclusions, and Recommendations 106
Introduction 106
Summary of Results 107
Research question 1 107
Research question 2 108
Limitations 109
Interpretation of Findings 110
Extent of literacy leadership practices use 110

Predictive value of identified literacy leadership practices toward the reading scores of Virginia's eighth grade students 111
Conclusions and Recommendations 113
Implications for Practice 114
Recommendations for Further Research 115
Summary 116
References 118
Appendix A: Initial Questions for Literacy Leadership Practices Survey 128
Appendix B: Literacy Leadership Practices Survey 130
Appendix C: Survey Emails 132
Appendix D: Informed Consent 135
Appendix E: Spring 2013 Grade 8 Reading SOL Pass Rates 136
Appendix F: Durbin Watson Scores for Individual Literacy Leadership Practices 140
Appendix G: Data Plots for Individual Literacy Leadership Practices 141

List of Figures

Figure 1. *Normal probability plot of student reading scores with the combined literacy leadership practices as the predictor variable* 102

Figure 2. *Scatterplot of the standardized residual scores with the combined literacy leadership practices as the predictor variable* 102

Figure 3. *Histogram of the standardized residual scores with the combined literacy leadership practices as the predictor variable* 103

Figure 4. *Normal probability plot of student reading scores with literacy action planning as the predictor variable* 141

Figure 5. *Scatterplot of the standardized residual scores with literacy action planning as the predictor variable* 141

Figure 6. *Histogram of the standardized residual scores with literacy action planning as the predictor variable* 142

Figure 7. *Normal probability plot of student reading scores with data-driven decision making as the predictor variable* 143

Figure 8. *Scatterplot of the standardized residual scores with data-driven decision making as the predictor variable* 143

Figure 9. *Histogram of the standardized residual scores with data-driven decision making as the predictor variable* 144

Figure 10. *Normal probability plot of student reading scores with capacity building as the predictor variable* 145

Figure 11. *Scatterplot of the standardized residual scores with capacity building as the predictor variable* 145

Figure 12. *Histogram of the standardized residual scores with capacity building as the predictor variable* 146

Figure 13. *Normal probability plot of student reading scores with instructional support as the predictor variable* 147

Figure 14. *Scatterplot of the standardized residual scores with instructional support as the predictor variable* 147

Figure 15. *Histogram of the standardized residual scores with instructional support as the predictor variable* 148

Figure 16. *Normal probability plot of student reading scores with resource allocation as the predictor variable* 149

Figure 17. *Scatterplot of the standardized residual scores with resource allocation as the predictor variable* 149

Figure 18. *Histogram of the standardized residual scores with resource allocation as the predictor variable* 150

List of Tables

Table 1. *NAEP Eighth Grade Reading Proficiency Percentages for Virginia Students* ... 7

Table 2. *Virginia Grade 8 Reading SOL Proficiency Percentages* 8

Table 3. *Comparison of Literacy Leadership Models* 73

Table 4. *Five Literacy Leadership Domains and Related Survey Questions* 85

Table 5. *Survey Response Rates by Region* 94

Table 6. *Cronbach's Alpha Reliability Coefficients* 95

Table 7. *Approximate School Enrollment* 96

Table 8. *Approximate Division Enrollment* 97

Table 9. *Years of Experience as a Principal* 98

Table 10. *Years of Experience as a Principal at Current School* 98

Table 11. *Frequency Data Related to the Literacy Leadership Practices Survey* 100

Table 12. *Collinearity Statistics* 104

Table 13. *Simple Regression Analysis for the Five Literacy Leadership Practices* 105

Table 14. *Simple Regression Analysis for the Five Literacy Leadership Practices* 109

Chapter 1: Introduction

There has been much debate regarding the impact of school administrators' leadership behaviors on student achievement. Quinn (2002) noted that although the role of the principal as instructional leader has been researched extensively, scholars have not universally agreed upon the behaviors considered to be effective. Almost 10 years later, Jacobson (2011) drew from leadership literature and the findings associated with the International Successful School Principalship Project to conclude that, although best practices have emerged and are better realized, there continues to be uncertainty regarding leadership effects on student achievement. Research regularly supports the importance of school leadership, and researchers have continued to explore the efficacy of school leadership and its impact on student achievement and school reform (Blasé & Blasé, 1999; Hallinger, 2003; Hallinger, Bickman, & Davis, 1996; Keys, 2010; Leithwood & Riehl, 2003; Marks & Printy, 2003; Nason, 2011). Despite the ample amount of research focusing on school leadership, there has been a conspicuous absence of research regarding the manner in which instructional leadership behaviors directly relate to the literacy development of adolescent learners. In the past decade, increased attention has been directed toward developing a set of behaviors designed to assist school leadership in the implementation of effective literacy programs, and a small body of research has begun to emerge.

Over the years, several definitions of literacy have been discussed in the professional literature. The following definitions were drawn from the work of researchers determined to be experts in the field of literacy or leadership based on the content of their own research and the prevalence of their contributions to the field.

- Moje, Young, Readence, and Moore (2000) suggested that adolescent literacy varies greatly from content reading and secondary reading in that it encompasses a broader sense of what it is to be literate. This group of scholars believed the definition of adolescent literacy is distinctly different from that of other literacy areas. According to these researchers, "the term *adolescent literacy* points to distinctive dimensions of the reading and writing of youth" (Moje et al., 2000, p. 402). Their definition was dependent upon the functional aspects of literacy and focused on meeting the changing literary needs of young students.
- Alvermann (2001) defined literacy as the combination of "reading, writing, and other modes of symbolic communication that are often valued differently by people living in different social and economic structures and holding different political views" (p. 4). Alvermann expanded her definition of literacy to include multiple literacies that she viewed as having both formal and informal constructs.
- Jetton and Dole (2004) defined literacy as a lifelong process that constantly challenges and develops adolescent learners. They noted that readers use background knowledge to construct understanding of written text as they develop mastery of the basic reading processes. Jetton and Dole also characterized adolescent literacy as strategic and motivating, asserting that young readers utilize various problem-solving strategies when reading and that they are motivated by the intrinsic value of what they have read.

- Irvin et al. (2007) defined literacy as "the communication modes of reading, writing, listening, speaking, viewing and representing" (p. 9). In the context of their model for literacy leadership, these researchers were primarily concerned with how the term literacy applies to academic settings; they stated, "Helping students to understand, analyze, and respond to the challenging texts that they find in content-area classes is essential to the development of academic literacy habits and skills" (Irvin et al., 2007, p. 9).
- P. A. Edwards (2010) identified a broadened definition of literacy that involves much more than reading and writing. She stated that this broader definition of the term literacy is important as society engages in a changing technological landscape. The Internet, television, and other emerging literacies shape the way people interact with the world around them.

There are noticeable similarities within the previous definitions of literacy. Each scholar suggested that a true definition of literacy encompasses more than simply the ability to decode and find meaning in words. Similarly, review of the literature connected critical thinking skills to the development of literacy and indicated that the teaching of literacy skills to adolescents is a multifaceted process, requiring attention to both in-school and out-of-school instruction. The concept of multiple literacies also seems to be a common thread, suggesting that the process of working with middle school students is becoming more complicated. Despite the various definitions of literacy presented above, it is most commonly reading ability that is measured as an indicator of student literacy success in the public schools. Consequently, student achievement scores in reading were identified as the literacy measure to be examined in this study.

A review of the literature identified multiple literacy leadership models aimed at improving adolescent literacy instruction (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003). The identified models primarily resulted from methods that involved interview processes, observations, anecdotal data, and personal and professional experiences. Review of these models revealed a lack of quantitative data indicating that any one practice or complete model has had a significant impact on student achievement.

This study was designed to add to the research supporting the importance of literacy leadership practices through the use of well-designed quantitative measures. J. M. Edwards (2010) completed one of the few quantitative analyses in the area of literacy leadership. She explored various literacy leadership practices and their effect on student achievement. J. M. Edwards recommended that future research in the area of middle level literacy leadership might take the form of a survey instrument designed to measure the effect of literacy leadership practices. She stated, "It appears that although previous literature supports the use of literacy leadership practices to promote student reading achievement, there is a lack of actual empirical studies to support their use" (J. M. Edwards, 2010, p.146). Accordingly, the primary focus of this study was a comparison of multiple literacy leadership models and the identification of practices that are common to each of the existing models. A measurement instrument was created to quantify the common practices identified from the various literacy leadership models reviewed as part of this research. Multiple regression analysis was performed to analyze the relationships between each of the identified practices and student achievement. It was hypothesized that in the schools with principals who participated in this study that a statistically

significant relationship existed between the implementation of the common literacy leadership practices and students' scores on the Virginia Grade 8 Reading Standards of Learning (SOL) assessment.

Scholarly literature thoroughly addressed the potential impact of principal leadership practices on student achievement. Hallinger, Bickman, and Davis (1996) questioned whether principals actually make a difference in the achievement outcomes of students. Hallinger and Bickman, et al. focused their research specifically on principals' effect on reading achievement and concluded that principals' responsibility for student academic improvement is primarily of an indirect nature. Hallinger and Heck (1998) further reported on the indirect nature of school leaders' impact on student outcomes. This question appeared to represent a common theme throughout the research with regard to many areas of student achievement and school reform. More recently, Robinson, Lloyd, and Rowe (2008) performed a meta-analysis of studies regarding the effects of leadership types on student achievement. Their research focused on the more individualized effects of transformational leadership and instructional leadership on student achievement. Robinson, Lloyd, and Rowe stated that the evidence, "suggests that the impact of instructional leadership on student outcomes is notably greater than that of transformational leadership" (Robinson et al., 2008, p. 658).

With regard to literacy instruction and practices, Alvermann (2000) reported four key issues that plague middle schools and contribute to a growing crisis with regard to adolescent literacy: struggling readers, accelerated reading expectations, multiple literacies, and implementation of the middle grades literacy knowledge base. She stressed that middle schools often fail to acknowledge or utilize the large knowledge base

that is available concerning adolescent literacy programming, and that both teachers and administrators must recognize the importance of literacy and its effect on student achievement. Concern for the literacy success of adolescent students has increased consistently over the past 20 years and has been characterized as a national crisis (Jacobs, 2008). Cassidy, Valadez, Garrett, and Barrera (2010) commented that adolescent literacy has been an increasingly "hot" topic, becoming "very hot" following the report *Reading Next—A Vision for Action and Research in Middle and High School Literacy* (Biancarosa & Snow, 2006). Cassidy et al. (2010) further stated, "Despite the attention, there do not appear to be extensive reports of great successes" (p. 454). The need for improved attention to adolescent literacy continues to be made clear; however, practices in both instruction and leadership do not appear to be keeping up with the demand.

Stronge (1998) wrote, "If principals are to heed the call from educational reformers to be the instructional leaders, it is obvious that they must take on a dramatically different role" (p. 33). More recently, in referring to new principals, Catano and Stronge (2007) noted "principals should possess the knowledge and skills necessary to meet the demands of a multifaceted job" (p. 383). As demands on those in administrative positions continue to pull leaders in different directions, instruction must continue to be the priority. Leithwood and Riehl (2003) examined the importance of school administrators' providing quality leadership to meet current instructional demands. They suggested that the core of school leadership is governed by two functions: "providing direction and exercising influence" (Leithwood & Riehl, 2003, p. 7). The purpose of this study was to investigate such concepts as they apply to literacy leadership roles of middle school leaders in Virginia as well as the relationship of those

roles to student achievement.

Statement of the Problem

Biancarosa and Snow (2006) were instrumental in highlighting the rising crisis associated with adolescent literacy. Specifically, they noted the alarmingly high dropout rate and the high numbers of struggling readers as measured by national assessments. As did Biancarosa and Snow, Wise (2009) identified literacy as the "cornerstone of student achievement" (p. 373); however, he acknowledged that although literacy skills have continued to grow at the lower grades, this has not been the case in secondary schools. Wise also reported that literacy concerns could be tied to poor graduation rates and added that there could be considerable economic costs associated with the problem.

In 2013, the National Assessment of Educational Progress (NAEP) showed that only 35% of Virginia students tested in the eighth grade reading assessment scored at the proficient achievement level (National Center for Education Statistics [NCES], 2013). As shown in Table 1, the 2011 and 2009 NAEP reports reflected very similar results (NCES, 2009; NCES, 2011).

Table 1

NAEP Eighth Grade Reading Proficiency Percentages for Virginia Students

Year	Proficient/Advanced	Basic	Below basic
2009	32	46	22
2011	36	42	22
2013	35	42	23

The Virginia State Report Card published each year by the Virginia Department of

Education (VDOE) indicated similar outcomes with regard to the percentage of students found to be not proficient in reading. Table 2 depicts the proficiency percentages for students participating in the Virginia Grade 8 Reading SOL test. The most recent test scores measuring student achievement in year 2012-2013 indicated a noticeable increase in the failure rate. This increase can be directly attributed to Virginia's efforts to increase the rigor of its reading assessment for eighth grade students (VDOE, 2014).

Table 2

Virginia Grade 8 Reading SOL Proficiency Percentages

Year	Advanced	Proficient	Fail
2010-2011	44	46	10
2011-2012	44	45	11
2012-2013	12	59	29

Especially in light of Virginia's efforts to assess students based on more rigorous content standards, the percentage of struggling students continued to indicate a statewide concern consistent with what was reported across the nation (NCES, 2013).

The lack of progress in student literacy achievement efforts demands that principals play an active role in designing, implementing, and monitoring literacy programs. Leithwood and Riehl argued,

> New understandings of teaching and learning, coupled with innovations in technologies for information search, communication, and teaching, provide many new options for the work of students and teachers, with the potential for creating a whole new way of doing things in schools. (Leithwood & Riehl, 2003, p. 5)

Irvin et al. commented on the challenging literacy leadership landscape, stating,

> Many school leaders are daunted by the complexity of the task. Systemic development of literacy influences—and is influenced by—all aspects of school including curriculum, instruction, assessment, policies and structures, resource allocation, teacher professional development, and school culture. Therefore, it is understandable that many middle and high school leaders wonder where to begin and what is involved in the process of improving literacy achievement for all students. (Irvin et al., 2007, p. 2)

Principals must be able to recognize the changing landscape and adjust their leadership practices to meet the instructional programming needs of students. Fox (2010) conducted a qualitative study examining middle level principals' perceptions of the literacy crisis. Using interviews, a questionnaire, and document analysis she gathered her participant's various experiences and reported on "middle level principals' perceptions of the adolescent literacy crisis," and "what are middle level principals doing to address the literacy needs of the early adolescent students in their school" (pp. 86-87). Fox's research revealed mixed sentiments among the participants regarding the degree of crisis that might exist; however, there was consensus that literacy must be a priority for middle level principals.

School divisions across Virginia have been focusing on literacy as a key to improving student achievement, and school leaders need research-based information to assist them in developing effective instructional programs. Despite existing information regarding the literacy crisis for adolescents, there continues to be a gap in the quantitative research that defines the relationship between literacy leadership and student achievement. Irvin (J. L. Irvin, personal communication, September 21, 2007) suggested that the model published by her and her colleagues (Irvin et al., 2007) had not been quantitatively assessed. She stated that she did not know of a current model that had been tested quantitatively and encouraged the pursuit of further empirically based

research. Phillips (M. Phillips, personal communication, May 28, 2008) echoed a similar sentiment when she was interviewed regarding the quantitative basis of her model published by the National Association of Secondary School Principals (Phillips, 2005). The lack of clear, data-driven models makes it difficult for school leaders to achieve the results they desire with regard to middle school literacy. Scores at both the national and state levels continue to indicate that more effective models of literacy leadership are critical if schools want to realize higher levels of student achievement.

Purpose and Research Questions

The purpose of this study involved several objectives. First, common literacy leadership practices were identified through a comprehensive review of the literature. Second, a quantitative research instrument was designed and implemented to gather data regarding the identified common practices. Through the data collection process, the presence or absence of key leadership components was determined. Third, using the data collected, the researcher used regression analysis to examine the predictive aspects of the literacy leadership practices with regard to the reading achievement of middle school students in Virginia. In particular, five common areas of literacy leadership were identified within the current research through a thorough comparison of several literacy leadership models. Data were gathered regarding each of these areas and then analyzed in relation to the Grade 8 Reading SOL scores for students from a sample of middle schools in Virginia. The independent variables included action planning, data-driven decision making, capacity building, instructional support, and resource allocation. The dependent variable for this study consisted of school pass rates on the 2012-2013 Grade 8

Reading SOL test. Descriptive information regarding literacy leadership practices, school demographics, and principal background was also reported.

Ultimately, the goal of this research was to determine the overall predictive value of certain literacy leadership practices that have been identified from a review of prominent models in the current literature. The following questions were addressed:

1. To what extent are identified literacy leadership practices employed by principals in Virginia's middle schools?
2. What is the predictive value of the combined identified literacy leadership practices toward the reading scores of Virginia's eighth grade students?
    a. What is the relative contribution of literacy action planning to the reading scores of Virginia's eighth grade students?
    b. What is the relative contribution of data-driven decision making to the reading scores of Virginia's eighth grade students?
    c. What is the relative contribution of capacity building to the reading scores of Virginia's eighth grade students?
    d. What is the relative contribution of instructional support to the reading scores of Virginia's eighth grade students?
    e. What is the relative contribution of resource allocation to the reading scores of Virginia's eighth grade students?

Question 1 was designed to address the descriptive aspects of the collected data, whereas Question 2 (a-e) specifically addressed the following research hypotheses:

H_0: Prominent literacy leadership practices (collectively and separately) do not have predictive value toward the reading achievement of eighth grade students in Virginia.

H_A: Prominent literacy leadership practices (collectively and separately) do serve as a predictor of reading achievement for eighth grade students in Virginia.

To test these hypotheses and answer the research questions, multiple and simple regression analyses were performed to determine the relationship between school literacy leadership practices and reading achievement.

Statement of Potential Significance

Sanacore (1997) stated, "Building principals who demonstrate positive language arts leadership can have a major impact on students' literacy learning" (p. 68). This belief has not changed over the years, and it has been recognized that a focus on improved literacy skills at all levels is critical to the overall success of students. Recognition of the need for improved literacy instruction at the middle school level also has been increasingly more prevalent as educators realize there is a significant population of students who are entering this stage of their learning unprepared to meet the challenges before them. Ivey (2002) suggested that common literacy practices are not sufficient to address the instructional needs of adolescents struggling to read and write. She emphasized that it is the responsibility of schools to fix the instructional context within which they instruct students and not attribute students' difficulties solely to the students themselves. Kinney (2009) suggested that school leaders are an integral piece of the literacy puzzle. She stated that school leaders must drive the literacy instruction for adolescent learners and that teachers must be empowered to focus on reading and writing

in all subject areas.

To address the current issues in adolescent literacy, schools must find ways to address the needs of both students and staff. If sustained academic development is to occur, change must begin with the school leadership. Irvin et al. (2007) stated, "The principal is frequently the one who initiates and sustains a school-wide literacy improvement effort" (p. 71). Irving and her colleagues suggested that it is critical for all administrators to be able to identify the basic elements of literacy instruction so that such instruction can be supported throughout the school. They further noted that many administrators admit they lack the necessary knowledge and skills to effectively support literacy reform.

This study investigated what was occurring in middle schools throughout the Commonwealth of Virginia in the area of literacy leadership. The results of the study provided information regarding the degree to which common literacy leadership practices were implemented by middle school principals in Virginia. Data from this study were used to establish the relationship, if any, between certain leadership practices and student achievement in reading. Conclusions drawn from the data analysis can serve to guide future school leaders toward best practices in literacy leadership.

Conceptual Framework

The conceptual framework for this study was developed from the research literature concerning educational leadership and instructional practices related to adolescent literacy. Specifically, a review of the literature was conducted not only to examine these areas, but also to determine how they are being represented in various models that have been presented by experts in the field of education and adolescent

literacy. Five key literacy leadership practices were identified from a review of the relevant research to establish the foundation for this study.

Educational leadership. Hallinger (2003) suggested that the most effective school leadership is based on instructional and transformational models. Supported by other researchers (Leithwood & Riehl, 2003; Marks & Printy, 2003), Hallinger argued that a combination of these styles provides school leaders with the tools they need to differentiate leadership and lead successfully. Aspects of both models are reviewed throughout this study in relation to their effectiveness in improving student achievement. The various leadership models that serve to support this study's framework are discussed more extensively in the following chapter.

Adolescent literacy instruction. The research regarding adolescent literacy instruction consistently identified a number of factors important to student achievement outcomes. Routinely, concepts such as student engagement, varied literacy demands, support of struggling readers, and effective instructional practices were noted. Researchers overwhelmingly agreed that teachers must continue to use participatory instructional practices that involve students in their own learning and expose them to various learning experiences. Research-based literacy practices are critical to the effectiveness of a literacy program; school leaders must have a solid foundation in research-based strategies that support their initiatives. Any leadership model that purports to effectively address the literacy needs of adolescent students must involve well-designed adolescent literacy programming.

Literacy leadership. Four models (Guth & Pettengill, 2005; Irvin et al., 2007; Phillips, 2005; Taylor & Collins, 2003) were discovered in the course of this study; each

model component was carefully examined. It was quickly noted that considerable overlap existed in the main components of each model. For the purpose of this study, a deep review of each model was conducted to identify the most common literacy leadership practices. These practices then became the basis for the conceptual foundation for the research. The four models are discussed in greater detail in the following chapter.

Based upon a general review of the relevant literature and the existing literacy leadership models, five critical focus areas were identified to form the conceptual framework for this study: (a) literacy action planning, (b) data-driven decision making, (c) capacity building, (d) instructional support (professional development combined with classroom and teacher support), and (e) resource allocation. Each of these five areas was present in at least three of the four models reviewed. Four of the five areas were distinctly present in each model, whereas instructional support represents a combination of like-aspects of each model including professional development, classroom support, and teacher support. The three areas that constitute instructional support were well documented in the literature as being important to the success of any literacy initiative. Review of each model revealed sufficient commonality to combine the three areas.

Summary of the Methodology

A nonexperimental design was used to test the predictive relationship between literacy leadership practices and student reading performance scores on the Spring 2013 Virginia Department of Education's Grade 8 Reading SOL assessment. The participants for the study were middle school principals from the Commonwealth of Virginia. A valid and reliable survey instrument was developed based on a thorough literature review and a detailed study of multiple literacy leadership models (Guth & Pettengill, 2005;

Irvin et al., 2007; Phillips, 2005; Taylor & Collins, 2003). Survey data were collected during the fall of the 2013-2014 school year from the principals assigned to Virginia middle schools during the 2012-2013 school year. Validity and reliability for the survey instrument was determined through expert reviews, pilot administrations, and statistical analysis. A variation of a linear, numeric scale was used that allows each respondent to assign a value to the level of implementation for each of the identified action steps (Alreck & Settle, 2004). The mean value of each principal's responses served as a composite score within each component of the conceptual framework. Regression analysis enabled the researcher to determine if a relationship existed between the identified literacy leadership practices and student achievement as measured by the Virginia Grade 8 Reading SOL test. In addition to the regression analysis, descriptive statistics pertaining to school demographics and model implementation were reported. A more detailed description of the research methodology is presented in Chapter 3.

Limitations

This study was limited to the population of middle school principals in Virginia. A potential limitation existed in the possibility that the researcher would not receive an adequate number of responses from the identified sample of principals. The Virginia Department of Education identified a total of 307 (*N*) middle schools for the 2012-2013 school year. A total of 235 surveys were distributed in an effort to acquire a sample size of at least 89 (*n*) eventual participants (Green, 1991). Additionally, because only one set of predictor variables was being considered and participants were all surveyed in the same manner, random assignment was not possible. The lack of true experimental design allowed the researcher to determine only whether or not a relationship existed, not to

produce data related to causation. Consideration was given to expanding the study beyond middle school or outside Virginia; however, due to the lack of any homogeneous achievement data, the researcher concluded that collecting Virginia middle school data exclusively was the most effective sampling frame. Focusing only on Virginia minimizes the degree to which the study may be generalized. An additional limitation may relate to the self-reporting aspect of the data collection process and the truthfulness and thoughtfulness of the responses from the participating principals.

Definition of Key Terms

For the purpose of this study the following terms are defined:

Adolescent. *The American Heritage Dictionary* ("Adolescent," n.d.) defined "adolescent" as "a young person who has undergone puberty but who has not reached full maturity; a teenager." This study focused on the group of students that fall within the range of this definition; however, for the purpose of this study the definition referred specifically to students at the middle school level in Virginia.

Middle school. In Virginia, middle school can represent varied grade-level configurations. A middle school may sometimes include Grades 5-9; however, according to the *Regulations Establishing Standards for Accrediting Public Schools in Virginia*, a middle school "means a public school with any grades 6 through 8" (VDOE, 2011, p. 4). For the purpose of this study, only schools that met the Virginia definition of having Grades 6-8 were considered.

Division. In Virginia, geographical groupings of schools are identified as divisions per the Code of Virginia, § 22.1-25. This term is often used interchangeably with the term district; however, in Virginia, school divisions are not separate government

entities and rely on the Commonwealth for political and economic support.

Literacy. As indicated earlier, several definitions of literacy have been discussed in the professional literature. Still, the typical definition of literacy that is measured in public schools suggests the ability to read and write. National, state, and local assessments all focus on reading achievement as the public measurement of literacy in the schools. Consistently, these measures have created concern regarding the degree to which students perform at national, state, and local levels. The discussion throughout this study was primarily concerned with the academic nature of the term literacy and its implications for student achievement in the area of reading.

Standards of Learning. According to *Regulations Established for Accrediting Public Schools in Virginia* (VDOE, 2011), Standards of Learning (SOL) tests refer to those criterion-referenced assessments approved by the Board of Education for use in the Virginia assessment program to measure attainment of knowledge and skills required by the SOL.

Literacy leadership. The definition of literacy leadership, for the purpose of this study, was based on the common elements of various research studies and models reviewed. In general, the concept of literacy leadership involves planning, assessing, leading, supporting, and providing resources for the implementation of programs that lead toward the integration and sustenance of successful literacy instruction programs (Guth & Pettengill, 2005; Irvin et al., 2007; Phillips, 2005; Taylor & Collins, 2003).

Summary

A review of current adolescent literacy data indicated that acceptable levels of student achievement have not been demonstrated in this area. In particular, middle

school reading test scores consistently show an alarmingly high percentage of students scoring in the below proficient range of reading achievement. This study was designed to investigate aspects of school leadership that can positively contribute to student achievement in reading at the middle school level. The research was designed to provide data that would further explain the principal's role in improving adolescent literacy by examining critical areas such as educational leadership, adolescent literacy instruction, and literacy leadership.

The following chapters present the details of this quantitative study. Chapter 2 provides a review of literature pertaining to educational leadership, adolescent literacy instruction, and literacy leadership. Each of these areas contributes to the five factors that compose the literacy leadership practices being assessed. Chapter 3 describes in detail the methodology used in performing this study, including pertinent research questions, research procedures, and ethical considerations. Chapters 4 and 5 present the findings and interpretations of the study results.

Chapter 2: Critical Review of the Literature

The conceptual framework for this study was grounded in the following areas: educational leadership, adolescent literacy practices, and literacy leadership. To develop this framework, it was critical to clearly define the current context of middle school adolescent literacy and identify the research that supports a need for increased leadership in this area. Meltzer and Ziemba (2006) argued that school leadership is essential to the effective implementation of literacy instruction at the middle school level. They wrote that it is the role of the principal to ensure that teachers,

> explicitly emphasize that a literate student is one who knows how to use reading, writing, listening and viewing, speaking and presenting, and critical thinking skills to learn content; who can use those skills to communicate what he or she learned; and who can transfer that learning to new situations. (Meltzer & Ziemba, 2006, p. 22)

Meltzer and Ziemba further stated that professional development, supervision and monitoring, assessment, and vigilance are all essential practices school leaders must establish to increase the effectiveness of any literacy improvement effort. Moje and Sutherland (2003) asserted that the goal of middle school literacy is to enable students to "use a variety of representational forms to make meaning of written texts" (p. 153). They suggested that multiple forms of literacy must be addressed with adolescents to provide them with an adequate instructional foundation.

This review of the literature examined multiple aspects of adolescent literacy. First, there is a description of the search procedures and the various search parameters that were used to locate the research studies and articles addressed in this review. Second, the review reflects critical examination of the area of educational leadership and research pertaining to the effectiveness of school leaders. The following section focuses

on research generated specifically in the area of adolescent literacy. The work of multiple researchers is presented to provide information regarding the overall field of adolescent literacy. Research supporting the critical nature of adolescent literacy instruction and current challenges and practices is reported. A fourth section focuses on literacy leadership and multiple studies that address the synthesized nature of educational leadership and literacy instruction. This section lacks the volume of quantitative studies that can be found to support the earlier sections of the literature review. Mainly drawing from information that is anecdotal and observational in nature, this final section presents the common elements of the reviewed literacy leadership models and establishes the conceptual framework for this study. Throughout the review, the intent was to provide adequate background information to establish a need for focusing on adolescent literacy as an area requiring intervention. Questions concerning the role of the principal in facilitating effective literacy-focused instructional programming in the middle school setting were also raised.

Research Process

For the purpose of this review, literature was chosen based on the extent to which the research study or article was current and relevant to the topic of middle school literacy instruction and principal leadership. Although the literature contained an abundance of research dealing with the general topics discussed within this study, the vast majority of information was focused on elementary level instruction and leadership practices. There was a noticeable shortfall of scholarly research dealing with middle level schools. To narrow the scope of this study, the literature review remained focused on relevant studies that directly addressed middle school practices. Most sources were

written within the past 10 years, with a few significant sources drawn from earlier years. Adolescent literacy is not a new topic and has received generous amounts of attention for as long as reading and writing have been taught. Attention has been heightened surrounding adolescent literacy, as accountability and high-stakes testing have become such an instrumental part of educating students. Studies and articles that are more current offer a better assessment of the context in schools.

Articles were selected and included in this review based upon the following criteria:

1. Primary search efforts were performed to locate both quantitative and qualitative research studies; however, fewer actual studies were found compared to the larger number of theoretical or nonresearch-based articles.
2. Sources were reviewed for their relevance to the literacy development of middle school level adolescents, teaching strategies, and principal leadership.

Multiple databases were searched in an attempt to locate all relevant articles, including ERIC, PsychInfo, Dissertation Abstracts, Proquest, EBSCO, and Google Scholar. The descriptors used were *adolescent literacy*, *adolescent reading*, *middle schools*, *principal leadership*, *literacy leadership*, *principal*, *literacy*, *leadership*, *educational leadership*, *transformational leadership*, *distributive leadership*, *literacy framework*, and *conceptual model*. Based upon the search results, a number of research articles and studies were selected for review within the areas of educational leadership, adolescent literacy research, and literacy leadership.

Description and Critique of Scholarly Literature

The process for reviewing the scholarly literature related to this study included the identification of three key areas relevant to the completion of this study: A thorough review addressed the areas of educational leadership, adolescent literacy research, and literacy leadership as primary topics that contributed to the overall body of knowledge influencing the relationship between principal leadership behavior and student achievement. The following critique examines each of these areas and highlights a number of pertinent research studies that helped to develop the context of this study.

Educational leadership. In a report for the American Educational Research Association, Leithwood and Riehl (2003) discussed the importance of educational leadership and the role that building-level leaders play in ensuring the integrity of school management practices. They stated,

> Local, state and federal achievement standards for ambitious learning for all children have changed the landscape of educational accountability. Pressure is on actors at all levels from students themselves to teachers, principals and superintendents. In these times of heightened concern for student learning, school leaders are being held accountable for how well teachers teach and how much students learn. (Leithwood & Riehl, 2003, p. 2)

Leithwood and Riehl also offered strong commentary regarding the importance of school leadership for student achievement as well as the critical role that is played by school leaders. Although Leithwood and Riehl did not directly cite their sources, they referred to what they described as "major findings from research on school leadership" (p. 4), and presented the following claims concerning school leadership and student learning.

1. Leadership has significant effects on student learning, second only to the effects of the quality of curriculum and teachers' instruction.

2. Currently, administrators and teacher leaders provide most of the leadership in schools, but other potential sources of leadership exist.
3. A core set of leadership practices form the "basics" of successful leadership and are valuable in almost all educational contexts.
4. Successful school leaders respond productively to challenges and opportunities created by the accountability-oriented policy context in which they work.
5. Successful school leaders respond productively to the opportunities and challenges of educating diverse groups of students. (Leithwood & Riehl, 2003, pp. 4-9)

Leithwood and Riehl concluded their report with a challenge for further inquiry and investigation into the various aspects of educational leadership. Educational leadership commonly has been viewed in terms of the following leadership types: instructional and transformational.

Robinson, Lloyd, and Rowe (2008) assessed educational leadership from a broader perspective and completed a meta-analysis of studies focused on drawing conclusions regarding the impact of different leadership types on student outcomes. Robinson et al. concentrated specifically on instructional leadership and transformational leadership. The selection of studies was derived from an extensive review of the English literature that purported to examine the relationship of leadership and student outcomes. The researchers selected 27 relevant studies for analysis. Ferguson and Brannick (2012) noted that publication bias could occur by excluding certain studies from meta-analysis processes. Robinson, et al. indicated that they knowingly excluded research that had not

been peer reviewed and that was not published in English. Acknowledging the potential for bias, we can still cautiously accept Robinson et al.'s efforts to determine effect size measurements as a way to compare the data from the various studies.

A key question investigated in the study by Robinson et al. (2008) related to the relative impact of instructional and transformational leadership on student outcomes. Findings yielded an effect size on student outcomes of .11 for transformational leadership, .42 for instructional leadership, and .30 for a category identified as other types of leadership. The conclusions indicated a three- to four-times difference for instructional leadership over transformational leadership. Some caution should be used when interpreting the results of this study as there was a wide array of effect for instructional leadership and the outcomes for each type of leadership varied, from more social outcomes for transformational leadership to more academically oriented outcomes for instructional leadership. Still both types of leadership exhibited positive effect sizes. They are each examined further in the sections that follow.

Instructional leadership. Blasé and Blasé (1999) conducted an extensive qualitative study regarding the principal-teacher relationship and instructional leadership. The researchers surveyed 809 teachers to ascertain their perspective of principal characteristics that positively or adversely affected classroom teaching. The research team coded the data "according to guidelines for inductive-exploratory research and comparative analysis" to identify two major themes in the principal-teacher relationship: "talking with teachers to promote reflection and promoting professional growth" (Blasé & Blasé, 1999, p. 358). These two themes became the basis for Blasé and Blasé's grounded theory reflection growth (RG) model of instructional leadership. This study did

not fully capture the details regarding principal strategies nor the frequencies of use for the identified strategies; however, it was significant in identifying critical roles for principal involvement with teachers, considerably expanding the research regarding instructional leadership.

Addressing the effects of instructional leadership from a different viewpoint, O'Donnell (2002) examined the relationship between principal instructional leadership and student achievement to further establish direct links between the two. The researcher identified a sample of 287 middle level schools in Pennsylvania to participate in a study designed to answer multiple research questions regarding principal leadership and several accompanying factors as predictors of student achievement in math and reading. In addition to addressing each research question to middle level principals, O'Donnell addressed the perspective of teachers in each research question. Ultimately, the researcher was interested in whether teacher perceptions of principal leadership more accurately predicted student achievement than did the principal's own perceptions.

O'Donnell's (2002) study was a correlational study that used two data collection instruments: the Principal Instructional Management Rating Scale (PIMRS) and the reading and math component of the Pennsylvania System of School Assessment (PSSA). Data were ultimately collected and analyzed from 26% (n = 75) of the initial sample (N = 287). Using a multiple regression process, O'Donnell drew several conclusions with regard to his research questions. With particular emphasis on principal perceptions of their leadership, the researcher concluded that principal-rated instructional leadership behaviors were nonsignificant as predictors of student achievement in reading and math. Conversely, the results of O'Donnell's study found teacher perceptions of principal

leadership in the area of promoting school learning climate to be a significant predictor of student achievement in reading and math ($p < .05$). O'Donnell's results additionally indicated that three principal instructional leadership dimensions—defining the school mission, managing the instructional program, and promoting the school learning climate—were positively associated with higher reading and mathematics scores ($p < .05$). O'Donnell's conclusions support a hypothesis that leader actions do have a measurable impact on student success.

Research on instructional leadership historically has focused on constructs such as perceptions of others, change efforts, and student achievement. More recent studies continued this focus. Sanzo, Sherman, and Clayton (2010) interviewed a purposeful sample of principals in Virginia to examine leadership practices. Focusing specifically on middle level leaders, this study was the third phase of a larger effort that previously had explored high school leaders and elementary leaders. Questions posed by Sanzo et al. included the following:

- How do leaders develop a shared understanding of their organization?
- How do leaders support sustained school performance?
- What do leaders do to facilitate change? (Sanzo et al., 2010, p. 34)

Ten principals were interviewed, five female and five male, with varied levels of experience, all of whom were identified as "successful" based on their effectiveness in meeting state and federal achievement standards. Using an open coding, constant-comparison process, the researchers identified various emergent themes including sharing leadership, facilitating professional development, leading with an instructional orientation, and acting openly and honestly. Although the results of the Sanzo et al. study

legitimately could be applied only to the sampled principals, the themes identified suggested that principals who lead with an instructional focus experience success. Again, due to the limited scope of the study, the relative magnitude of that success cannot be identified. In conclusion, Sanzo et al. noted "it is crucial that school leaders recognize the practices that contribute to high student achievement and engage in those to meet their own student needs" (Sanzo et al., 2010, p. 42). Their research, although focused on principal leadership, did not draw clear connections between principal actions and student achievement.

Ultimately, it was student outcomes that illustrated the true effectiveness of leadership efforts. Nason (2011) examined the potential effects of certain instructional leadership practices on student achievement across a sampling of secondary principals in Idaho. Through a survey titled Instructional Leadership Behaviors of Principals, she examined quantitatively the relationship between the identified "principal-perceived instructional leadership practices and the frequency of those practices and the size, the type of school, and the school AYP status" (Nason, 2011, p. 92). Measured instructional practices included activities, such as providing observational feedback and supporting professional development opportunities for curriculum planning and data analysis. Results of Nason's study should be viewed cautiously, as her own power analysis suggested that 128 participants would be a sufficient number, yet she received responses from fewer than half that number ($n = 52$). Still, Nason reported certain statistical conclusions. Research procedures specifically included using least-squares regression to investigate the relationship between School No Child Left Behind (NCLB) ratings and Principal Practice Importance ($p > .05$) and Principal Practice Frequency ($p > .05$) as

defined in the survey used. Additionally, the researcher used ANOVA to evaluate the difference between the type and size of school and the Principal Practice Importance (type, $p > .05$; size, $p > .05$) and the Principal Practice Frequency (type, $p > .05$; size, $p > .05$). In all cases, statistical significance could not be established. Nason suggested that even in today's world of complex instructional expectations and high-stakes testing, the principals in her sample may not have embraced instructional leadership practices and may have relied more heavily on building management skills. Still, the insufficient power of her study generated by lack of an adequate sample size minimizes the validity of her study outcomes.

Instructional leadership has been suggested to be an effective approach to addressing the needs of both staff and students. Research has demonstrated that principal actions can affect both the actions of others and the achievement of students. Still, student measures of success are found to be lacking, suggesting that instructional leadership may not be the only influential factor that requires consideration. Leadership takes multiple forms, and instructional leadership may not always be the most appropriate approach.

Transformational leadership. Transformational leadership is another common approach pursued by school leaders. It is based on creating a cultural change in an organization to reach certain identified goals. Leithwood and Jantzi (2000) further supported the effectiveness of transformational leadership. These researchers conducted extensive surveys of a large, diverse school division in eastern Canada. Participants in the study included all elementary and junior high school teachers ($N = 2,465$), who were asked to complete a survey that measured organizational conditions and school

leadership; the response rate for the survey was 71%. Leithwood and Jantzi also distributed 8,805 student surveys that gathered information regarding student engagement and family educational culture. Data for all variables in their study were completed for 110 of the 123 elementary and junior high schools in the division. The results of the leadership portion of this study determined that transformational leadership does have an impact on both organizational conditions and student engagement. The demonstrated overall effect was strong for various organizational conditions and weak, yet significant, for student participation (.07) and identification (.10) (Leithwood & Jantzi, 2000). Transformational leadership is but one approach to achieving sustained outcomes. Other leadership approaches have also proven to be effective.

Hallinger (2003) suggested that educational leadership has been emerging over the previous 25 years. Based on a review of empirical studies, he identified the two foremost models of educational leadership as instructional leadership and transformational leadership. Hallinger purported that each of these models contributes to the overall function of a school administrator and that an integrated approach to leadership involving characteristics of both models may be optimal. Marks and Printy (2003) completed a mixed-methods study that examined the relationship between instructional and transformational leadership more closely. In particular, Marks and Printy were interested in how the combination of the two leadership models contributed to school restructuring efforts.

In their study, Marks and Printy (2003) attempted to respond to three specific research questions: (a) What was the relationship between transformational and instructional leadership; (b) How did the schools involved in the study differ from one

another; and (c) What effect did instructional leadership and transformational leadership have on specified measures of school performance? Selecting from a pre-identified list of 300 schools from across the nation, Marks and Printy focused on a convenience sample of schools (n = 24) equally distributed across elementary, middle, and high school grade levels. The 24 schools were determined using criteria to select schools that had made "substantial progress in their reform efforts" (Marks & Printy, 2003, p. 378). Throughout the study, the researchers conducted a survey of 910 teachers, achieving a survey return rate of approximately 80%. Additionally, on-site interviews were conducted, meetings were observed, and ratings of actual student work were completed. Marks and Printy were particularly interested in the effect of the independent variable of leadership on three different dependent variables: pedagogical quality, assessment tasks, and academic achievement.

To answer the questions posed in their study, Marks and Printy (2003) used various statistical analyses including interpretation of a scatter plot, analysis of variance (ANOVA), and hierarchical linear modeling (HLM). Using the scatter plot to address the relationship between instructional leadership and transformational leadership, the researchers concluded that "transformational leadership with the behaviors it implies are a necessary, although insufficient, condition for shared instructional leadership" (Marks & Printy, 2003, p. 385). Consistently, schools that scored low on transformational leadership also scored low on instructional leadership (n = 8). Conversely, when schools scored high on transformational leadership there was a positive relationship to the presence of instructional leadership. The researchers stated that the reasons behind these leadership patterns were unclear, noting that exceptions did exist. They repeatedly

emphasized that "strong school performance…depends on integrated leadership mobilizing the collective action of individuals to produce high-quality teaching and learning" (Marks & Printy, 2003, p. 388). Although, the scatter plot analysis did provide for some comparison between instructional and transformational leadership, the researchers may have been able to strengthen their results by using a more detailed statistical analysis such as a chi square test of independence to determine whether there was a significant relationship between the two categorical variables. Finally, the researchers' analysis revealed that both pedagogical quality and authentic achievement were higher in schools with integrated leadership practices. Marks and Printy were challenged by the difficulty of finding a significant sample of effective school leaders for the study. They acknowledged that, even in the selective sample they established, there was discrepancy in the leader characteristics. Due to their sampling strategies, the researchers noted, the results had limited generalizability beyond their sample. Still, within their study, Marks and Printy's results supported the hypothesis that instructional leadership coupled with transformational leadership is an important combination when considering the effectiveness of teaching and learning.

A more recent study by Keys (2010) focused on the relationships among transformational leadership, learning communities, and student achievement. Keys sought to answer three research questions: one involving the relationship between principal self-ratings of transformational leadership and teacher ratings of the principal's transformational leadership, another involving the relationship between teachers' ratings of the principal as a transformational leader and ratings of the school as a learning

community, and one involving the relationship between teachers' ratings of the school as a learning community and students' academic achievement.

Keys's (2010) study was limited to respondents from four participating high schools. The principals (n = 4) and teachers (n = 95) that participated reflected various demographics, and each responded to a leadership survey and a learning community survey. Results of the study revealed strong correlation between principal ratings and teacher ratings related to transformational leadership of the principal (r = .94). Correlation also was established between teacher ratings of the principal as a transformational leader and teacher ratings of the school as a learning community (r = .69). Lastly, Keys concluded that there was also a relationship between teacher perceptions of the school as a learning community and student achievement (r = .65) as measured by the averaged score as measured by the Mississippi Curriculum Test, Second Edition (MCT2). Although Keys's study does allow for conclusions to be drawn, the results of his study cannot generalize beyond the very small sample that participated. The results that were reported offer some insight into the relationship of transformational leadership practices and their ultimate effect on student achievement, yet the findings should be viewed with some caution.

Even in the light of research suggesting that transformational leadership, or any other type of leadership, might have positive effects on student outcomes, other contributing factors must be taken into account. Educational leadership without solid instructional practices to support it will not likely lead to desired results. School leaders must have knowledge of the practices that have been proven to lead to positive outcomes for students.

Adolescent literacy research. Important to the consideration of this study was a critical look at practices within the middle school grades that might be influenced by the leadership of school officials and lead to increased student achievement. Snow and Moje (2010) stressed that although there has been some increase in student literacy scores at the elementary level, there have not been improvements at the middle and high school levels. They suggested the need for increased emphasis on instruction, intervention, and professional development to address the literacy needs in middle and high schools. For more than a decade, the current condition of adolescent literacy in the United States has been described as a national crisis (Alvermann, 2000; Ivey, 2002; Vacca & Alvermann, 1998). The literature concerning secondary school literacy portrayed a common theme, suggesting that students in the middle grades are being forgotten while resources of time, money, and personnel are being devoted to younger students in primary and elementary instructional settings. Sunderman, Amoa, and Myers (1999) studied the organizational and institutional influences affecting literacy instruction at the middle school level. The researchers proposed two questions in their study:

1. How do middle and high schools organize and allocate resources to support reading?
2. How do middle and high schools respond to resource and structural challenges created by the multiple institutional actors that comprise the school system? (Sunderman et al., 1999, p. 1)

Sunderman et al. used regression analysis results from a former study, the *California Effective Elements* study, to identify the sample for their study. Their investigation narrowed the focus of the study; whereas the original study had focused on

20 schools, Sunderman et al. studied only eight of the originally identified California middle schools. Interviews with school personnel, observations of classrooms, and review of relevant documentation indicated a diminishing capacity for middle level institutions to meet the demanding literacy needs of students (Sunderman et al., 1999). Sunderman et al. found that organizational constraints regarding funding, curriculum, staffing, scheduling, and availability of appropriate materials constitute hindrances to quality literacy instruction. Their conclusions were supported by fellow scholars who purported that critical issues exist within the middle school setting, requiring educators to commit additional time and resources to bridge the literacy gap that has existed in schools (Hosking & Teberg, 1998; Snow & Biancarosa, 2003).

The National Assessment of Educational Progress (NAEP) in 2013 reported that 65% of eighth graders tested below proficient levels of performance in reading (NCES, 2013). The NAEP report revealed that only 35% of eighth graders tested were found to be at or above proficient levels. These numbers were obtained from a nationwide assessment of eighth grade students in multiple contexts: reading for literary experience, reading for information, and reading to perform a task. The 2009 and 2011 NAEP Report Cards (NCES, 2009; NCES 2011) indicated similar results for reading, offering strong support to the claim that less than proficient literacy performance is a valid national issue. Proper address of the literacy crisis requires that school leaders clearly understand the contextual issues that prevent them from achieving high levels of student success.

Alvermann (2000) reported on the status of adolescent literacy instruction and recognized several major issues facing middle school education: the impact of struggling readers, content area focus, secondary student interests, and the implementation of

effective literacy practices. These concerns were supported throughout the literature that addressed adolescent readers (Goodman, 2005; Zipperer, Worley, Sisson, & Said, 2002). In a non-empirical report, Alvermann (2001) suggested that there is a body of knowledge, a set of quality literacy practices, that can serve to better prepare adolescent students in the area of literacy. The literature was somewhat consistent regarding the characteristics of quality middle school literacy programs; however, researchers have suggested that school leaders often are unaware of the commonality of recommended practices. Drawing from the large body of literature that addresses adolescent literacy practices, Alvermann (2001) described five aspects of literacy that are critical to meeting the needs of students: (a) student self-efficacy and engagement, (b) demands of academic literacy, (c) struggling readers and their needs, (d) critical literacy, and (e) participatory approaches to instruction.

The literature supported various additional practices that are generally aligned with Alvermann's (2001) critical elements. Issues were noted with regard to the manner in which these practices are employed by middle school leadership. Common areas of concern in middle school literacy included student identity, engagement, content area literacy demands, struggling readers, and instructional practices

Adolescent literacy practices. Biancarosa and Snow's (2006) report, *Reading Next – A Vision for Action and Research in Middle and High School Literacy: A Report to Carnegie Corporation of New York*, has been recognized as a significant contribution to the way that adolescent literacy is approached. Biancarosa and Snow worked with five nationally known and respected educational researchers to discuss ways to address the

multiple needs of struggling adolescent readers. The report identified goals in three primary areas:

1. Disseminate more widely the current state of knowledge about adolescent literacy;
2. Specify the dimensions of adolescent literacy interventions that hold particular promise for improving academic achievement; and
3. Posit an approach to evaluating programs and understanding the value-added contribution of each dimension. (Biancarosa & Snow, 2006, p. 11)

The result of the experts' collaboration was the establishment of a list of 15 critical components supporting effective adolescent literacy programs. The first 9 of the 15 components dealt with instruction, whereas the remaining six focused on infrastructure:

1. Direct, explicit comprehension instruction.
2. Effective instructional principles embedded in content.
3. Motivation and self-directed learning.
4. Text-based collaborative learning.
5. Strategic tutoring.
6. Diverse texts.
7. Intensive writing.
8. A technology component.
9. Ongoing formative assessment of students.
10. Extended time for literacy.
11. Professional development.
12. Ongoing summative assessment of student and programs.

13. Teacher teams.
14. Leadership.
15. A comprehensive and coordinated literacy program. (Biancarosa & Snow, 2006, p. 12)

Biancarosa and Snow stated, "The challenge is to select programs in a manner that conceptualizes them as unique mixes of the fifteen key elements and to require that the supported programs use common evaluation guidelines and procedures" (p. 31). The *Reading Next* report continues to be repeatedly cited as a hallmark effort to identify the landscape of adolescent literacy.

Consistent with aspects of the *Reading Next* (Biancarosa & Snow, 2006) report, Dillon (2002) completed an investigation of content area reading instruction in five Florida middle schools. This mixed-methods study attempted to answer research questions addressing the following factors: teacher attitudes and practice regarding content area instruction, principal beliefs about content area instruction and their leadership practices to support reading in the content areas, teacher attitudes toward reading based on their primary certification, and teacher and principal perceptions of content area reading instruction across different school settings. The five schools were purposefully chosen based on the researcher's prior knowledge and her belief that each school would be open to visits from a researcher. Dillon used teacher surveys, principal interviews, and review of school improvement plans to gather descriptive, nonexperimental data that were then subjected to a series of correlation analyses to determine the answers to her multiple research questions. The primary data collection process involved two teacher surveys: the Reading Attitude Survey and the Reading

Practice Survey. A total of 170 teachers from the various schools responded to the surveys, generating a response rate of approximately 48%. The key conclusions in the study were that adjustments to instruction, attitude, and professional development practices could influence the effectiveness of content area instruction in the middle school setting (Dillon, 2002). Dillon's results should be viewed with caution, as her study has limited generalizability due to a lack of random selection. The survey instruments used in the study were found to be reliable measures based upon alpha coefficients, but more extensive validation procedures such as a factor analysis were not performed.

One year later Guthrie and Davis (2003) discussed the relationship of student engagement to middle school instruction; they asserted that any content area could be an area of low motivation, stating that reading fell into the same category as other content areas with regard to the ways in which students viewed particular subjects. Guthrie and Davis surveyed all third, fifth, and eighth grade students in the State of Maryland to measure the level of motivation for reading at each grade level. Their results showed consistently negative views from the eighth graders in comparison to students in the other grades. Guthrie and Davis presented six challenges that adolescent readers face as they enter middle school: "(a) detachment of reading instruction from content; (b) formidable texts and textbook structures; (c) formal, non-personal response expectations; (d) diminished student choice; (e) isolation of students from teachers; and (f) minimal linkage of real-world interaction with reading" (Guthrie & Davis, 2003, p. 66).

In particular, Guthrie and Davis (2003) noted that integrated reading instruction across content areas, as reported by the students, diminished as the grade levels advanced.

Especially between fifth grade and eighth grade, reading instruction in the content areas was reported by consistently lower percentages of students. Additionally, the researchers discussed the increasing difficulty of texts as students move into the middle school grades. The survey results suggested that at the same time that texts become more difficult, less teacher support is provided to assist students in meeting the higher demands. With regard to diminishing choices as students move into the middle school grades, Guthrie and Davis's survey noted that teacher encouragement of students to explore a diverse selection of reading materials definitely lessens between the fifth grade and eighth grade. Based on the results of their study, the researchers developed an "engagement model of instruction" (Guthrie & Davis, 2003, p. 70) that addressed student motivation as well as six practices important to the middle school setting: (a) knowledge goals, (b) real world interactions, (c) an abundance of interesting texts, (d) support for student choice and self-determination, (e) direct strategy instruction, and (f) collaboration support. Guthrie and Davis suggested that all of the practices listed must exist together to be the most effective; one alone is not enough to address the reading engagement issues revealed through their survey of students.

A report by Learning Point Associates (LPA) (2005) discussed the importance of student engagement in promoting adolescent literacy. The LPA published an "action guide" that was supported by 2002 NAEP data published by NCES. Using the 2002 NAEP reading data, LPA established a need for reading improvement at the secondary level. Several important elements critical to student engagement were discussed including (a) student confidence, (b) teacher involvement, (c) relevant and interesting texts, and (d) choices of literacy activities. The LPA report provided guidance for school,

division, and state policymakers suggesting that teachers must be supported in the areas of curriculum, instruction, assessment, and professional development.

Investigating factors very similar to those identified in the LPA (2005) report, Franciosi (2005) studied the ability of Oregon high schools to meet the needs of struggling students in "terms of program offerings, identifying students, curriculum and instruction, and staff development" (p. v). Franciosi's study was both quantitative and qualitative. In the first part of her study, 25 schools were randomly selected from each of four different levels of socioeconomic status. One hundred schools were contacted in total. Only 28 schools ultimately participated by responding to the researcher's survey; however, three additional schools were included through site visits bringing the total sample to 31. From this group, the researcher gathered descriptive data regarding "the existence of programs within schools, the program options available, staffing, scope and sequence, curriculum materials available, scheduling, student placement, measures of success and evaluation, and budget" (Franciosi, 2005, p. 23).

The second part of Franciosi's (2005) research was a qualitative study, described by the researcher as a "one-point-in-time" ethnographic study (p. 24), that examined three individual schools that had been identified as having exemplary reading program: two schools recommended by the Oregon Department of Education and one revealed through an educational workshop. The researcher evaluated reading instructional practices at each of the schools through her interactions with school personnel. Limitations to Franciosi's study included a relatively small sample size and a relatively low return rate for the survey. Nevertheless, she was able to gather useful data regarding her research questions, which included inquiries regarding what Oregon high schools were doing to

help struggling readers as well as what factors were contributing to student and program success. Based upon the reading assessment scores and reports from administrators, teachers, and students, Franciosi (2005) determined that schools must provide additional programs for struggling students and establish clear eligibility standards for program participation. Franciosi also identified staffing, instructional strategies, curriculum, materials, staff development, and leadership as critical concerns.

Dodson (2009) closely examined the 15 effective adolescent literacy practices outlined by Biancarosa and Snow (2006) to examine the relationships among portions of the Augmented Arkansas Benchmark Examination of 2008, the Stanford Achievement Test, and the Missouri Assessment Program. The study, which involved surveying 89 participants, sought to answer four research questions. Questions 1, 2, and 3 investigated the relationship between the 15 key literacy practices and each of the aforementioned tests. The final question focused on the extent to which student outcomes and conditions such as "socio-economic status of students, academic background of the instructional leader or teacher, content taught by the classroom teacher, school enrollment configuration, and grade level configuration of the school" (Dodson, 2009, p. 84) were related. Dodson used a Spearman correlation to determine if relationships actually existed.

Analysis of Dodson's (2009) first three questions revealed that no significant relationships existed between any of the 15 key literacy practices and student achievement. Initially, the study revealed some isolated areas of significance; however, the researcher implemented a Bonferroni correction to adjust for multiple correlations, and once the correction was applied all areas of analysis revealed nonsignificant

relationships. Results related to Dodson's fourth research question found similarly nonsignificant results.

Dodson's (2009) results were limited somewhat by several aspects of the study, including the small sample size and the inconsistent student outcome measures that were used. The researcher admitted that her conclusions could not be generalized to the larger population. Still, Dodson's efforts draw attention to the genuine need to connect educational literacy practices to improved student outcomes.

Literacy leadership. In examining the practices of school leaders in relation to adolescent literacy, it was important to consider the connections between the previous two sections of this literature review. Literacy leadership is a combination of solid educational leadership practices and knowledge of adolescent literacy instruction. Booth and Roswell (2002) defined a literacy principal as one who supports and evaluates literacy initiatives with the intention of improving student achievement. Throughout the years, researchers have strived to find connections between the actions of principals and the literacy success of students.

Several key historical studies were designed to investigate principal involvement in literacy leadership. Sanacore (1984) conducted a survey of middle school principals in Suffolk County, New York. Through the survey process he hoped to determine the answer to three questions:

1. To what extent were principals aware of prior knowledge as it related to reading?
2. To what extent were principals aware of metacognition as it related to reading?

3. Was there a difference between the principals' awareness of prior knowledge and metacognition as they related to reading? (Sanacore, 1984, p. 55)

The author established the need for his study by stating, "thus far, limited research has been conducted to determine the extent to which principals possess knowledge of reading" (Sanacore, 1984, p. 1). He later wrote,

> Traditionally, the building principal has been expected to function as an effective instructional leader. His or her responsibilities have included monitoring student progress, stressing the importance of achievement, maintaining an orderly building environment, communicating instructional goals, and supporting the professional staff. (Sanacore, 1984, p. 58)

Sanacore recognized that the majority of existing research was directed at the elementary level and was oriented to areas that were not as pertinent to the literacy development of adolescent students.

Using a forced-choice attitudinal scale survey, Sanacore (1984) gathered data from 43 middle or junior high school principals and analyzed the results of the data collected by determining the percentage of correct responses and assigning a knowledge level based on the percentage. Principals scoring above 75% on the survey instrument were considered to be knowledgeable in the corresponding response area. Sanacore's data were primarily survey data that simply reported on the current context of Suffolk County middle school administrators. There was no evidence of any statistical calculations through which comparisons could be made outside the Suffolk County area. The study findings, though limited in generalizability, indicated that the majority of Suffolk County principals did, in fact, demonstrate knowledge awareness and metacognition related to reading instruction.

Sanacore (1997) continued to focus on the impact of leadership with regard to reading instruction and adolescent literacy. In a journal article, he suggested that effective reading programs require a number of key components, including "a shared vision of what the program should be, highly competent and caring teachers, a wide variety of instructional resources, and active parental involvement" (Sanacore, 1997, p. 64). He further asserted that the role of the building principal as a key player would more than likely increase the effectiveness of the aforementioned components and facilitate increased student achievement. Based upon his experiences with successful building principals as well as uncited professional literature, Sanacore outlined several guidelines regarding leadership for reading instruction:

- Keep up to date concerning language arts and related fields.
- Work cooperatively with staff.
- Support different learning styles and assessment strategies.
- Promote lifetime reading through literacy immersion.
- Involve parents in their children's literacy learning. (Sanacore, 1997, pp. 64-68)

In addition to these practices, Sanacore described multiple aspects of reading leadership as critical for school leaders:

> For example, principals or their designees should consider supporting literature-based practices across the curriculum, motivating read-alouds through the grades, organizing a visiting authors' program, including at risk learners in heterogeneous classes, hiring and maintaining qualified reading professionals, involving teachers in innovative staff development efforts that focus on teachers as learners and asking for feedback about reading leadership performance. (Sanacore, 1997, p. 68)

The information in Sanacore's journal article only provided "guidelines" that were "neither prescriptive nor comprehensive" (p. 64). Unsupported statements such as those provided by Sanacore were not uncommon during the literature review for this study, especially when it related to middle school literacy leadership.

Hallinger and Bickman et al. (1996) conducted a study that examined principals' effects on reading achievement. The researchers involved 87 elementary schools in Tennessee through a multidimensional model that studied school context variables, principal instructional leadership, instructional climate, and student reading achievement. Antecedent variable data were collected from school administrators using a School Information Form and from parents using the Connecticut School Effectiveness Questionnaire (CSEQ). School organizational variable data were collected through additional questionnaires and the CSEQ. Student achievement was measured using a criterion-referenced reading test: the Basic Skills First Test. Hallinger and Bickman et al. then completed multiple statistical analyses of the data, based on the presence or absence of antecedent variables. The findings regarding the direct effect of principal leadership without antecedents on reading achievement yielded nonsignificant results, thus indicating that principal leadership had no statistically verified impact on student achievement. Analysis of the mediated effects of principal leadership with antecedents did reveal a positive correlation between principal leadership and student achievement: $\chi^2 = 27.5$, $df = 19$, $p < .05$, and Bentler-Bonnet fit index = .911.

Hallinger and Bickman et al. (1996) found positive relationships in answering their research questions. Higher levels of parental involvement were found to correspond with increased instructional leadership ($p < .01$). There was a positive relationship

between higher socioeconomic status and principal leadership ($p < .05$) as well. The researchers reported that their analysis of the data regarding gender indicated that women tended to exercise more involved leadership in the areas of curriculum and instruction, but at "a lower level of statistical significance" (p. 542). It is important to note that the *p* value reported by the researchers, $p < .10$, did not support their statement. Also, it is inaccurate to suggest levels of significance. With regard to the second research question, concerning the consequences of principal instructional leadership, the researchers found no clear statistically significant effects on student achievement directly related to principal leadership. They did find that through attention to instructional climate variables, principals facilitated a situation in which their instructional leadership reflected a significant positive relationship to student achievement in reading ($p < .05$).

The researchers summarized two conclusions regarding research on the principal's role in school effectiveness:

1. The relationship between principal and school effectiveness will be best understood through the use of models that account for effects of the school context on a principal's leadership.
2. The effects of principal leadership on student learning should be examined in terms of theoretically relevant intervening variables as well as school outcomes. (Hallinger, Bickman et al., 1996, p. 544)

Ultimately, Hallinger and Bickman et al. concluded that principal effect on student achievement is indirect through a number of antecedent variables. Nevertheless, the researchers suggested that this fact is "irrelevant. . .since we assume that achieving results

through others is the essence of managerial work" (Hallinger, Bickman et al., 1996, p. 545).

More recent efforts such as those made by Key (2005) concluded that inadequate literacy skills of middle school students have led to increased dropouts and have had a significant impact on the nation's future. Key suggested that school principals must lead the literacy efforts for older students and create the culture and climate necessary for reading instruction to thrive. The purpose of her study was to explore how principals act as instructional leaders with regard to literacy as well as their perceptions regarding literacy instruction. Four questions guided Key's study:

1. Does student population and years of experience as a principal affect the principal's instructional leadership of literacy in regards to staff professional development?
2. Does student population and years of experience as a principal affect the principal's instructional leadership of literacy in regards to school climate?
3. Does student population and years of experience as a principal affect the principal's instructional leadership of literacy in regards to literacy knowledge?
4. What are middle school principals' beliefs and perspectives about middle level literacy? (Key, 2005, p. 6)

Key's (2005) study involved quantitative and qualitative data. Using a two-way ANOVA, she quantitatively examined the relationship of school size and principals' years of experience to the behaviors of middle school principals with regard to literacy. The qualitative data were derived from open-ended questions presented through a

questionnaire designed to determine middle school principals' perspectives and beliefs about literacy instruction. An "open-coding" process was used to analyze the qualitative data. Key's primary data collection method involved the use of a researcher-designed survey instrument. Although she reported some efforts to determine validity of the instrument, there was no reporting of statistical analyses of the survey to support reliability or validity. Failure to properly manage the development of the survey instrument raised skepticism regarding the value of the data collected.

Key (2005) concluded that population size and principal experience appeared to have little effect on the questions regarding literacy. Critical literacy issues included funding, below-grade-level readers, and the implementation of content area reading instruction. Principals with reading instruction backgrounds were found to be more attentive to professional development and overall literacy knowledge. Key found that middle school principals in her sample, in general, did not have adequate reading backgrounds. Principals in the study did recognize current research contending that individualized instruction and content area instruction are essential to middle school literacy programs.

Unlike Key (2005), who looked at more extrinsic factors that could effect literacy instruction, Bongarten (2006) focused on more intrinsic characteristics of effective literacy principals. Specifically, she suggested that a literacy leader should have knowledge of literacy instruction, establish a literacy team with a coach, build capacity for literacy, provide time for professional development, and establish accountability standards. Bongarten performed a case study of one school examining the literacy leadership of the principal and the perceptions of 11 teachers. She completed 40 hours of

principal observation, attended multiple staff development sessions, observed several classroom teachers, and reviewed pertinent documents. Through interviews, observation, and document review, Bongarten hoped to answer two key research questions: (a) In what ways does the building principal demonstrate the five characteristics of an effective literacy leader? and (b) What other essentials characterize the work of an effective literacy principal (Bongarten, 2006, p. 70)? Bongarten's case study provided full, rich descriptions of the principal and the school she examined. In conclusion, her look into the world of an effective literacy leader suggested that true literacy leadership is a combination of instructional, transformational, and distributed leadership. She also reported that other factors such as division commitment, funding, and professional development contribute to the overall impact of adolescent literacy initiatives.

As previously noted, in a more recent study, J. M. Edwards (2010) examined the relationship between certain literacy leadership practices and student achievement. Specifically, J. M. Edwards identified nine dimensions of literacy leadership and sought to determine the extent to which middle school principals used each of the dimensions and whether or not there was a predictive relationship between the reported use of each dimension and student scores on the Virginia Grade 8 Reading SOL assessment. The researcher further focused her questions to examine certain subgroups: economically disadvantaged students, Black students, and students with disabilities. The nine dimensions included

1. Establishing literacy as a priority.
2. Developing an appropriate platform of beliefs.
3. Ensuring quality instruction.

4. Maximizing time.
5. Constructing a quality program.
6. Assessing performance and ensuring accountability.
7. Creating a coherent and aligned reading system.
8. Fostering staff development and promoting communities of learners.
9. Forging links between home and school. (J. M. Edwards, 2010, p. 81)

J. M. Edwards asked a defined population of middle school principals in Virginia to respond to a modified survey instrument that gathered data regarding the nine literacy leadership dimensions and student reading achievement. Using the data collected, the researcher, used both descriptive and inferential statistics to respond to her research questions. Descriptive statistics served to report the frequency of use for each literacy leadership dimension, and simple linear regression was used to examine the predictive relationship between practice and performance.

Data reported regarding J. M. Edwards's (2010) first research question revealed that the calculated means for the nine dimensions ranged from 3.28 (*SD* = .74) to 4.4 (*SD* = .44). The scale used by respondents ranged from 1 = *never practiced* to 5 = *extensively practiced*. The resulting means suggested that every dimension was practiced to some degree by each principal surveyed.

Research questions two and three were assessed through the use of linear regression models to determine any predictive relationships. Results related to J. M. Edwards's (2010) second research question failed to identify any predictive relationships with the exception of a slight variance in reported student reading achievement that could be attributed to the ninth leadership dimension of forging links between home and school

(p = .044). No predictive value was determined for any of the literacy leadership dimensions relative to research question three, which focused specifically on student subgroups. Despite reasonable efforts to gather a larger sample, the responses for this study were fewer than desired and may have contributed to the eventual nonsignificant outcomes. Although only one specific area of analysis led to a finding of significance, J. M. Edwards's study did serve to document the notion that principals overwhelmingly practice recognized literacy leadership behaviors. The study also provided strong support for the continued need to investigate literacy leadership practices and their effect on student achievement.

Literacy leadership models. Various literacy leadership models were reviewed in Chapter 2 of this study. Four studies, in particular, seemed to capture the key concepts espoused in the areas of adolescent literacy instruction and educational leadership. Although none of the models were examined through quantitative means, all of them were well supported through qualitative measures such as interviews, surveys, observation, and case studies. As the researcher explored the constructs of each model, similarities were noted and universal understandings were identified. Conceptually, this research study was based on the common factors found in the following literacy leadership models. The reviewed models provided a generalized view of the current state of literacy leadership.

Taylor and Collins, 2003. Taylor and Collins (2003) outlined a process for leading successful literacy development that involved six behavioral practices: (a) committing to literacy leadership; (b) using data to design a system of literacy; (c) aligning curriculum, instruction, learning tools, and assessment; (d) creating classrooms

for literacy learning; (e) designing professional development to ensure success; and (f) building capacity for continuous improvement. Each of these practices supports the others in establishing the climate and culture needed for literacy instruction and programming to thrive in the school setting. The basis for the literacy leadership model presented was drawn from the authors' experiences and observations. Throughout their book, *Literacy Leadership for Grades 5-12*, no references to quantitative data supportive of the implementation of the practices described were found.

According to Taylor and Collins (2003), effective literacy leadership begins with a commitment from the school leader. Unless the school leadership sets the tone for quality literacy instruction, it is extremely difficult to move others toward the "end goal for literacy learning: that all students will become joyful, independent readers and writers" (Taylor & Collins, 2003. p. 2). The authors outlined three essential steps for establishing a "fail-safe system of literacy":

1. Believe that all students can be joyful, independent readers and writers…and that you can help them reach that goal.
2. Evaluate your fellow stakeholders' commitment to students becoming joyful, independent readers and writers.
3. Demonstrate your commitment through action. (Taylor & Collins, 2003, p. 16)

Taylor and Collins believed strongly that successful implementation of a literacy programming initiative depends greatly on the level of dedication demonstrated by the school leader.

Once a leader has committed to the idea of developing a quality literacy program, Taylor and Collins (2003) suggested, the leader must confront questions regarding which of the students in the school are literate, which are not, and to what degree in each case. Effective data analysis can help school leadership answer these questions. The authors strongly suggested the establishment of a literacy leadership team to assist the principal in managing the overwhelming task of data analysis. They outlined four steps to be followed once the stage is set:

1. Identify the data and evidence that you will accept.
2. Gather and analyze the acceptable data and evidence.
3. Identify, prioritize, and target individual students and groups of students for literacy outreach.
4. Identify, prioritize, and target individual teachers and groups of teacher for literacy-related coaching. (Taylor & Collins, 2003, p. 20)

Following these steps will assist the principal and leadership team in setting clear goals and objectives for their literacy program. Priorities can be set that become the focus for all faculty as they work with students at every level.

Taylor and Collins (2003) stressed the importance of making sure that the school's methods are tightly aligned with its goals and objectives. Instructional alignment cannot be successful if performed in a linear fashion and must assume a more cyclical pattern where school leaders continuously review what is working and what is not working to improve student achievement. Taylor and Collins challenged the literacy leader to examine the coordination of several factors, including the curriculum,

instructional strategies, learning tools, assessment, and professional development. They suggested that school leaders should continually focus on the following questions:

- What do you want your students to know and be able to do related to literacy learning?
- What literacy strategies work best with your students and what other, research-based strategies do you want to use?
- Do both classroom and standardized assessments reflect actual classroom practice?
- Do the learning tools in your school support the curriculum, instructional strategies, and assessments?
- How will you eliminate unproductive practices?
- How will you know that your curriculum system is aligned? (Taylor & Collins, 2003, p. 40)

Taylor and Collins asserted that the success of a literacy program depends on a well-devised system of resources that serve to support direct instruction of literacy skills and enhance each student's learning experience.

Taylor and Collins (2003) identified classroom structure as a critical focus for literacy leaders. School leaders must be prepared "to set expectations that will articulate exactly what teachers must do to support literacy learning in every classroom" (Taylor & Collins, 2003, p. 59). Within this context, classrooms designed to promote literacy learning and demonstrate a strong literacy focus are more likely to develop successful students. The authors asserted that in addition to setting very clear expectations, literacy leaders must follow several recommended action steps, including the following:

- Create a literacy leadership team.
- Review the student data gathered and analyzed.
- Research proven and promising literacy practices.
- Set literacy expectations appropriate for your student population.
- Align literacy expectations with learning tools appropriate for your student population. (Taylor & Collins, 2003, p. 73)

After setting clear expectations and laying a solid literacy foundation for every classroom, the school leader is ready to focus on the needs of the staff devoted to instructional programming.

Taylor and Collins (2003) suggested that a collaborative approach to designing professional development activities could establish a level of commitment necessary for smooth implementation. Professional development should be designed around desired results and should designate individuals to be responsible for execution of the instructional program. The whole process should be well planned, and an evaluation procedure should be established to provide an indication of success.

Finally, Taylor and Collins (2003) discussed the importance of capacity building and the process of ensuring that efforts to develop strong literacy practices are ongoing. They stressed that school leaders must continually reflect "on what went well and what [they] want to modify, and then start the fail-safe literacy process all over again" (Taylor & Collins, 2003, p. 124). The process of leading effective literacy instruction is never ending and requires that everyone involved be included in the journey. All participants should be knowledgeable of continuing efforts to positively affect literacy; everyone should exhibit buy-in for these efforts. These researchers wrote, "Capacity for growth in

literacy behaviors will happen because you have a well-thought-out, data-driven plan to which your school community is committed" (Taylor & Collins, 2003, p. 116).

Guth and Pettengill, 2005. Guth and Pettengill (2005) provided a model of literacy leadership involving a collaborative effort of school administrators and reading specialists. Guth and Pettengill asserted that the principal alone cannot make the necessary inroads toward a successful literacy program. Their model relies heavily on a shared leadership style that invites others to be part of the overall literacy development process. The authors based this model on their combined experience; through their own expertise and involvement in successful literacy endeavors they developed a set of recommended program elements. Critical factors for the model include (a) developing and coordinating a school wide literacy program, (b) developing a comprehensive literacy community, (c) building an effective resource collection, (d) coordinating and using data, (e) planning and collaborating with teachers, (f) supporting classroom instruction, (g) providing specialized support for students and teachers, and (h) motivating the literacy community.

According to Guth and Pettengill (2005), the development and coordination of a school-wide literacy program should involve not only the school administrator, but also other literacy leaders including the reading specialist and a well-established literacy committee. It is the role of these leaders to formulate a school-wide literacy vision and to establish priorities based on the particular needs of the school. The authors asserted that the leadership process must be flexible, stating that it is impossible to develop an effective program "without knowing the needs of the teachers, the school, the students, and the community" (Guth & Pettengill, 2005, p. 15). A plan for the school should

include clear responsibilities for those involved in school leadership, instruction, and diagnosis and assessment of student progress.

A comprehensive literacy community requires that the effort to promote literacy success and development stretch beyond the walls of the schoolhouse and include the broader community. Guth and Pettengill (2005) defined the literacy community as "all community members, students, parents, support staff, teachers, and administrators" (p. 29). Ultimately, the work of the community is actualized in the efforts of the school literacy team. The most challenging aspects of a school-wide literacy program involve managing the implementation procedures. School leaders must ensure that they garner support from the appropriate people and capitalize on the sense of efficacy that stems from being involved in the process.

Guth and Pettengill (2005) identified resource allocation as a critical aspect of a successful literacy program; resources include both time and materials. The availability of both reading time and reading choices should be a priority for the literacy leadership team. The authors wrote, "Providing time, assistance, and choice for teachers, as well as for students, is critical" (Guth & Pettengill, 2005, p. 57). They encouraged school reading leaders to adhere to the following guidelines in managing literary resources:

- Consult the districtwide list of approved trade books.
- Correlate materials with curriculum and state standards.
- Identify materials that will meet the needs of all readers.
- Provide a variety of reading materials.
- Look for user-friendly resource books and novel units.

- Develop a system for requesting, receiving, and replacing materials. (Guth & Pettengill, 2005, pp. 48-54)

Guth and Pettengill perceived the proper management of literacy resources as a way to lay the foundation for effective instructional practices.

Use of data to guide instructional decision making has become a key ingredient for all successful educational reform issues. The Guth and Pettengill (2005) model included a data analysis component that encourages school literacy leaders to make assessment purposeful and ongoing. Various types of data, including state and division assessments, school-based assessments, and classroom-based assessments, should be accessed to make proper decisions. All test results should be useful to staff as they design instruction for students. Guth and Pettengill also believed that students should be active participants in the assessment process. They wrote, "When all students strive to better themselves as readers and writers, reading becomes an acceptable practice and does not carry a negative stigma" (Guth & Pettengill, 2005, p. 71).

Effective instruction is no longer the sole responsibility of the classroom teacher. Sharing the instructional responsibility is critical to ensuring that students receive the proper attention necessary for them to succeed. Guth and Pettengill (2005) stated, "Successful collaborative efforts ultimately result in teachers who are actively involved in classroom and school-wide literacy efforts and who feel better prepared to more effectively meet their students' needs" (p. 87). Planning and collaboration for successful literacy instruction requires involvement from school administration, instructional support personnel, and classroom teachers. The implementation of a well-designed literacy program depends upon the common effort of the entire school community. This

process is ultimately driven by school leadership, but must involve invested participation from all levels in the school.

Instruction is ultimately delivered in the classroom; without direct support to the classroom the success of any instructional initiative will be hindered. Guth and Pettengill (2005) identified the role of the literacy leader as that of planner and organizer. Without proper planning and organization, instruction cannot be delivered in an efficient and effective manner. School leadership should establish a well-organized process that clearly identifies program goals, instructional expectations, schedules, and so forth. Ultimately, the organizational aspects of the initiative must be implemented in classrooms. School leadership, especially reading specialists, should be sure to arrange time to model the established expectations and assist teachers to embrace the school's literacy program (Guth & Pettengill, 2005).

Guth and Pettengill (2005) asserted that both the student and the teacher are critical to successful literacy programming. Students and teachers need direct, specialized support from the school reading specialist, literacy coach, and other literacy leaders. Focused support for students and teachers should emphasize preventive measures to maintain good reading habits, acceleration strategies for struggling readers, and long-term maintenance plans to ensure the lasting effects of literacy efforts (Guth & Pettengill, 2005). Support should be individualized, and school leadership must be mindful that students and teachers often require differentiated approaches.

Finally, Guth and Pettengill (2005) suggested that motivation plays a key role in the implementation of a literacy program. They even described motivation as "perhaps the most important aspect of a literacy program" (Guth & Pettengill, 2005, p. 114).

Literacy should be celebrated and rewarded at many different levels. Classroom teachers should be readers as well as teachers of reading. They should set an example for students that reading is an enjoyable activity that bears its own rewards. Incentives that provide both students and staff with positive reinforcement for reading should be developed throughout the school year. Incentives can take many forms including awards, reading lists, tangible rewards, and public recognition. The key is to provide meaningful connections to the literacy program that keep interest high and motivate all learners to continue growing and developing.

Phillips, 2005. The National Association of Secondary School Principals (NASSP) published a guide, authored by Phillips (2005) that provided a literacy leadership framework for middle and high school administrators. The NASSP guide outlined nine action steps that should be addressed by an effective literacy leader:

1. Determine the school's capacity for literacy improvement.
2. Develop a literacy leadership team.
3. Create a collaborative environment that fosters sharing and learning.
4. Develop a school-wide organizational model that supports extended time for literacy instruction.
5. Analyze assessment data to determine specific learning needs of students.
6. Develop a school-wide plan to address the professional development needs of teachers.
7. Create a realistic budget for literacy needs.
8. Develop a broad understanding of literacy strategies that work in the content-area classroom.

9. Demonstrate…commitment to the literacy program. (Phillips, 2005, pp. 8-14)

Phillips identified the first step in developing a strong literacy program: determining the capacity of the school to make improvements. Specifically, Phillips designed the Literacy Capacity Survey to "help determine a school's strengths and needs for improvement in the area of literacy" (Phillips, 2005, p. 8). The author created the survey based on personal experience as well as qualitative data within the educational arena. Phillips stated that there was no empirical evidence to support the survey, nor had any validation procedures been performed (M. Phillips, personal communication, June 10, 2008). Nevertheless, the survey provides a baseline of information to assist the literacy leader in beginning the improvement process.

As did researchers associated with the aforementioned models, Phillips (2005) identified the importance of establishing a literacy leadership team. Having the support of staff at all levels is critical to the success of any change initiative. Inviting people with various responsibilities into the early planning stages of a literacy initiative helps to establish the necessary buy-in to pull others along and to sustain the planned change. The author stressed the importance of involving "key teachers" (Philips, 2005, p. 8) who can carry the mission of the literacy leadership team directly to their colleagues in the classrooms. All members of the team should have the willingness and the energy to delve deep into school data to find areas in need of improvement and then begin to shape responses to the identified needs.

The school leader must provide opportunities for involvement across the school and promote a collaborative atmosphere. Decision making should be shared, and involvement in discussion about the planning and implementation of the literacy initiative

should be encouraged. An effective literacy leader facilitates multiple ways for staff to become collaborative. Encouragement should be given, and success should be celebrated (Phillips, 2005).

Phillips (2005) also asserted that priorities must be examined to ensure that appropriate amounts of time are available for literacy instruction. She stressed that the use of instructional time must be differentiated, and that there should be ways for struggling students to receive greater attention. Ultimately, it is critical that all teachers examine the amount of time allotted to addressing literacy instruction: "If students are to improve literacy, then teachers must spend time teaching with strategies that support reading and comprehension" (Phillips, 2005, p. 10).

Analyzing assessment data is critical to the Phillips' (2005) model. Teachers must be able to determine the current level of student performance and use the data to guide them in developing interventions. Simply reviewing standardized testing is not sufficient. Instruction should be based on multiple types of assessment that provide a complete picture of students' strengths and needs. The model stresses that data collection should not be a passive process, whereby the results simply are "set on the shelf" (Phillips, 2005, p. 10) and forgotten. Teachers must regularly review student performance data and adjust their instruction accordingly.

According to Phillips (2005), identifying the needs of students is only the beginning. Teachers must be prepared to provide effective instruction in their classrooms. Quality professional development must be designed for all staff based on a solid assessment of both student and staff needs. Although all teachers may not be reading teachers, it is important that all teachers have a clear understanding of effective

"strategies that improve comprehension, strengthen the reading/writing connection, and enhance content-area literacy instruction" (Phillips, 2005, p. 11). School leadership should be responsible for ensuring that teachers receive initial training as well as ongoing opportunities to improve their understanding of literacy and the delivery of literacy instruction.

Phillips (2005) recognized the cost associated with any new initiative and emphasized the need for a realistic budget to be developed to support the implementation of the literacy program. Resources must be allocated differently to meet the demands of a new approach to literacy instruction. Priorities must be established, and funds may need to be reallocated to provide students and teachers with materials needed to achieve success. It may be necessary to provide books, software, assessments, and other ancillary materials to fulfill newly identified instructional needs. Phillips also suggested that funds might be accessed through sources such as partnerships with businesses, corporations, and educational resource vendors.

Finally, Phillips (2005) suggested that it is the responsibility of the principal to become knowledgeable about literacy instruction and to lead in a manner that demonstrates commitment to the literacy initiative. The effective leader must be able to express at least a basic understanding of the instructional concepts that are expected. Effective supervision requires that school leaders participate in pedagogical discussions and be adept at providing constructive feedback and direction following classroom observations. By demonstrating his or her own willingness to be a continuous and active learner, the principal can exhibit a level of commitment that will elicit the same response from the staff.

Irvin, Meltzer, and Dukes, 2007. Irvin et al. (2007) developed a comprehensive literacy leadership model that integrated common practices of educational leadership and adolescent literacy research. The model consists of multiple goals supported by five key action steps. Adolescent instructional techniques provided the foundation for the goals of the model, including student motivation, student engagement, and student achievement. Additional goals focused on the integration of literacy and learning through content area instruction and specific interventions for struggling readers and writers. Finally, Irvin and her colleagues suggested that sustained literacy development requires support from schools, the district, parents, and the community. The action steps of the model, which stem from established instructional leadership practices, include the following:

- Develop and implement a school-wide literacy action plan.
- Support teachers to improve instruction.
- Use data to make decisions about literacy teaching and learning.
- Build leadership capacity.
- Allocate resources to support literacy. (Irvin et al., 2007, p. 17)

At the heart of the model developed by Irvin et al. (2007) are student motivation, engagement, and achievement. To develop their model, Irvin and her colleagues interviewed principals who had led successful efforts to improve literacy instruction. By tying the results of their interviews to the current literature, they believed there to be a strong research base for their model (J. L. Irvin, personal communication, November 9, 2006).

Irvin et al. (2007) identified five key areas pertinent to effective literacy action planning: (a) strengthening literacy development across content areas; (b) providing

literacy interventions for struggling readers and writers; (c) establishing school policies, structures, and culture for supporting literacy; (d) building leadership capacity; and (e) supporting teachers to improve instruction. These areas serve as the supporting structures for the action steps presented in the leadership model for improving adolescent literacy. They are the building blocks that prepare educators to meet their goals and stay the course toward their instructional objectives. Irvin and her colleagues also stressed the importance of collaboration in the planning process. They emphasized the literacy action plan as a critical component to the leadership model for improving adolescent literacy, providing clear structure for the other aspects of the model.

Supporting teachers is critical to achieving sustained student achievement. Irvin et al. (2007) discussed the important role that classroom teachers play in developing the literacy skills of adolescent students. Teachers are the key ingredients in the instructional process; they have the greatest impact on student achievement. The classroom teacher is the one professional who has the significant amount of contact time with students that is necessary to improve student performance. Irvin et al. suggested that it is a primary responsibility of school leaders to support teachers and provide them with the resources and professional development they need to effectively instruct students. Structures that regularly support teacher development of literacy instruction include the following.

- Professional learning communities.
- Making the work public.
- Literacy coaching.
- Teacher professional development. (Irvin et al., 2007, p. 145)

Additionally, the researchers supported various leadership responsibilities, including:

- Classroom observations.
- Literacy walk-throughs.
- Teacher evaluation.
- New faculty induction. (Irvin et al., 2007, pp. 145-146)

Irvin et al. (2007) strongly supported the use of data to help school leaders pinpoint the areas of need for their adolescent literacy programming. The leadership model for improving adolescent literacy relies on the use of quality data so that leaders can make "the best decisions about instruction, programming, resource allocation, and placement" (Irvin et al., 2007, p. 159). Leaders must be able to do the following:

- Recognize their responsibility to set up a culture of continuous improvement based on the use of data.
- Model how to analyze and use data to make instructional decisions.
- Work to ensure that teachers and administrators have the data they need in the forms required to inform instruction.
- Understand multiple ways that data about student performance can be used to inform support for literacy in the content areas and placement of students in literacy interventions. (Irvin et al., 2007, p. 159)

Although Irvin et al. stressed the critical skill of disaggregating student performance data, they asserted that focusing on data relevant to the school literacy goals is even more important. The researchers also suggested that the use of data is not a passive responsibility. Structures, policies, and systems should be established that guide the use of the data and help to inform school staff regarding issues of instruction and student achievement.

Irvin et al. (2007) acknowledged the importance of any school reform initiatives involving more than just the top school administrator. They described the school principal as "a general contractor" who "must see their [*sic*] job as that of coordinator of the literacy improvement effort and must enlist others to ensure success" (Irvin et al., 2007, p. 180). Irvin et al. emphasized the efforts of school leaders to involve all staff members in becoming literacy leaders. Distributing leadership throughout the school building greatly increases the potential that successful reform will occur. Irvin et al. suggested several actions that school leaders can take to effectively distribute leadership in their schools:

- Create a strong school literacy team to guide literacy improvement efforts and provide teachers with the support and resources they need.
- Offer professional development to build the leadership capacity of teachers in the area of literacy.
- Increase their knowledge and skills in identifying successful school improvement strategies and other strategies that the literacy team believes are needed to make meaningful decisions built on research findings and best practices.
- Take steps to increase teachers' involvement in the decision making process.
- Connect incentives to teacher participation and show the impact of teachers' participation and decisions. (Irvin et al., 2007, pp. 183-184)

Irvin et al. (2007) asserted that making sure appropriate resources are available to address key goals and objectives is a critical function of school leadership. Allocating resources involves the following factors:

- Time for literacy learning, assessment, planning and instruction;
- Use of support personnel, such as literacy coaches, reading specialists, tutors, and paraprofessionals, to work with teachers and students;
- Professional development for all teachers in content-related literacy instruction;
- Instructional materials and technologies to support differentiated literacy instruction; and,
- Adequate funding to support ongoing literacy initiatives. (Irvin et al., 2007, p. 201)

The leadership model for improving adolescent literacy (Irvin et al., 2007) stressed the notion that school leaders may need to make nontraditional decisions regarding the allocations of time, funding, and materials. Wise choices regarding the allocation of literacy resources have the potential to send a message of importance to teachers, students, and the entire community.

Inferences for Forthcoming Study

The research presented in this literature review supports the notion that adolescent literacy is a national problem that requires attention on multiple levels. The 2013 NAEP results framed the problem well by reporting that 65% of the eighth grade student population performed below a proficient level of achievement on standardized reading tests (NCES, 2013). Zipperer et al. (2002) wrote, "The ability of students to read and write, and communicate (a set of skills that by tradition are collectively referred to as 'literacy') stands among the most current concerns pertaining to academic achievement in public education" (p. 3). Fortunately, the adequate level of adolescent literacy practices

research suggested there are remedies to this problem; however, the research regarding literacy leadership continued to be minimal and indicated that increased focus is necessary in this area.

The effect of leadership and the way in which it impacted the underlying literacy research on best practices was not as clear. Alvermann highlighted a critical issue when she stated,

> Finally, questions concerning the degree to which the knowledge base in middle grades literacy education is being translated into practice remain largely unanswered. Studies are needed that both quantitatively and qualitatively investigate what characterizes a school in which teachers, administrators, and supervisory personnel actively engage in applying relevant findings from the available knowledge base to their school's curriculum, and, in particular, to teaching reading in the content areas. (Alvermann, 2000, p. 19)

Zipperer et al. (2002) concurred with Alvermann, stating that principals are key players in how a school's reading program is implemented. School leadership must make decisions regarding scheduling, reading programs, and staffing. Zipperer et al. further stated that in most cases principals are performing these duties with little or no training in the teaching of reading.

The effect that principals have on the literacy achievement of middle school students remains unclear, even in light of this critical review of the existing literature. Many researchers have opined that school leaders are essential to meeting the needs of adolescent literacy issues. Still, there is limited quantitative research that pertains to these issues. Through the course of this study, questions were addressed regarding the representation of literacy leadership in Virginia's middle schools and the ways in which leadership practices affect student achievement in the reading content area.

Conceptual Framework for Forthcoming Study

The literature provided a number of models purporting to offer a structure to effectively facilitate implementation of an adolescent literacy program. To fully understand the current context of the literacy issues facing schools, it was important to consider various structural models of literacy leadership. Many of the reviewed studies offered ideas for effective literacy leadership. Key (2005) proposed a construct of literacy leadership that involved modeling and coaching, instructional knowledge, professional development, resource allocation, and supervision and monitoring practices. Consistent with the research regarding adolescent literacy, the models included common aspects. Similar elements addressed the critical areas as identified by Alvermann (2001): student self-efficacy and engagement, academic literacy, struggling readers, critical literacy, and instructional practices. Research reviewed through this study identified leadership roles and responsibilities; however, the information reported in the research favored instructional practices more than leadership practices. Attention to the role of school leadership was discussed within the context of instructional techniques. The trend in more recent research reflected researchers including a stronger consideration of the impact of leadership on the literacy achievement of adolescents.

Four reviewed models focused on the connection between adolescent literacy practices and educational leadership (Guth & Pettengill, 2005; Irvin et al., 2007; Phillips, 2005; Taylor & Collins, 2003). Each of these models advocated a collection of leadership practices designed to promote the implementation of effective school-based literacy practices. The foundations for the models were based upon qualitative data and personal experiences and observations (Irvin et al., 2007; Phillips, 2005) or simply

personal experiences and observations (Guth & Pettengill, 2005; Taylor & Collins, 2003) that had consistently reported positive results. The conceptual framework for this study was drawn directly from these models. Each model was thoroughly reviewed to identify the core constructs that were represented. Certain elements were common to each model and recognized as potential critical elements of literacy leadership. Table 3 depicts the cumulative list of literacy leadership constructs found through the model reviews and indicates the degree to which each construct is shared between models.

Table 3

Comparison of Literacy Leadership Models

Model	Commitment	Data-driven decision making	Action planning	Professional development	Alignment	Capacity-building
Taylor & Collins, 2003	X	X	X	X	X	X
Guth & Pettengill, 2005		X	X	X		X
NASSP – Phillips, 2005	X	X	X	X		X
Irvin, Meltzer, & Dukes, 2007		X	X			X

Model	Community development	Resource allocation	Classroom support	Teacher support	Collaboration	Motivation
Taylor & Collins, 2003		X	X			
Guth & Pettengill, 2005	X	X	X	X		X
NASSP – Phillips, 2005	X	X	X	X	X	
Irvin, Meltzer, & Dukes, 2007		X		X		

Areas that were found to be common to all models have been specifically identified and serve to establish the conceptual framework for this study. In all, five areas were identified as having a significant degree of commonality: (a) literacy action planning, (b)

data-driven decision making, (c) capacity building, (d) instructional support (professional development combined with classroom and teacher support), and (e) resource allocation. With the exception of instructional support, each concept was found to be present in all four models reviewed. Instructional support represents a combination of professional development, classroom support, and teacher support. These three areas were well documented in the literature as important to the success of any literacy initiative, and reviews of the literacy leadership models presented sufficient commonality to combine the three areas. The researcher hypothesized that the critical components of these models are sufficiently designed to address the leadership demands for middle school principals to effectively improve the reading achievement of typical middle school students.

Summary

Adolescent literacy has become an important focus for middle school leaders. With national reading measures indicating that 65% of eighth graders are below the proficient level of reading (NCES, 2013), adolescent literacy can be considered an instructional crisis. The role of the principal as an instructional leader has been well established in research literature (Hallinger, 2003; Leithwood & Jantzi, 2000; Marks & Printy, 2003; O'Donnell, 2002). Similarly, the importance of adolescent literacy instruction has been well documented (Alvermann, 2000; Alvermann, 2001; Dillon, 2002; Franciosi, 2005; Guthrie & Davis, 2003; Hosking & Teberg, 1998). The combination of these two concepts has served to establish a new role for principals: literacy leadership. Especially in the middle grades, student achievement in the area of reading continually has not met expectations, and schools must respond to this challenge at all levels. Principals must be involved in the kinds of leadership activities that not only

address the management needs of the school, but also establish clear goals and objectives to meet the literacy demands of all students.

Additionally, this review process established five specific literacy leadership practices common to each of the reviewed models that can be used to examine the role of principals in facilitating adolescent literacy instruction in schools. Common elements from multiple literacy leadership models provided a leadership framework that consisted of key constructs critical to principals' having a successful impact on literacy achievement. These constructs included the following: (a) literacy action planning, (b) data-driven decision making, (c) capacity building, (d) instructional support (professional development combined with classroom and teacher support), and (e) resource allocation.

Most of the reviewed research examined aspects of educational leadership or adolescent literacy instruction. Limited quantitative research was found on how school leadership directly supports literacy at the middle school level or the degree to which specific leadership actions affect student achievement. Overall, this critical analysis highlighted the need for school leaders, namely principals, not only to understand fully the instructional needs associated with adolescent literacy learners, but also to develop the skills necessary to lead and manage adolescent literacy programming efforts. The literature emphasized both high-quality instruction and effective leadership. The following chapter is a presentation of the methodology to be used to conduct research designed to explore the relationship between literacy leadership practices and student achievement.

Chapter 3: Methodology

Literacy achievement scores, especially in the middle grades, continue to indicate a relatively high percentage of students who struggle to meet even minimal standards. With approximately 29% of Virginia's middle school students continuing to fail even basic level reading competency exams (VDOE, 2014), it is critical that educators look closely at the practices and procedures that appear to have a positive impact on student learning. Phillips (2005) stated, "Strong leadership from both administrators and teachers is an essential building block in constructing a successful literacy program, but the role played by the principal is key to determining success or failure of the program" (p. 7). Phillips recognized that school leaders are essential to sustaining improved literacy outcomes. Research has repeatedly supported the need for strong instructional approaches and research-based interventions (Alvermann, 2000; Alvermann, 2001; Dodson, 2009; Goodman, 2005; Guthrie & Davis, 2003); however, the impact of school administration on the effectiveness of these approaches and interventions is often minimized or ignored entirely. The majority of information that has been presented in the area of literacy leadership is overwhelmingly anecdotal in nature and relies heavily on qualitative measures to support the effectiveness of recognized practices.

It is important to establish quantitative data that also document the value of educational leadership practices designed to improve student literacy outcomes. This nonexperimental study was conducted using the Literacy Leadership Practice Survey. The survey was the result of an extensive review of the literature that identified a set of frequently cited leadership practices theorized to have an impact on the literacy outcomes of adolescent students. The survey was administered to middle school principals

throughout Virginia and gathered self-reported data regarding the degree to which certain behaviors were practiced within their buildings. The common leadership practices investigated included literacy action planning, data-driven decision making, capacity building, instructional support, and resource allocation. Regression analysis was used to determine whether the identified leadership practices, as a whole or individually, might be considered predictors of student achievement in the area of reading. The scope of the study was limited to Virginia primarily due to a greater level of access to the schools that were surveyed since the researcher is also located in Virginia, but more importantly because it allowed for the assignment of a common criterion variable. Scores on the Virginia Grade 8 Reading Standard of Learning test were chosen as the criterion variable to focus the study and tie the results back to an instructional area that might prove beneficial to the middle school leadership in Virginia.

Research Questions

1. To what extent are the identified literacy leadership practices employed in Virginia's middle schools as reported by Virginia's middle level principals?
2. What is the predictive value of the combined identified literacy leadership practices toward the reading scores of Virginia's eighth grade students?
    a. What is the relative contribution of literacy action planning to the reading scores of Virginia's eighth grade students?
    b. What is the relative contribution of data-driven decision making to the reading scores of Virginia's eighth grade students?
    c. What is the relative contribution of capacity building to the reading scores of Virginia's eighth grade students?

d. What is the relative contribution of instructional support to the reading scores of Virginia's eighth grade students?
e. What is the relative contribution of resource allocation to the reading scores of Virginia's eighth grade students?

Design

In this nonexperimental study, data were reported on the extent to which middle school principals in the Commonwealth of Virginia utilize certain identified literacy leadership practices. Additionally, regression analysis was used to investigate the relationship between the identified literacy leadership practices and student achievement as measured by the Virginia Grade 8 Reading SOL assessment. The Literacy Leadership Practices Survey was used to collect data regarding the predictive value of the identified practices in Virginia middle schools. Virginia accreditation standards define middle school as "a public school with any grades 6 through 8" (VDOE, 2011, p. 4). The survey collected data regarding the degree to which principals reported that they actively demonstrated prominent literacy leadership practices. This data were used to respond to the first research question that asked to what extent the identified literacy leadership practices were used by principals. A linear, numeric scale was designed to collect participant responses regarding the extent to which the participants employed the identified literacy leadership practices. Alreck and Settle (2004) suggested that this type of scale is effective in gathering equal interval data. The results of the survey instrument were then compiled to develop subscale composite scores for each of the five predictor variables. The leadership practices that served as predictor variables for this study included literacy action planning, data-driven decision making, capacity building,

instructional support, and resource allocation. School pass rates on the Virginia Grade 8 Reading SOL assessment constituted the criterion variable.

To answer the research questions posed in this study both descriptive and inferential statistics were employed. Frequency data were reported regarding the configuration of the schools represented in the principal responses, school enrollment, division enrollment, and principal years of experience. Additional descriptive statistics were used to respond to the first research question that asks to what extent principals utilize the identified literacy leadership practices. The mean, median, and standard deviation was reported for the use of each practice based on principal responses. Multiple regression analysis was then used to answer the second research question and determine the predictive value of each of the literacy leadership practices (predictor variables) to student achievement scores on the Virginia Grade 8 Reading SOL test (criterion variable). The following chapter will report various types of data to address this study's research questions. In particular, the researcher will report on the fit of the regression model (adjusted R^2), the significance of the overall relationship (F), and the significance of each predictor variable (p).

Shadish, Cook, and Campbell (2002) discussed a validity framework consisting of four specific validity types. They outlined the need for researchers to consider internal validity, external validity, statistical conclusion validity, and construct validity. Each component of the framework provides the researcher with guidance regarding the identification of possible threats to the validity of a research study's design. Accounting for the various threats inherent in the framework can improve the overall validity of the research and subsequent findings.

Internal validity is concerned with the potential causal relationship between variables of interest and with potential threats such as history, maturation, testing, instrumentation, statistical regression, selection, and mortality. External validity considers the generalizability of the causal relationship. The nonexperimental nature of this research design provided little information with which to assess causal relationships. Because the primary objective of the research study was focused specifically on verifying the existence of a predictive relationship between the predictor variables and the criterion variable but not purporting to evaluate causal relationships, the threats associated with internal and external validity are not relevant.

Statistical conclusion validity requires the researcher to determine whether or not there is a relationship between the variables being studied. Through a proper power analysis and research design that involves only one researcher, two data collection tools (The Literacy Leadership Survey and the Virginia Grade 8 Reading SOL), and one criterion variable (student achievement scores), major concerns regarding statistical conclusions have been addressed in this study. Also, the statistical procedure chosen was appropriate for the level of measurement. Further examination of the assumptions underlying the regression analysis was addressed during the actual data analysis process.

Construct validity addresses the possibility that inferences about the constructs involved in the study will be faulty. The researcher has attempted to minimize threats in this area by performing a series of pre and pilot studies to formally define and refine the assessed constructs. Although certain aspects of the study are appropriate for generalization, the extent of the generalization was limited by the scope of the data collected and the geographic limitations incurred by restricting the collection of data to

middle school principals in Virginia. While reading was identified as only one part of the general definitions of literacy, the focus of this study was the reading construct that was associated with the various definitions of literacy and was consistent with how middle schools in Virginia assessed their literacy achievement. The Virginia SOL test that served as the criterion variable for this study measured reading achievement and further supported the study's construct validity.

In general, the various threats to this study either were not applicable or were minimized. Nevertheless, throughout the study the data were examined closely to confirm that outcomes and conclusions were valid. Shadish et al. (2002) suggested that despite attention to the various threats that may present themselves, nonexperimental research designs will "usually be inferior to experiments" (p. 500). For this reason, great efforts were made to develop a solid research study design that minimized potential threats.

Participants

The hypothetical population for this study included all middle school principals everywhere. Within the scope of such a study it would be difficult to address all principals; furthermore, the nature of the data would not necessarily be congruent. Acknowledging that a reasonable sample of all principals would be unobtainable, the researcher designated middle school principals across the Commonwealth of Virginia as the participants for this study. Targeting only Virginia middle school principals was realistic and allowed all responses regarding the predictor variables to be compared to a consistent criterion variable. For the purpose of this study, only schools that met the Virginia definition of having grades 6-8 were considered. At the time of the study, the

Virginia Department of Education had identified 307 schools as middle schools (VDOE, 2013).

Green (1991) discussed the minimum number of participants required to conduct multiple regression analysis, suggesting that there are several rules of thumb researchers typically may use when determining an appropriate sample size. In his analysis, Green argued that simple rules may not always be sufficient and encouraged researchers to use a more complex rule that incorporates the effect size in the determination of sample size. The desired sample size for this research study was developed using Green's more complex rule, which drew from calculations based on Cohen's (1988) power analysis approach. Using the rule proposed by Green, it was determined that a medium effect size ($f^2 = .15$) for this study could be obtained from a sample size of approximately 89 participants ($n \geq 89$). The formula used to determine an appropriate sample size was $N \geq L/f^2$, where $L = 6.4 + 1.65m - .05m^2$ (m = number of predictors; L = approximation of lambda).

To select the desired number of participants, a proportional stratified random sample of middle school principals was drawn from the 307 (N) available middle school principals in Virginia. Virginia public schools are divided into eight geographic regions. The sample for this study was derived from these eight geographic regions and was designed to result in a proportional sample similar to the overall population for each region. Based upon the proportionate number of principals from each region, SPSS software was used to generate a random selection of principals; 235 principals were eventually surveyed in an attempt to acquire the required number of participants ($n \geq 89$). Scherbaum (2009) completed a study that investigated the response rates to online

surveys and mail-in surveys. Her conclusions indicated a 38% response rate for online efforts versus a 61% response rate for mail-in. The sample size of 235 principals was specifically selected to increase the possibility that the desired return rate of 89 or more participants will be realized. Participants were informed that all data collected would be used strictly for research purposes. Participation was voluntary, and all information gathered remains confidential. Survey data were collected in the fall of the 2013-2014 school year; however, principals were targeted based on their middle school assignments from the previous year, 2012-2013.

Instrument

Initially, the intent of this study was to use an established survey instrument that measured literacy leadership behaviors. Several existing surveys were reviewed, but those considered were based on anecdotal and observational data. Minimal to no validation procedures were described. Additionally, the existing surveys did not specifically assess the predictor variables of interest in this study. In the absence of an existing valid survey, it was decided that a new data collection instrument must be developed. The survey instrument developed to collect data in this study was the result of a synthesis of current literacy leadership literature. Specifically, four prominent models were reviewed (Guth & Pettengill, 2005; Irvin et al., 2007; Phillips, 2005; Taylor & Collins, 2003) for common elements. The researcher then organized the identified commonalities into five different literacy leadership domains: literacy action planning, data-driven decision making, capacity building, instructional support, and resource allocation.

Initial questions were developed based upon a thorough review and comparison of the key tenets of each model. A comparability matrix was developed that grouped common practices into one of the five aforementioned literacy leadership domains. Each question was written with three important attributes in mind:

1. *Focus*: Each question should be directly related to the issue being investigated.
2. *Brevity*: Shorter questions are subject to less error.
3. *Clarity*: Each question should elicit the same interpretation from respondents. (Alreck & Settle, 2004, pp. 90-91)

To promote full understanding of the content by all respondents, special attention was paid to the vocabulary and grammatical structure of the survey. Additionally, the questions were structured to avoid instrumentation and response biases that might be introduced through poor survey design. The survey was pretested to determine the validity of the survey instrument. Both pilot group and expert review techniques were employed to examine the content validity of the instrument. The original 54 questions reviewed are included in Appendix A.

The pilot group consisted of 15 university students pursuing doctoral degrees in educational administration and leadership. This group performed an initial review of the survey instrument and provided feedback based on the attributes identified by Alreck and Settle (2004). Written and verbal feedback was obtained from the pilot group. The pilot group overwhelmingly suggested that the original survey of 54 questions was too lengthy. A number of questions had been identified as failing to meet one or more of the required attributes. Additionally, the group noted some redundancy in the questions.

Based upon the results from the pilot group, a number of items were determined to be poorly developed and were removed from the survey. After fully considering all the remarks from the pilot group, 37 questions were identified as meeting the attributes of focus, brevity, and clarity and resulted in a revised instrument.

A panel of experts including middle school and central office personnel then reviewed the revised version of the instrument. The panel included principals, assistant principals, literacy leadership team members, and instructional supervisors. Each of the reviewers had expertise in middle school leadership and adolescent literacy programming. The review of the expert panel led to seven additional questions being eliminated because they did not meet the desired attributes sufficiently. The version of the survey that remained after review by the pilot group and the expert panel consisted of 30 questions (Appendix B).

Table 4

Five Literacy Leadership Domains and Related Survey Questions

Literacy leadership domain	Related survey questions
Literacy action planning	2, 5, 6, 9, 21, 26
Data-driven decision making	8, 10, 13, 14, 22, 27
Capacity building	1, 7. 15, 17, 24, 28
Instructional support	4, 12, 18, 20, 25, 29
Resource allocation	3, 11, 16, 19, 23, 30

The final version of the survey instrument was piloted prior to distribution to study participants. The pilot group consisted of a small group of recognized literacy leaders (n = 30), who responded to the survey questions based on their knowledge and

expertise of literacy practices within their respective settings. This group consisted of building level literacy leaders including former principals, assistant principals, and literacy supervisors. Prior to full implementation of the study, the pilot data were used to calculate Cronbach's alpha to determine the internal consistency of the instrument.

The survey was designed to solicit structured responses from the study participants using a simple linear, numeric scale. Alreck and Settle (2004) suggested that such a scale "with the extremes labeled appropriately is the most straightforward method of scaling" (p. 130). Linear, numeric scaling also provides the type of equal interval data required of regression analysis. The rating scale applied to the survey was a 7-point scale with a rating of 0 indicating that a particular practice *never occurs* and 6 indicating that a particular practice *always occurs*. Each participant completing the 30 item survey generated a subscale score for each of the 5 domain areas; the score was derived from each principal's mean responses. The subscale scores served as the predictor variable for the multiple regression analysis.

The criterion variable for this study was student achievement scores on the Spring 2013 Virginia Grade 8 Reading SOL assessment. The Virginia SOL tests were first administered in 1997. At the time of this study, the assessment for reading was required of all students in Grades 3 through 8 and Grade 11. Grade 8 students participated in a 55 question, multiple choice assessment that contained 10 field test items. Based upon his or her performance on the 45 operational items, each student received a scaled-score ranging from 0-600. The scores were further broken into indicators of success with a *Pass Advanced* score between 500 and 600, a *Pass Proficient* score between 400 and 499, and a *Fail* score below 400.

The VDOE considered test validity and reliability as it developed SOL tests. As reported by the VDOE and as cited in J. M. Edwards (2010), a Kuder-Richardson reliability index (*KR20*) was used to test reliability. A *KR20* value of .87 was reported for the Grade 8 Reading SOL test. To address validity, a Spearman rank order correlation coefficient ($r = .81$) was calculated for the reading SOL assessment and the Stanford 9 total reading scores. Together the *KR20* and the Spearman established strong measures of reliability and construct validity for the Virginia test.

Procedures

To ensure the collection of an adequate number of responses, the survey instrument was distributed to a proportional stratified random sample of 235 middle school principals in the Commonwealth of Virginia. A list of the middle schools ($N = 307$) in Virginia and their principals was retrieved from the Virginia Department of Education website. Dillman, Smyth, and Christian (2009) outlined the following procedures designed to improve the Internet survey process:

1. Personalize contacts, if possible.
2. Consider incentives.
3. Use multiple contacts; vary the message.
4. Strategically time the contacts.
5. Consider contacting respondents by an alternative mode when possible.
6. Ensure that e-mail contacts are short and to the point.
7. Set up your emails to minimize the possibility of them being identified as spam.
8. Carefully complete the name and address line of the e-mail; include an informative subject line.

9. Be clear on the method to access the survey.
10. Develop a clear opening screen.
11. Allocate each participant a distinctive ID number.
12. Understand the capabilities and limitations of the web servers.
13. Determine a procedure for dealing with emails that are undeliverable.
14. Determine methods for dealing with returned incentives.
15. Determine methods for dealing with questions from respondents.
16. Apply a system for checking progress and assessing early responses.

These considerations will guide the survey process for this study.

An email invitation to participate in the survey (Appendix C) and information regarding informed consent (Appendix D) was sent electronically to each of the selected middle school principals via their respective school e-mail addresses using the web-based survey development tool SurveyMonkey. As the survey instrument was distributed electronically via e-mail, there was no written documentation for consent. As necessary, division protocols regarding procedures for conducting research studies were pursued. The electronic correspondence provided the principals with a link to an electronic survey through which they could respond to the survey questions. The correspondence also asked them to submit their response within a week of receiving the survey. The SurveyMonkey program provided an indication of who had responded to the survey request. The responses of the participants were linked to their e-mail addresses so that the responses could be matched to the associated criterion variable, Virginia SOL scores, that were obtained from the Virginia Department of Education website. Although responses were tracked, only aggregate data were reported as part of this study.

Individual responses were not reported to maintain privacy. Nonresponders received a follow-up request generated via the SurveyMonkey program. This process was repeated two times until an adequate response ($n \geq 89$) was obtained. A second and a third e-mail request were sent as necessary, each occurring one week after the due date of the preceding request. The identities of all respondents were strictly maintained, and their names kept confidential. It was necessary to collect identifying information so that schools could be matched with SOL data that were obtained through the VDOE website. The SOL data were obtained from the VDOE and the *Virginia School Report Card* generated for each of the schools represented in the returned surveys. The results of this study were made available to any participant who desired additional information.

Data Handling

After the receipt of completed surveys, data were downloaded directly into the SPSS software and checked to ensure that each survey had been fully completed. Once data were confirmed as complete, principal responses were aggregated within each of the five literacy leadership constructs to establish composite scores; these scores were then compared to each school's performance on the Virginia Grade 8 Reading SOL assessment. The original sample of 235 principals provided a sufficient response ($n = 98$). Of the 98 surveys returned, five identified a grade configuration different than what was obtained originally through the VDOE website. The reported configurations for these five schools were different than the identified definition of a Virginia middle school, serving Grades 6-8, and were not included in the statistical analysis leaving a sample of 93 principals. Using the final set of collected data ($n = 93$), new Cronbach's

alpha values were computed to again check the consistency of the survey items in comparison to the values obtained from the pilot data.

Data Analysis

The SPSS software was used to perform a regression analysis designed to answer each of the research questions. Both descriptive and inferential statistics were reported using the data collected in this study. Descriptive statistics were used to provide basic demographic information about the study participants and to answer the first research question that pertains to the extent that principals utilize the literacy leadership variables central to the components being examined. Key statistics reported included the mean, median, and standard deviation associated with each of the leadership practices. Inferential statistics resulting from the regression analysis provided the data necessary to respond to the remaining research question pertaining to the hypothesized relationship between the identified literacy leadership practices and student achievement. As stated previously, the key statistics reported included the fit of the regression model (adjusted R^2), the significance of the overall relationship (F), and the significance of each predictor variable (p).

Cohen, Cohen, West, and Aiken (2002) outlined four key assumptions critical to multiple regression analysis: independence, normality, linearity, and homoscedasticity. Examining the distribution of the residual scores obtained through the data analysis procedures provided a check for each of these assumptions. Independence was checked using the Durbin-Watson statistic available in SPSS. Normality was ascertained once residual scores were obtained and a histogram was plotted to graphically display data variations. Plotting standardized residual scores against the predictor variable or the

predicted value of the criterion variable allowed for the assessment of both linearity and homoscedasticity.

Ethical Considerations

The participants in this study encountered no potential risks through their involvement. The study and all procedures and processes were reviewed and approved by the Institutional Review Board of The George Washington University. All respondents participated voluntarily with the understanding that all data would be maintained in a strictly confidential manner and be used only for the purposes of this research study. The purpose, risks, and benefits of the study were stated clearly in the participant consent form that was provided electronically to each participant prior to their submission of any data pertinent to the study.

Summary

This nonexperimental study was designed to investigate the predictive relationship between certain identified literacy leadership practices and the reading achievement scores of middle school students in Virginia. Data were collected using a survey instrument distributed to a proportional stratified random sample of middle school principals in Virginia. The data were used to perform both descriptive and inferential statistical analyses to answer the research questions identified in this study. Chapter 4 presents the results of this research study.

Chapter 4: Results

The purpose of this study was to investigate the predictive relationship between common literacy leadership practices and student performance on eighth grade reading assessments in Virginia. To respond to the research questions, a survey instrument was designed that facilitated the collection of data in five domain areas including literacy action planning, data-driven decision making, capacity building, instructional support, and resource allocation. In addition, participant demographics were identified and SOL scores obtained. Two research questions were the focus of the study:

1. To what extent are identified literacy leadership practices employed in Virginia's middle schools as reported by Virginia's middle level principals?
2. What is the predictive value of the combined identified literacy leadership practices toward the reading scores of Virginia's eighth grade students?
    a. What is the relative contribution of literacy action planning to the reading scores of Virginia's eighth grade students?
    b. What is the relative contribution of data-driven decision making to the reading scores of Virginia's eighth grade students?
    c. What is the relative contribution of capacity building to the reading scores of Virginia's eighth grade students?
    d. What is the relative contribution of instructional support to the reading scores of Virginia's eighth grade students?
    e. What is the relative contribution of resource allocation to the reading scores of Virginia's eighth grade students?

The population consisted of 307 Virginia middle school principals. A

representative sample of 235 principals was electronically surveyed using SurveyMonkey. Ninety-eight principals responded, providing a response rate of 42%. The *Literacy Leadership Practices Survey* asked each principal to provide basic demographic information and to rate the occurrence of the identified literacy leadership practices via 30 questions. The 30 questions were divided into groups of six survey questions that aligned with each domain area and provided the composite scores used as predictor variables in this study. Virginia Grade 8 Reading SOL pass rates for the school of each respondent constituted the criterion variable.

Description of the Population

The population for this study consisted of 307 middle school principals in Virginia during the 2012-2013 school year. The *Regulations Establishing Standards for Accrediting Public Schools in Virginia* define a middle school as any "public school with any grades 6 through 8" (VDOE, 2011, p. 4). In Virginia, all divisions and their schools are divided into eight regions based on their geographic location, and the participants for this study were part of a proportional stratified random sample drawn from the middle schools throughout these regions.

To achieve an adequate sample for this study, a total of 235 surveys were distributed via electronic mail through SurveyMonkey. A return rate of 42% (n = 98) was achieved. As mentioned earlier in Chapter 3, five respondents identified a grade configuration outside the identified definition of a Virginia middle school, serving Grades 6-8, and were not included in the statistical analysis. The final statistical analysis was based on 93 responses that met the sampling criteria. The participants represented 48 school divisions throughout the Commonwealth. Each of the eight Superintendent's

Regions was also represented by the 93 responses. Based on the statistical analysis used in this study, and the calculations reported earlier (Green, 1991), at least 89 responses were needed to achieve a medium effect size for this study. The response rate by region is represented in Table 5. In many cases the actual response rate was similar to the desired response rate.

Table 5

Survey Response Rates by Region

Region	Response Rate Desired (%)	Response Rate Actual (%)
1	15.2	10.8
2	21.0	31.2
3	7.1	8.6
4	27.8	21.5
5	10.7	11.8
6	9.7	9.7
7	5.5	3.2
8	2.9	3.2

(n = 93)

Additionally, a chi square goodness-of-fit test revealed that the sample was not significantly different than the population, χ^2 (3, n = 93) = 3.57, p = .312. Chi square calculations assume that the data contains one categorical variable, independence of observations, mutually exclusive groups, and an adequate sample size of at least 5 frequencies in each group. Although, the first three assumptions were met in this study, one of the expected cells did not meet the final assumption, resulting in only 75 percent of cells having the desired frequencies. Failure to meet all assumptions requires that some caution should be used in the interpretation of the results for the goodness-of-fit

test.

Reliability of the Data

To determine the internal consistency of the survey items, Cronbach's alpha was calculated using SPSS. Nunnally (1978) suggested that a value of .70 or higher is a sufficient indicator toward a reliable scale. Responses to the pilot and the final survey distribution rendered alpha measures that exceeded .70 (Table 6); therefore, sufficient evidence of reliability was established in both cases.

Table 6

Cronbach's Alpha Reliability Coefficients

Literacy leadership domains	Pretest (*N*=30)	Final (*N*=93)	Items
Literacy action planning	.82	.90	2, 5, 6, 9, 21, 26
Data-driven decision making	.70	.89	8, 10, 13, 14, 22, 27
Capacity building	.72	.79	1, 7. 15, 17, 24, 28
Instructional support	.86	.81	4, 12, 18, 20, 25, 29
Resource allocation	.79	.80	3, 11, 16, 19, 23, 30

Survey Results: Sample Characteristics

Respondents for this study included middle school principals throughout the Commonwealth of Virginia. Demographic information that was collected included school configuration, school enrollment, division enrollment, and years of experience as principal both total and at current school.

School configuration. Ninety-eight school principals responded to the survey questions. Five schools identified themselves as containing a grade configuration other than the Grade 6-8 configuration recognized by the Virginia Department of Education as

a middle school and were subsequently removed from the sample as they did not meet the earlier identified definition of middle school for this study. All of the schools included in the final data set (n = 93) identified themselves as containing the desired Grades 6-8.

School enrollment. Respondents were asked to indicate the approximate enrollment of their schools. Data related to this survey question are presented in Table 7. The majority of principals that responded (62%) represented 58 schools with enrollment of greater than 600 students. Very few schools fell into the lower enrollment numbers with only 3 principals (3%) reporting less than 200 students and only 6 principals (7%) reporting 200 to 399 students. Twenty-five principals (27%) indicated that their school enrollment fell within the 400 to 600 range. One respondent failed to provide a response to this survey question.

Table 7

Approximate School Enrollment

Number of students	*f*	*p*
< 200	3	.03
200-399	6	.07
400-600	25	.27
> 600	58	.62
Unreported	1	.01

Division enrollment. Respondents were also asked to indicate the approximate enrollment of their division. Data related to this survey question are presented in Table 8. Principals reported from various sized divisions. Although the most common reported division enrollment was 5,000 to 14,999 students (24%), there was a sufficient dispersion

of division enrollment sizes reported. Sixteen principals (17%) indicated that their division enrollment was less than 5,000 students, and 14 principals (15%) stated their division enrollment was 15,000-29,999 students. Nineteen participants (20%) reported in each the 30,000-50,000 and greater than 50,000 categories. One respondent failed to provide a response to this survey question.

Table 8

Approximate Division Enrollment

Number of students	*f*	*p*
< 5,000	16	.17
5,000-14,999	24	.26
15,000-29,999	14	.15
30,000-50,000	19	.20
> 50,000	19	.20
Unreported	1	.01

Years of experience as principal. Data collected regarding each principal's years of experience are reported below in Table 9. Nearly half of the principals responding to the *Literacy Leadership Practices Survey* (47%) reported that they had one to five years of principal experience. Thirty-six principals (39%) indicated they had been principals for 6 to 10 years. Very few principals reported experience beyond 10 years. The mean number of years experience as principal was 6.7 years (*SD* = 4.6).

Table 9

Years of Experience as a Principal

Number of Years	*f*	*p*
1-5	44	.47
6-10	36	.39
11-15	8	.09
16-20	4	.04
> 20	1	.01

Years of experience as principal at current school. Data collected regarding each principal's years of experience at their current school were reported in Table 10. A majority of the principals responding (73%) reported that they have 1 to 5 years of principal experience in their current school. Nineteen respondents (20%) indicated they had been principals at their current school for 6 to 10 years. Consistent with the data regarding overall experience as principal, very few principals reported experience beyond 10 years. The mean number of years experience as principal was 4.3 years (*SD* = 3.4).

Table 10

Years of Experience as a Principal at Current School

Number of Years	*f*	*p*
1-5	68	.73
6-10	19	.20
11-15	5	.05
16-20	1	.01
> 20	0	.00

Standards of Learning Data

The school pass rates on the Spring 2013 Virginia Grade 8 Reading SOL assessment constituted the criterion variable for this study. Pass rates associated with each of the participants' schools were retrieved from the VDOE. Scores for "All Students" were used for the purposes of this study's statistical analysis. The mean pass rate for the scores included (n = 93) as part of this study was 70.14% (SD = 12.52). Pass rates for each school represented in the study are provided in Appendix E.

Presentation of the Data: Research Questions

To answer the first research question of this study, descriptive statistics were obtained to determine the mean, median, and standard deviation of each literacy leadership practice, thus providing an indication of the extent to which each practice was employed by the participating principals. The second research question sought to determine any predictive relationship that may exist between the literacy leadership practices, both collectively and individually, and pass rates on the Virginia Grade 8 Reading Standard of Learning assessment. To determine if such a relationship existed SPSS statistical software was used to calculate F tests through the use of multiple and simple regression models.

Research Question 1: To what extent are identified literacy leadership practices employed in Virginia's middle schools as reported by Virginia's middle level principals?

To determine the response to this research question, descriptive data were obtained that provided an indication of the extent each of the identified literacy practices was used by the responding principals. Principal responses to the 7-point rating scale (0

= *never occurs*; 6 = *always occurs*) indicated whether they never utilized a particular practice at one extreme and whether they always used a practice at the other. Identifying the mean, median, and standard deviation for each of the five practices provided an overall sense of their use. The measures for each practice are provided below in Table 11. Review of the data show that literacy action planning (M =4.50, SD = 1.05), data-driven decision making (M =4.70, SD = .99), capacity building (M =4.74, SD = .79), and resource allocation (M =4.34, SD = .99) all were reported, on average, within the four to five point range on the rating scale. This suggested that principals employed these practices a majority of the time; however, not quite all the time. Instructional support (M =3.72, SD = 1.23) ratings were reported on average between 3 and 4 on the rating scale, suggesting that this practice occurred slightly more than half of the time.

Table 11

Frequency Data Related to the Literacy Leadership Practices Survey

Literacy Leadership Practices	*M*	*Mdn*	*SD*
Literacy action planning	4.50	4.67	1.05
Data-driven decision making	4.70	4.83	.99
Capacity building	4.74	4.83	.79
Instructional support	3.72	3.83	1.23
Resource allocation	4.34	4.33	.99

Note. The above data were based on a rating scale of 0-7 (0 = *Never*; 6 = *Always*). n = 93.

Research Question 2: What is the predictive value of the combined identified literacy leadership practices toward the reading scores of Virginia's eighth grade students?

a. **What is the relative contribution of literacy action planning to the reading scores of Virginia's eighth grade students?**
b. **What is the relative contribution of data-driven decision making to the reading scores of Virginia's eighth grade students?**
c. **What is the relative contribution of capacity building to the reading scores of Virginia's eighth grade students?**
d. **What is the relative contribution of instructional support to the reading scores of Virginia's eighth grade students?**
e. **What is the relative contribution of resource allocation to the reading scores of Virginia's eighth grade students?**

To respond to the first part of research question 2, it was necessary to conduct a multiple regression analysis using the mean scores of the five literacy leadership practices as predictor variables and reading scores of Virginia's eighth grade students as the criterion variables. A null hypothesis stating that there is no predictive relationship between the collective use of prominent literacy leadership practices and the reading achievement of eighth grade students in Virginia was established and tested using SPSS statistical software. The alpha level was set at .05 for this analysis.

For the purpose of this analysis, it was important also to verify that several essential assumptions were met. The analysis for the multiple linear regression resulted in a Durbin-Watson score of 2.25, allowing us to conclude that that independence was met. Figures 1, 2, and 3 support that the assumptions of linearity, normality, and homoscedasticity were also met.

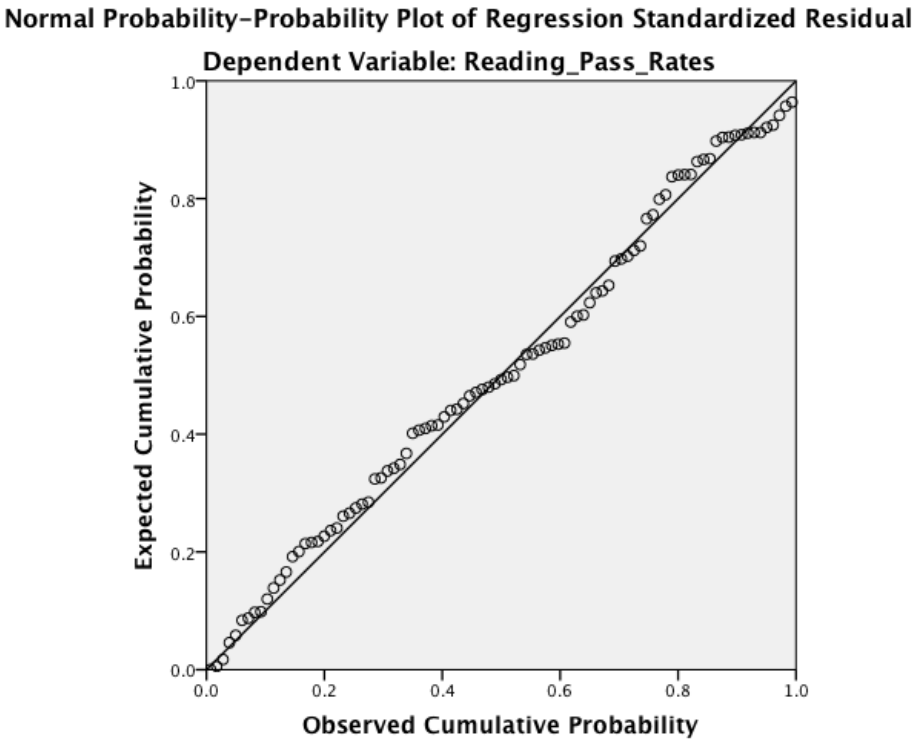

Figure 1. Normal probability plot of student reading scores with the combined literacy leadership practices as the predictor variable.

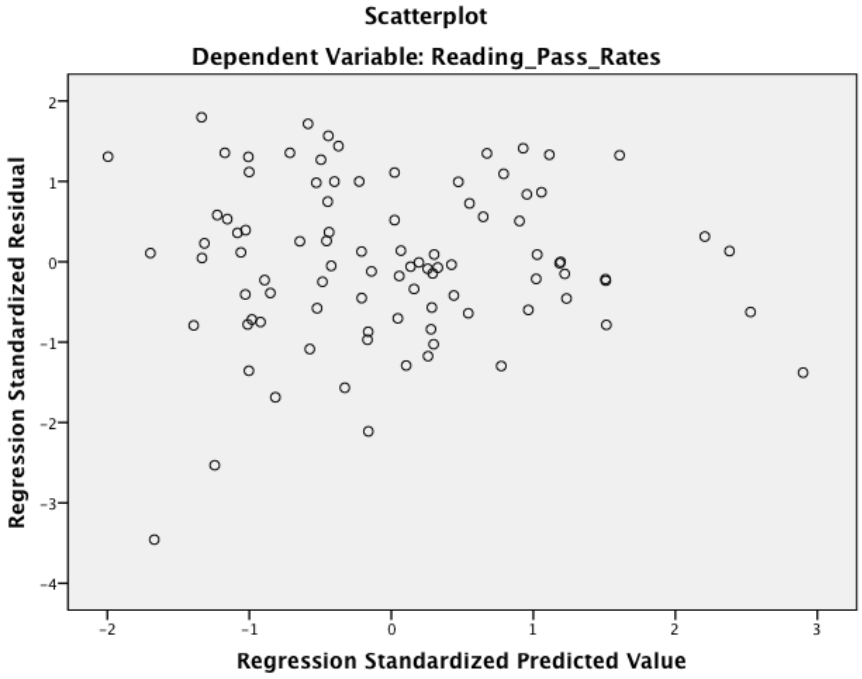

Figure 2. Scatterplot of the standardized residual scores with the combined literacy leadership practices as the predictor variable.

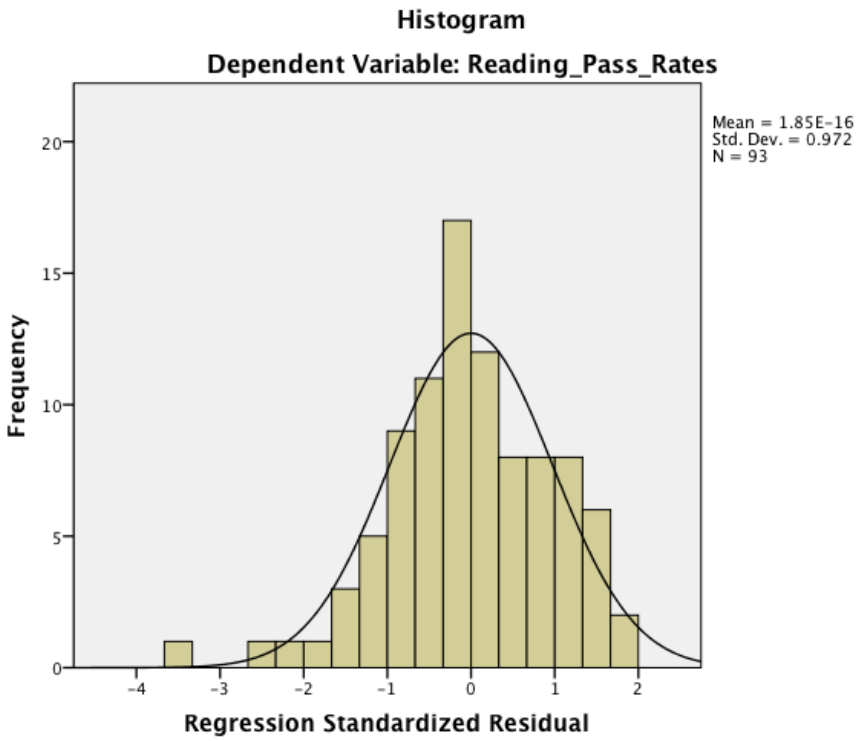

Figure 3. Histogram of the standardized residual scores with the combined literacy leadership practices as the predictor variable.

Collinearity statistics, tolerance and Variance Inflation Factors (VIF), also were run and are reported in Table 12. O'Brien (2007) noted that, "Not uncommonly a VIF of 10 or even one as low as 4 (equivalent to a tolerance level of .10 or .25) have been used as rules of thumb to indicate excessive or serious multi-collinearity" (p. 674). O'Brien further commented that the most common rule of thumb suggested that a tolerance level lower than 0.10 or a Variance Inflation Factor (VIF) of greater than 10 indicate that multicollinearity should be viewed as a serious concern. Given that all tolerance levels and VIFs for this study did not exceed these measures, multicollinearity was not considered to be a significant concern.

Table 12

Collinearity Statistics

Predictor Variable	Tolerance	VIF
Literacy action planning	.205	4.87
Data-driven decision making	.330	3.03
Capacity building	.233	4.29
Instructional support	.288	3.48
Resource allocation	.458	2.18

As stated earlier, SPSS statistical software was used to perform a multiple regression with the five literacy leadership practices identified as predictor variables and student reading achievement scores as the criterion variable. The results of the multiple regression did not support a predictive relationship between the literacy leadership practice and students' reading scores, adjusted $R^2 = .057$, $F\ (5, 87) = 2.081$, $p = .075$. The overall adjusted R^2 (.057) suggested that only a very small amount of the variance in the criterion variable could be attributed to the comprehensive effect of the predictor variables.

In addition to the multiple regression analysis that looked simultaneously at the predictive value of all five literacy leadership practices, each practice was individually assessed for predictive value. In each case, the same four assumptions–independence, linearity, normality, and homoscedasticity–that were checked for the multiple regression were verified for each of the simple regression models (see Appendices F & G). Based on the simple regression analyses, and also consistent with the multiple regression analysis, each individual practice proved to be a nonsignificant predictor of student reading achievement (see Table 13).

Table 13

Simple Regression Analysis for the Five Literacy Leadership Practices

Literacy Leadership Practices	Adj. R^2	F (1, 91)	p
Literacy action planning	-.01	.01	.95
Data-driven decision making	-.01	.01	.92
Capacity building	-.01	.08	.78
Instructional Support	.02	2.60	.11
Resource Allocation	.001	.89	.35

Note. $n = 93$.

As evidenced by the adjusted R^2 values, which range between -.01 and .02, each of the literacy leadership practices contributed to only a very small, if any, proportion of the variance in the student reading achievement scores.

Summary

This study was designed to determine if commonly identified literacy leadership practices had predictive value toward student achievement scores on the Virginia Grade 8 Reading SOL assessment. Multiple experts (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003) suggested that the practices investigated were critical components of an effective literacy leadership model at the middle school level. The results of this research, however, do not support that the practices in a combined fashion or individually have a predictive relationship to student achievement scores. Although all of the respondents in this study ($n = 93$) reported utilizing the identified practices, the statistical outcomes did not indicate that they could be used to predict improved reading scores for students.

Chapter 5: Interpretations, Conclusions and Recommendations

Introduction

As stated earlier, the purpose of this study was to contribute to the empirical research regarding literacy leadership and the effect such actions have on student achievement. Currently, there continues to be a lack of clarity on what specifically constitutes literacy leadership and how a school leader should approach this concept. This study examined the concept of literacy leadership as it related to adolescent literacy practices and educational leadership practices. A review of relevant literature produced research and information pertaining to each of these areas; however, literacy leadership implied a conceptual framework that represented both areas. Unfortunately, the literature review did not reveal an abundance of information with regard to literacy leadership, and most of what was discovered relied heavily upon qualitative and anecdotal data to support its assertions. Dowell, Bickmore, and Hoewing (2012) suggested that an actual framework for literacy leadership does not exist in the educational literature. To the contrary, this study identified several frameworks (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003) that provided for the basic components of literacy leadership. In synthesizing these frameworks, five practices surfaced as common to each: literacy action planning, data-driven decision making, capacity building, instructional support, and resource allocation. These five practices became the basis for the conceptual framework of this study.

A survey was designed to elicit feedback from middle school principals in Virginia on the extent to which they employed the identified literacy leadership practices. Using the five practices as predictor variables and Virginia's Grade 8 Reading SOL

scores as the criterion variable, regression analysis was employed to determine the relationship, if any, the identified practices had on student achievement. The following research questions were addressed through the research study:

1. To what extent are identified literacy leadership practices employed in Virginia's middle schools as reported by Virginia's middle level principals?
2. What is the predictive value of the combined identified literacy leadership practices toward the reading scores of Virginia's eighth grade students?
    a. What is the relative contribution of literacy action planning to the reading scores of Virginia's eighth grade students?
    b. What is the relative contribution of data-driven decision making to the reading scores of Virginia's eighth grade students?
    c. What is the relative contribution of capacity building to the reading scores of Virginia's eighth grade students?
    d. What is the relative contribution of instructional support to the reading scores of Virginia's eighth grade students?
    e. What is the relative contribution of resource allocation to the reading scores of Virginia's eighth grade students?

Summary of Results

Research question 1. To what extent are identified literacy leadership practices employed in Virginia's middle schools as reported by Virginia's middle level principals?

Through the Literacy Leadership Practices Survey, principals rated questions associated with each of the identified practices on scale from 0 to 6, with 0 representing

never utilized and 6 representing *always utilized*. Descriptive statistics showed that literacy action planning ($M = 4.50$, $SD = 1.05$), data-driven decision making ($M = 4.70$, $SD = .99$), capacity building ($M = 4.74$, $SD = .79$), and resource allocation ($M = 4.34$, $SD = .99$) all were within a rating of 4 to 5, suggesting that each of these practices was used to a moderate extent. The practice of instructional support ($M = 3.72$, $SD = 1.23$) was also reported to occur a majority of the time.

Research question 2. What is the predictive value of the combined identified literacy leadership practices toward the reading scores of Virginia's eighth grade students?

a. **What is the relative contribution of literacy action planning to the reading scores of Virginia's eighth grade students?**
b. **What is the relative contribution of data-driven decision making to the reading scores of Virginia's eighth grade students?**
c. **What is the relative contribution of capacity building to the reading scores of Virginia's eighth grade students?**
d. **What is the relative contribution of instructional support to the reading scores of Virginia's eighth grade students?**
e. **What is the relative contribution of resource allocation to the reading scores of Virginia's eighth grade students?**

Both the comprehensive and individual results of the regression analysis that was conducted as part of this research study failed to identify a predictive relationship between the identified literacy leadership practices and student achievement on the Virginia Grade 8 Reading Standard of Learning assessment. Table 14 reports again the

statistical analysis indicating the nonsignificance of the various regressions that were performed.

Table 14

Simple Regression Analysis for the Five Literacy Leadership Practices

Literacy Leadership Practices	Adj. R^2	F (1, 91)	p
Comprehensive practices	.06	2.08	.08
Literacy action planning	-.01	.01	.95
Data-driven decision making	-.01	.01	.92
Capacity building	-.01	.08	.78
Instructional Support	.02	2.60	.11
Resource Allocation	.001	.89	.35

Note. $n = 93$.

Despite the fact that each of the identified practices were referenced in some part by five different models (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003), there was no conclusive evidence to suggest that as a group or individually these practices provided significant support to the measured student outcomes.

Limitations

A possible limitation for this study could have been aspects of the data collection instrument. The survey used in this study was a new instrument being issued only for the first time. Although the sample size and response rate were acceptable, there were some noticeable variations in Cronbach's coefficient alpha between the pilot and the final collections, especially in the area of data-driven decision making. This could have been due to the size of the sample, or possibly the difference in the demographics of the

respondents. Additionally, the lack of sensitivity of the survey instrument may have contributed to less precise outcomes associated with the reported use of each literacy leadership practice. Ultimately, this insensitivity may have influenced the results of the statistical analyses.

Principal responses to the survey may have also limited the findings. All principals reported at least some use of the literacy leadership practices; however, they may have responded in a socially desirable manner. Failure to respond in a true and accurate manner may have skewed their responses toward the upper limit of the scale.

Interpretation of Findings

Based on the outcomes described, the principals responding to this study reported the use of the five literacy leadership practices examined to occur slightly more than the majority of the time. It was reported by principals that they were using the practices; however, the results of the regression analyses that were performed did not indicate a significant relationship between the combined or individual effect of the literacy leadership practices on the pass rates of students on the Virginia Grade 8 Reading SOL assessment. Still, consistent with this study's conceptual framework, the principals' responses supported the value of the literacy leadership practices that were identified through the examination of existing models (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003). Although the quantitative results did not find a predictive relationship between the variables, the principals consistently reported their use and appeared to employ them as a general practice.

Extent of literacy leadership practices used. As identified earlier, the reported use of the practices based on the established rating scale with 0 representing "never" and

6 representing "always" was $M = 3.72$, $SD = 1.23$ to $M = 4.74$, $SD = .79$. Principals clearly indicated that they had utilized the practices examined in this study; however, the overall use was only moderate. Although the focus of this study was not on the degree to which principals utilized the literacy leadership practices, it was worth contemplating why the use was not reported as higher given the recognized crisis in reading scores for students at the middle level. Key (2005) asked 91 middle level principals in Missouri, "What do you feel are the most critical issues facing middle level principals?" (p. 147). The top four responses to Key's inquiry included lack of funding for professional development activities, students' low reading levels, scheduling, and lack of funding for requirements associated with federal legislation. Over the past several years, Virginia schools have suffered significant cuts in funding that may have contributed to the moderate focus on literacy leadership strategies. Still, the overwhelming response of principals indicated that they did implement the identified practices, providing some support for the notion that they believed each of the practices had value. The indications from the principals were not dissimilar from those reported by J. M. Edwards (2010) relative to different, yet related, literacy leadership practices. J. M. Edwards's study identified eight of the nine literacy leadership dimensions reported by principals in her study to be practiced "often" to "extensively" (p.138).

Predictive value of identified literacy leadership practices toward the reading scores of Virginia's eighth grade students. The results of the various regression analyses, both the multiple and single tests, failed to support a predictive relationship between the five literacy leadership practices and student reading scores on the Virginia Grade 8 Reading SOL test. Despite the nonresearch-based literature that purported each

of the identified practices as important steps for principals to take as they support the reading achievement of students (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003), this study did not demonstrate a significant relationship between the included variables.

The findings of this study seemed to contradict the assertions of the five literacy leadership models examined. Although each of the models anecdotally supported the value of the practices, the results of the regression analyses did not provide evidence to conclude that a significant value exists. To the contrary, the results of this study support the conclusions of numerous other professionals that question the direct impact of principal actions on student achievement (Cassidy et al., 2010; J. M. Edwards, 2010; Jacobson, 2011; Nason, 2011; Sanzo et al., 2010).

The collection of practices that were assessed in this study was selected from common elements found in the literature. Literacy action planning, data-driven decision making, building capacity, supporting instruction, and allocating resources are were all reported by recognized experts (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003) to be critical actions that school leaders should perform to influence the achievement outcomes of students. Although, the findings of this study did not suggest significant predictive utility of the practices, the general literature supporting principal impact on student achievement continues to support at least an indirect influence.

Leithwood and Riehl (2003) suggested that school leadership only has minimal effects on student learning; however, strong leadership practices have indirect impact by promoting "vision and goals, and by ensuring that resources and process are in place for

teachers to teach well" (p. 4). The statistical analysis performed in this study may not have shown the overall model, or even individual practices, to have significantly affected students' reading scores; however, the practices were widely reported to have been implemented. Nason's (2011) study of principals in Idaho suggested many principals continue to serve more as building manager than instructional leader. She stated that increased demands on principals might reduce further the instructional leadership focus of principals whose schools already may be meeting state and national student achievement expectations. The nonsignificant findings in this study may have been influenced by concepts such as those raised by Leithwood and Riehl (2003), and Nason (2011).

Conclusions and Recommendations

The nonsignificance of the regression analysis does not negate the potential value of the literacy leadership practices. Even though the predictive value of the practices could not be established, the study did reveal that principals in Virginia are aware of and utilize literacy leadership practices. As it is well established in the literature that principal actions may contribute indirectly to student achievement (Hallinger, Bickman, et al., 1996; Leithwood & Riehl, 2003; Nason, 2011), the statistical outcomes of this study should be interpreted carefully. Simply because the various regressions did not indicate significance, it was not ample data to entirely discard the belief that principal actions contribute in some manner to student outcomes. It is important to recognize that the lack of significance may have been directly related to poor implementation of the model components by the reporting principals.

We also must recognize that the literature revealed a strong need for educators to

implement the adolescent literacy practices that address the learning needs of students. Biancarosa and Snow (2006) argued that there must be a balance of strong instructional practices and school leadership stating that, "it is possible to enhance adolescent literacy achievement now while at the same time refining and extending the knowledge base of the entire field" (p. 31). Biacarosa and Snow presented 15 instructional practices that supported the reading development of adolescent students. The importance of ensuring effective literacy instructional practices are present in schools was well reported in the literature (Alvermann, 2000; Alvermann, 2001; Dodson, 2009; Goodman, 2005; Guthrie & Davis, 2003). The nonsignificant outcomes must be considered in the context of the literature that suggests students achieve at higher levels when principal leadership and strong instructional practices coexist. This study only accounted for one of these contextual considerations.

Implications for Practice

Despite the nonsignificant outcomes associated with regression analysis of this study, the nonresearch-based literature (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003) strongly suggested that the identified literacy leadership practices would have positive effects on the reading achievement of middle schools students. Principals clearly reported use of the practices that were presented. Much of the leadership research that was reviewed purported that principal leadership only indirectly affected student outcomes. Concepts, such as action planning, data-driven decision making, capacity building, supporting instruction, and allocating resources, are not unique to one area of educational leadership. Keeping the indirect nature of principal influence in mind, it would be prudent for middle level

principals to consider the impact that their actions and support of teachers and students might have on achievement. School leaders may also want to review the quality of their implementation efforts with regard to the reported literacy leadership practices.

Recommendations for Further Research

During the completion of this study, a number of additional questions arose that could not be responded to through the scope of this particular research. Although this study obtained valuable results regarding the specific research questions that were pursued, it opened the door for future research in this area, perhaps just a little wider. The following are suggestions suitable for further research.

1. Future studies could examine any indirect effects that principal implementation of literacy leadership practices might have on the effects of student achievement outcomes.
2. Future studies could look at the relationship of literacy leadership practices and student reading achievement based on a different sample that focuses on a more specific population of principals or perhaps even extends beyond the Commonwealth of Virginia.
3. Future studies could focus not only on the literacy leadership practices, but also on the principal monitoring of adolescent literacy instructional practices that exist in schools.
4. Future studies could consider teacher perceptions of literacy leadership practices and their relationship to principal perceptions.
5. Future studies could expand upon this research to determine if the literacy leadership practices have predictive value for other content areas.

6. Future studies could expand the definition of "literacy" to include the concept of multiple literacies and examine the effect that the literacy leadership practices have on a broader scale.
7. Future studies could focus more directly on the development of a stronger data collection instrument that has statistically been shown to be both reliable and valid.
8. Future research could involve gathering relevant response data from other literacy leaders in the school setting such as assistant principals, literacy coaches, and reading specialists.
9. Future research could also examine the years of experience or years as a principal as they relate to the effectiveness of the principals' literacy leadership actions.

This study served to establish that there is a limited amount of research available to middle level leaders regarding how they can address the literacy crisis facing our schools. The qualitative research that exists is mostly observational or experiential, while the quantitative data do not prescribe clear direction. Additional research such as that described above is critical to understanding effective ways that school leadership can respond to the needs of students.

Summary

This study set out to determine the value of five identified literacy leadership practices: literacy action planning, data-driven decision making, capacity building, instructional support, and resource allocation. Each of the practices examined had been repeatedly identified as critical by leading experts in the field (Guth & Pettengill, 2005;

Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003) and had served as the basis for this study's conceptual framework. Despite the more extensive qualitative support for each of the practices, the statistical results of this study did not show that together or separately these practices had predictive utility. Still, it would be a mistake for these results to be seen in a manner that completely negated the potential effectiveness of the practices. Principal behaviors are important, and while this study could not demonstrate that the practices tested contribute to higher student achievement, the overall literature base does support the indirect nature of principal behavior on student outcomes. Anecdotal and observational data continue to provide support for well-designed systems of intervention driven by principal leadership. The practices assessed through this research may still prove to be valuable tools in an effective principal's toolbox.

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Appendix A: Initial Questions for Literacy Leadership Practices Survey

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1. A common vision regarding literacy is communicated to staff members.
2. A designated literacy expert (literacy coach) supports classroom instruction and student learning.
3. A diverse team of staff members makes decisions regarding school-wide instructional programming.
4. A diverse team of staff members makes plans and evaluates the literacy needs and initiatives of the school.
5. A variety of data sources are used to make literacy-related instructional decisions.
6. A variety of literacy materials are available for students and staff.
7. Adequate financial resources are provided to support literacy programs.
8. All staff members view literacy instruction as their responsibility.
9. Classroom observations are directed at improving literacy outcomes.
10. Clearly defined action plan steps guide school-wide literacy instruction.
11. Collegial decision making is encouraged.
12. Data analysis targets both students and teachers for literacy-related interventions.
13. Data results are used to identify struggling students.
14. Evaluations of teachers address the importance of improving literacy instructional practices.
15. Funding for literacy initiatives is considered first and foremost during instructional budgeting.
16. High standards of achievement are set for students and staff members.
17. Individual student data are examined to evaluate current literacy practices.
18. Instructional materials and technologies are provided to support literacy instruction.
19. Key faculty members are involved in making literacy decisions.
20. Leadership for literacy programs is distributed throughout the school community
21. Literacy action plan steps are supported by school-wide polices and procedures.
22. Literacy data collection is purposeful and ongoing.
23. Literacy data are analyzed to inform and guide instruction across all content areas.
24. Literacy data are disaggregated to determine specific areas of students' strengths and needs.
25. Literacy data are used to make individual student placement decisions.
26. Literacy demands are addressed through professional learning communities.
27. Literacy goals are adjusted based on individual student progress.
28. Literacy instruction is a collaborative effort and involves all staff members.
29. Literacy instruction is a focus for all content areas.
30. Literacy is a major component of the school improvement plan.
31. Literacy is a school priority.
32. Literacy leaders examine relevant and meaningful data.
33. Literacy practices are examined and eliminated if unproductive.
34. Literacy strategies are modeled for teachers.

35. Literacy walk-throughs are used as a method for assessing literacy instruction.
36. Literacy-centered professional development is required of all staff members.
37. Literacy-related roles and responsibilities are clearly defined.
38. Multiple staff members perform literacy leadership responsibilities.
39. Planning and collaboration for literacy instruction involves staff members at all levels.
40. Professional development is based on an analysis of school-wide literacy data.
41. Resources are available to assist teachers in preparing for literacy instruction.
42. Scheduled reading time is provided for each student during the day.
43. School leadership promotes a culture of collaborative planning and programming to meet literacy goals.
44. School time is allocated for literacy learning, assessment, planning, and instruction.
45. Space and facilities are allocated to adequately address literacy programming.
46. Specialized assistance in literacy instruction is offered to teachers when necessary.
47. Standardized data regarding students' reading and writing scores are collected.
48. Support personnel are used to work with both teachers and students in literacy areas.
49. Teachers are empowered to become leaders of improved literacy instruction.
50. Teachers are involved in making decisions regarding literacy instruction.
51. Teachers use informal assessments to identify literacy needs.
52. The school administration demonstrates commitment to literacy.
53. The school-wide curriculum is linked to literacy goals.
54. Timelines are established for literacy goals and objectives.

Appendix B: Literacy Leadership Practices Survey

The purpose of the survey is to determine the extent to which various literacy leadership practices apply to your school. The questions posed in this survey represent 5 domain areas: literacy action planning, data-driven decisions, capacity building, instructional support, and resource allocation. Each domain area was developed from a synthesis of literacy leadership models presented by various adolescent literacy experts (Guth & Pettengill, 2005; Irvin, Meltzer, & Dukes, 2007; Phillips, 2005; Taylor & Collins, 2003).

PLEASE COMPLETE THE FOLLOWING DEMOGRAPHIC INFORMATION
Please check the answer that best describes your school.

What is your school configuration (grade levels)?
____4-8 ____5-8 ____6-8 ____ Other (please specify ____)

What is your school enrollment (approximate)?
____< 200 ____200-399 ____400-600 ____> 600

What is your division enrollment (approximate)?
____< 5,000 ____5,000-14,999 ____15,000-29,999 ____30,000-50,000 ____> 50,000

What are your years of experience as a principal? ____

What are your years as principal at your current school? ____

PRINCIPAL SURVEY:
Please take a few minutes to respond to the following statements regarding literacy leadership practices. Do not evaluate the practices in terms of good or bad, but only in terms of whether they occur at your school. If you believe that a practice always occurs at your school, circle a number from the far right side of the scale (6). If you feel that a practice never occurs, then circle a number at the far left of the scale (0). If you feel the occurrence is somewhere between the two extremes, then pick a number somewhere in the middle of the scale (1-5) to show your opinion.

	Literacy Leadership Practice	Never------Always						
1	Teachers are empowered to become leaders of improved literacy instruction.	0	1	2	3	4	5	6
2	A common vision regarding literacy is communicated to staff members.	0	1	2	3	4	5	6
3	Space and facilities are allocated to adequately address literacy programming.	0	1	2	3	4	5	6
4	Literacy strategies are modeled for teachers.	0	1	2	3	4	5	6
5	Clearly defined action plan steps guide school-wide literacy instruction .	0	1	2	3	4	5	6

	Literacy Leadership Practice	Never------Always						
6	Literacy is a major component of the school improvement plan.	0	1	2	3	4	5	6
7	Literacy instruction is a collaborative effort and involves all staff members.	0	1	2	3	4	5	6
8	Literacy data collection is purposeful and ongoing.	0	1	2	3	4	5	6
9	Timelines are established for literacy goals and objectives.	0	1	2	3	4	5	6
10	Data analysis targets both students and teachers for literacy-related interventions.	0	1	2	3	4	5	6
11	Scheduled reading time is provided for each student during the day.	0	1	2	3	4	5	6
12	A designated literacy expert (literacy coach) supports classroom instruction and student learning.	0	1	2	3	4	5	6
13	Literacy data are analyzed to inform and guide instruction across all content areas.	0	1	2	3	4	5	6
14	Literacy data are used to make individual student placement decisions.	0	1	2	3	4	5	6
15	Leadership for literacy programs is distributed throughout the school community.	0	1	2	3	4	5	6
16	Instructional materials and technologies are provided to support literacy instruction.	0	1	2	3	4	5	6
17	Collegial decision making is encouraged.	0	1	2	3	4	5	6
18	Literacy walk-throughs are used as a method for assessing literacy instruction.	0	1	2	3	4	5	6
19	A variety of literacy materials are available for students and staff.	0	1	2	3	4	5	6
20	Literacy-centered professional development is required of all staff members.	0	1	2	3	4	5	6
21	Literacy action plan steps are supported by school-wide policies and procedures.	0	1	2	3	4	5	6
22	Data results are used to identify struggling students.	0	1	2	3	4	5	6
23	School time is allocated for literacy learning, assessment, planning, and instruction.	0	1	2	3	4	5	6
24	High standards of achievement are set for students and staff members.	0	1	2	3	4	5	6
25	Specialized assistance in literacy instruction is offered to teachers when necessary.	0	1	2	3	4	5	6
26	Key faculty members are involved in making literacy-related decisions.	0	1	2	3	4	5	6
27	A variety of data sources are used to make literacy-related decisions.	0	1	2	3	4	5	6
28	School leadership promotes a culture of collaborative planning and programming to meet literacy goals.	0	1	2	3	4	5	6
29	Professional development is based on an analysis of school-wide literacy data.	0	1	2	3	4	5	6
30	Adequate financial resources are provided to support literacy programming.	0	1	2	3	4	5	6

Appendix C: Survey Emails

Initial email

Dear [FirstName] [LastName],

Hello! My name is Craig Pinello, and I am a doctoral candidate at The George Washington University. I am researching common literacy leadership practices of middle school principals and the effects these practices may have on student achievement on the Grade 8 Reading Standards of Learning test. I am specifically investigating the practices of middle school principals in Virginia and would like to invite you to participate in this study. I am hopeful that you might find a few minutes in your busy schedule to complete a brief survey that is accessible via the link below. It should take you no longer than 10-15 minutes to complete the survey.

The link is uniquely tied to this survey and your email address. Please do not forward this message.

[SurveyLink]

All information will be treated confidentially. No personally identifiable information will be reported as part of the study, and only aggregate data will be included in the study results. There are no known risks involved and participation is entirely voluntary.

Your responses to this survey are critical to the completion of my dissertation study, and I would be very appreciative should you choose to take the time to assist in my data collection. Each person that responds will be entered in a drawing to receive one of two $50 VISA gift cards. The drawing will take place upon completion and publication of the study.

If you should have any questions or concerns regarding this request, please feel free to email me at craig.pinello@cpschools.com. You may also contact me on my cell phone at (XXX) XXX-XXXX.

Thank you very much!

Craig Pinello

Director of Special Education
Chesapeake Public Schools
2107 Liberty Street
Chesapeake, VA 23324
(757) 494-7600

[RemoveLink]

Reminder email

Dear [FirstName] [LastName],

Hello again! Although you have not yet responded to my Literacy Leadership Practices Survey, I cannot express how much I would appreciate and need your support. I am very close to gathering the sample size that I need to run my statistical analysis; however, without your assistance I fear I may not reach my goal.

As you know, adolescent literacy is an area of significant concern and how we choose to address this issue is very important. Your participation will help me to investigate the relationship between identified literacy leadership practices and student reading achievement. The survey should only take you around 5 minutes to complete and will lead to important research conclusions.

I know that your job as a principal is extremely demanding; however, I do hope that you will consider taking a few minutes to click on the link below and participate.

[SurveyLink]

This link is uniquely tied to this survey and your email address. Please do not forward this message.

As a reminder, all information will be treated confidentially. No personally identifiable information will be reported as part of the study, and only aggregate data will be included in the study results. There are no known risks involved and participation is entirely voluntary. For your time and support, please also remember that I am providing each respondent a chance at a drawing for one of two $50 VISA gift cards.

If you should have any questions or concerns regarding this request, please feel free to email me at craig.pinello@cpschools.com. You may also contact me on my cell phone at (XXX) XXX-XXXX.

Thank you in advance for your participation!

Craig Pinello

Director of Special Education
Chesapeake Public Schools
2107 Liberty Street
Chesapeake, VA 23324
(757) 494-7600

[RemoveLink]

Reminder email for partial completers

Dear [FirstName] [LastName],

Hello again! I wanted to thank you for choosing to participate in my research study. I have noticed that you chose to begin the survey; however, you have not completed the process. I wanted to request that you please consider responding to the areas that remain. I am very close to gathering the sample size that I need to run my statistical analysis; however, without your assistance I fear I may not reach my goal.

If you have any questions regarding this request prior to completing the survey, please do not hesitate to contact me at craig.pinello@cpschools.com or on my cell phone at (XXX) XXX-XXXX. I have included the survey link below for your convenience.

[SurveyLink]

This link is uniquely tied to this survey and your email address. Please do not forward this message.

As a reminder, all information will be treated confidentially. No personally identifiable information will be reported as part of the study, and only aggregate data will be included in the study results. There are no known risks involved and participation is entirely voluntary. For your time and support, please also remember that I am providing each respondent a chance at a drawing for one of two $50 VISA gift cards.

Thank you in advance for your participation!

Craig Pinello

Director of Special Education
Chesapeake Public Schools
2107 Liberty Street
Chesapeake, VA 23324
(757) 494-7600

[RemoveLink]

Appendix D: Informed Consent

Information Sheet about the Research Study
A Regression Study: Middle School Literacy Leadership Practices in Virginia
{IRB #0711303}

You are invited to participate in a research study under the direction of Dr. Linda Lemasters of the Graduate School of Education and Human Development at The George Washington University (email: lindal@gwu.edu/ph: 757-269-2218). The principal contact is Craig Pinello. Taking part in this research is entirely voluntary and you may discontinue participation at any time without penalty.

The purpose of this study is to investigate the potential effects of established literacy leadership practices on student achievement scores on the Virginia Grade 8 Reading Standards of Learning assessment. If you choose to take part in this study, you will be completing a short survey regarding the extent to which certain literacy leadership practices occur in you school. The total amount of time you will spend in connection with this study is approximately 10-15 minutes. You may not benefit directly from your participation in the study: however, your input is extremely valuable and be helpful in drawing important conclusions regarding the way school leaders support literacy, leading to increased student achievement.

Every effort will be made to keep your information confidential, however, this cannot be guaranteed. All information will be treated confidentially, and only group data will be presented. If results of this research study are reported in journals or at scientific meetings, the people who participated in this study will not be named or identified. There are no known risks to your participation in this study. The survey program has been set up to track responses and facilitate a mechanism for entering respondents in a drawing for one of two $50.00 VISA gift cards. The drawing will take place upon completion and publication of the study. Based upon a desired response rate of approximately 90 participants, the odds of receiving a gift card would be 1:45.

The Office of Human Research of George Washington University, at telephone number (202) 994-2715, can provide further information about your rights as a research participant. Further information regarding this study may be obtained by contacting me via e-mail at craig.pinello@cpschools.com, or via telephone at (XXX) XXX-XXXX.

Your willingness to participate in this research study is implied if you proceed.

*Please keep a copy of this document in case you want to read it again.

Appendix E: Spring 2013 Grade 8 Reading SOL Pass Rates

Statistics

Reading_Pass_Rates

N	Valid	93
	Missing	0
Mean		70.1394
Std. Error of Mean		1.29797
Median		70.7200
Mode		70.59[a]
Std. Deviation		12.51721
Variance		156.680
Skewness		-.852
Std. Error of Skewness		.250
Kurtosis		1.875
Std. Error of Kurtosis		.495
Range		71.57
Minimum		21.26
Maximum		92.83
Sum		6522.96

a. Multiple modes exist. The smallest value is shown

Reading_Pass_Rates

Pass Rate		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21.26	1	1.1	1.1	1.1
	34.25	1	1.1	1.1	2.2
	43.81	1	1.1	1.1	3.2
	46.29	1	1.1	1.1	4.3
	49.54	1	1.1	1.1	5.4
	49.73	1	1.1	1.1	6.5
	54.58	1	1.1	1.1	7.5
	54.81	1	1.1	1.1	8.6
	54.87	1	1.1	1.1	9.7
	56.52	1	1.1	1.1	10.8
	56.91	1	1.1	1.1	11.8
	57.25	1	1.1	1.1	12.9
	57.38	1	1.1	1.1	14.0
	57.53	1	1.1	1.1	15.1
	57.65	1	1.1	1.1	16.1
	58.87	1	1.1	1.1	17.2
	58.88	1	1.1	1.1	18.3
	60.96	1	1.1	1.1	19.4
	60.98	1	1.1	1.1	20.4
	61.07	1	1.1	1.1	21.5
	61.76	1	1.1	1.1	22.6
	61.92	1	1.1	1.1	23.7
	63.71	1	1.1	1.1	24.7
	63.79	1	1.1	1.1	25.8
	64.38	1	1.1	1.1	26.9
	64.50	1	1.1	1.1	28.0
	64.56	1	1.1	1.1	29.0
	65.12	1	1.1	1.1	30.1
	65.22	1	1.1	1.1	31.2
	65.24	1	1.1	1.1	32.3
	66.67	1	1.1	1.1	33.3

66.78	1	1.1	1.1	34.4
66.80	1	1.1	1.1	35.5
66.84	1	1.1	1.1	36.6
67.23	1	1.1	1.1	37.6
67.54	1	1.1	1.1	38.7
67.79	1	1.1	1.1	39.8
68.10	1	1.1	1.1	40.9
68.21	1	1.1	1.1	41.9
69.57	1	1.1	1.1	43.0
69.63	1	1.1	1.1	44.1
69.96	1	1.1	1.1	45.2
70.07	1	1.1	1.1	46.2
70.12	1	1.1	1.1	47.3
70.59	2	2.2	2.2	49.5
70.72	1	1.1	1.1	50.5
70.83	2	2.2	2.2	52.7
71.43	2	2.2	2.2	54.8
71.72	1	1.1	1.1	55.9
71.87	1	1.1	1.1	57.0
72.09	1	1.1	1.1	58.1
72.20	1	1.1	1.1	59.1
72.48	1	1.1	1.1	60.2
72.81	1	1.1	1.1	61.3
72.88	1	1.1	1.1	62.4
73.31	1	1.1	1.1	63.4
73.45	1	1.1	1.1	64.5
73.68	1	1.1	1.1	65.6
74.77	1	1.1	1.1	66.7
75.00	1	1.1	1.1	67.7
75.42	1	1.1	1.1	68.8
76.53	1	1.1	1.1	69.9
77.40	1	1.1	1.1	71.0
77.88	1	1.1	1.1	72.0
79.59	1	1.1	1.1	73.1
79.62	1	1.1	1.1	74.2

	79.93	1	1.1	1.1	75.3
	80.00	1	1.1	1.1	76.3
	80.63	1	1.1	1.1	77.4
	81.22	1	1.1	1.1	78.5
	81.36	1	1.1	1.1	79.6
	81.50	1	1.1	1.1	80.6
	81.82	1	1.1	1.1	81.7
	81.89	1	1.1	1.1	82.8
	82.99	1	1.1	1.1	83.9
	83.55	1	1.1	1.1	84.9
	83.70	1	1.1	1.1	86.0
	83.73	1	1.1	1.1	87.1
	84.17	1	1.1	1.1	88.2
	84.24	1	1.1	1.1	89.2
	84.99	1	1.1	1.1	90.3
	86.13	1	1.1	1.1	91.4
	86.54	1	1.1	1.1	92.5
	86.68	1	1.1	1.1	93.5
	87.38	1	1.1	1.1	94.6
	88.62	1	1.1	1.1	95.7
	89.29	1	1.1	1.1	96.8
	90.89	1	1.1	1.1	97.8
	91.11	1	1.1	1.1	98.9
	92.83	1	1.1	1.1	100.0
	Total	93	100.0	100.0	

Appendix F: Durbin Watson Scores for Individual Literacy Leadership Practices

Literacy Leadership Practice	Durbin Watson
Literacy action planning	2.026
Data-driven decision making	2.016
Capacity building	2.011
Instructional Support	2.142
Resource Allocation	2.084

Appendix G: Data Plots for Individual Literacy Leadership Practices

Literacy Action Planning

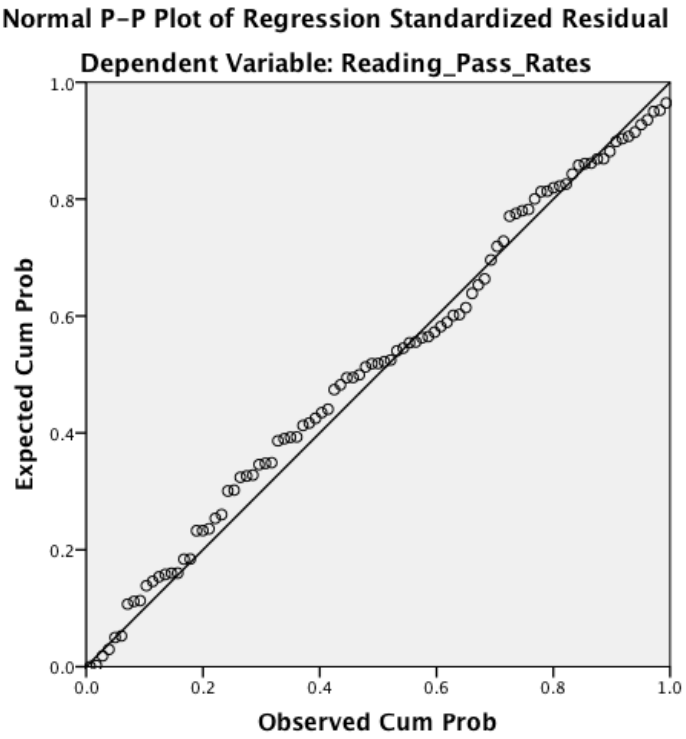

Figure 4. Normal probability plot of student reading scores with literacy action planning as the predictor variable.

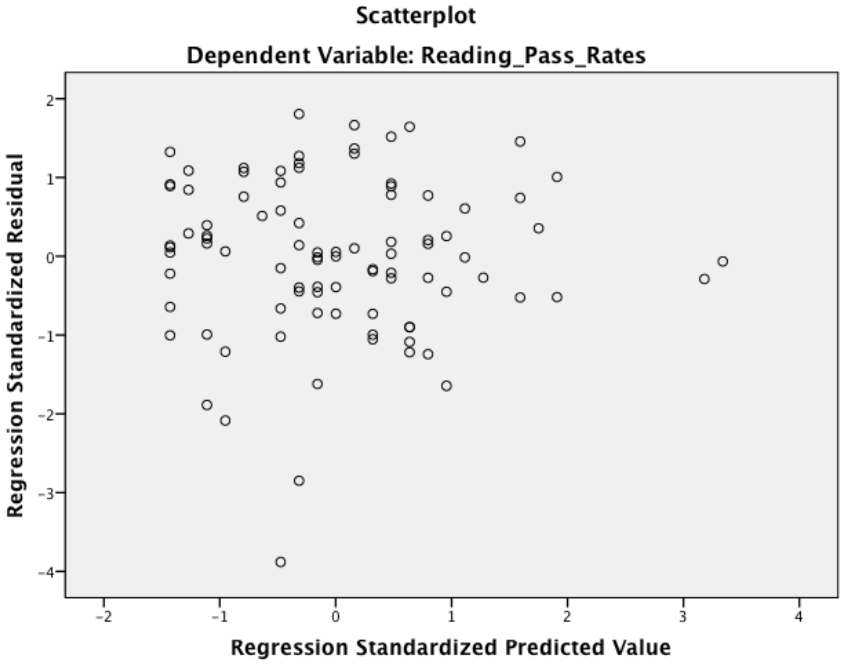

Figure 5. Scatterplot of the standardized residual scores with literacy action planning as the predictor variable.

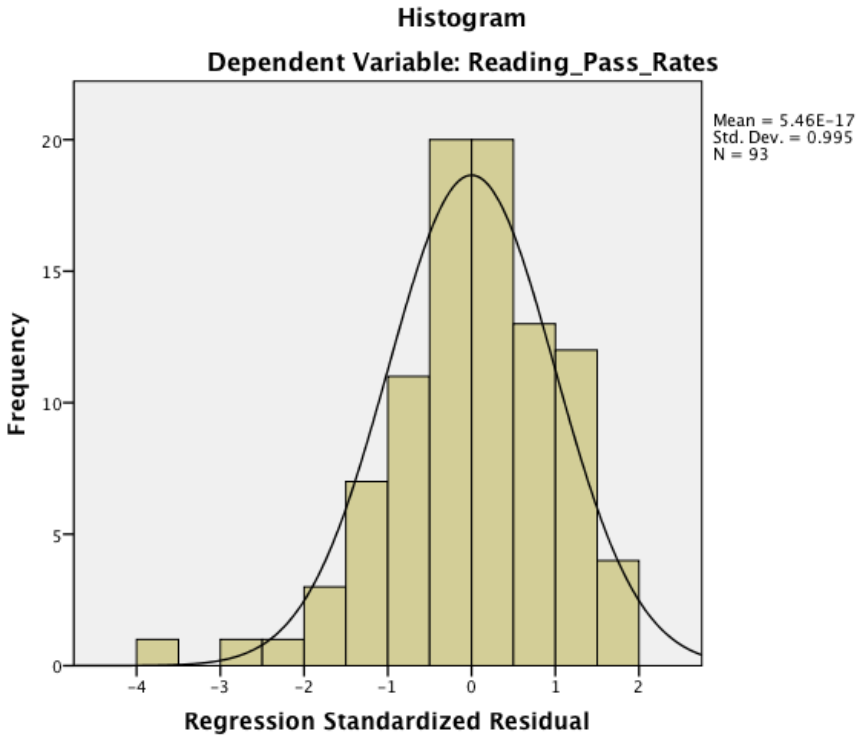

Figure 6. Histogram of the standardized residual scores with literacy action planning as the predictor variable.

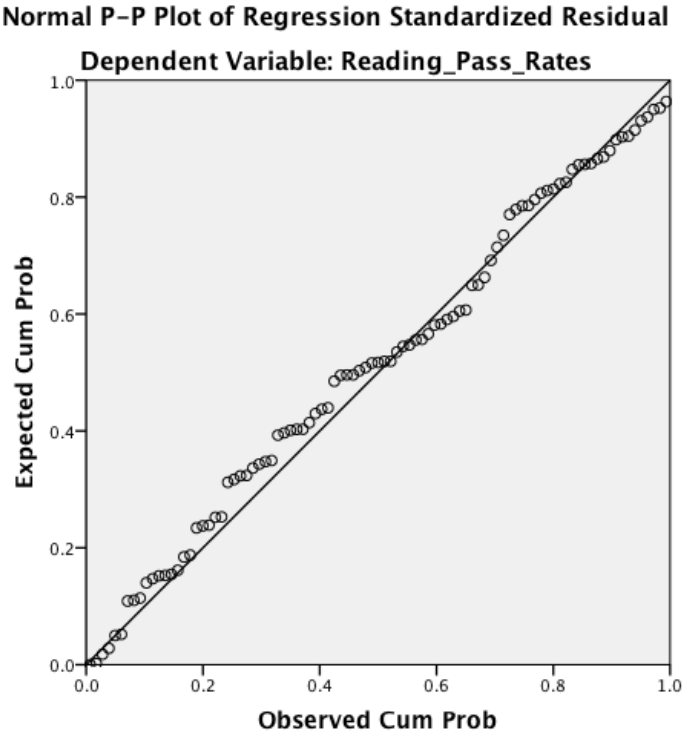

Figure 7. Normal probability plot of student reading scores with data-driven decision making as the predictor variable.

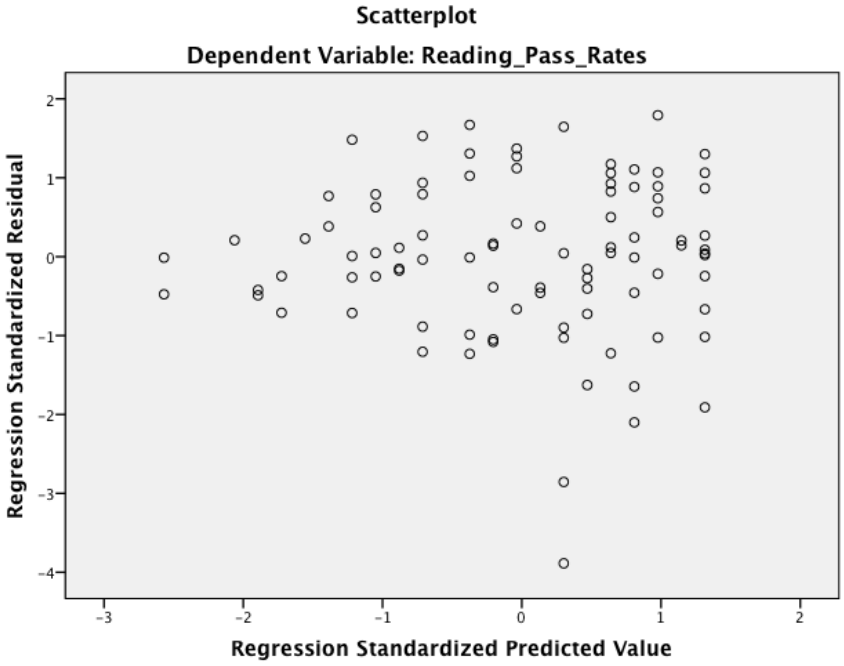

Figure 8. Scatterplot of the standardized residual scores with data-driven decision making as the predictor variable.

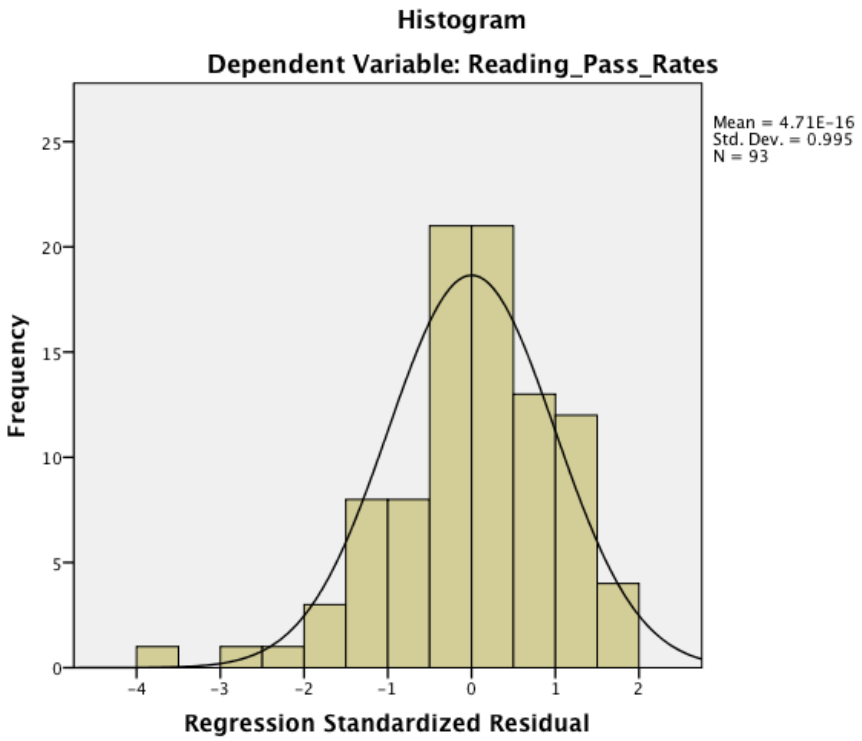

Figure 9. Histogram of the standardized residual scores with data-driven decision making as the predictor variable.

Capacity Building

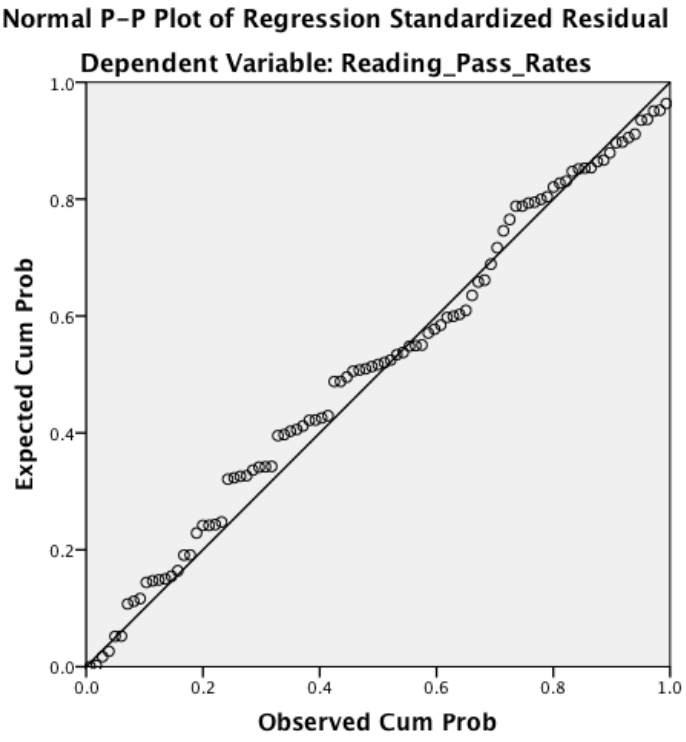

Figure 10. Normal probability plot of student reading scores with capacity building as the predictor variable.

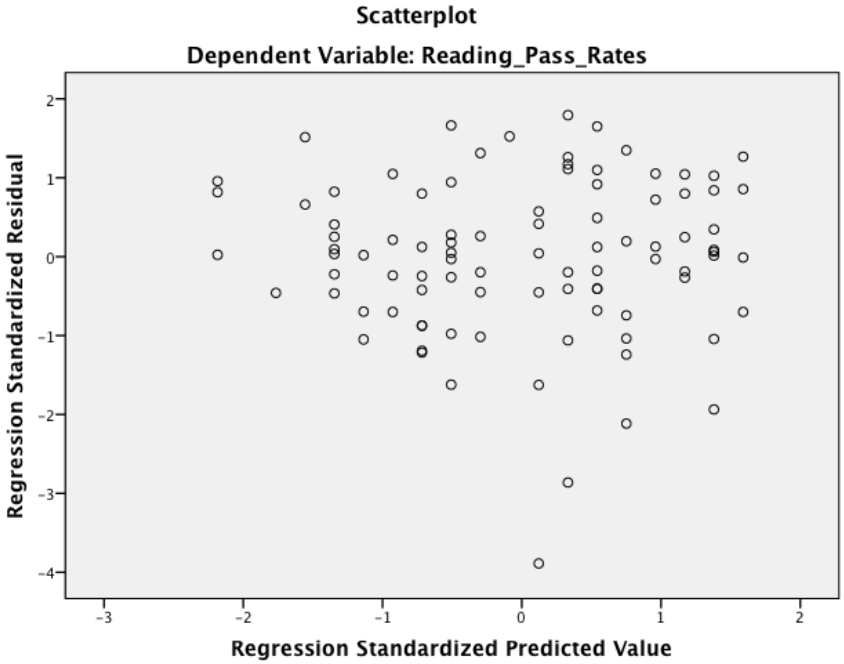

Figure 11. Scatterplot of the standardized residual scores with capacity building as the predictor variable.

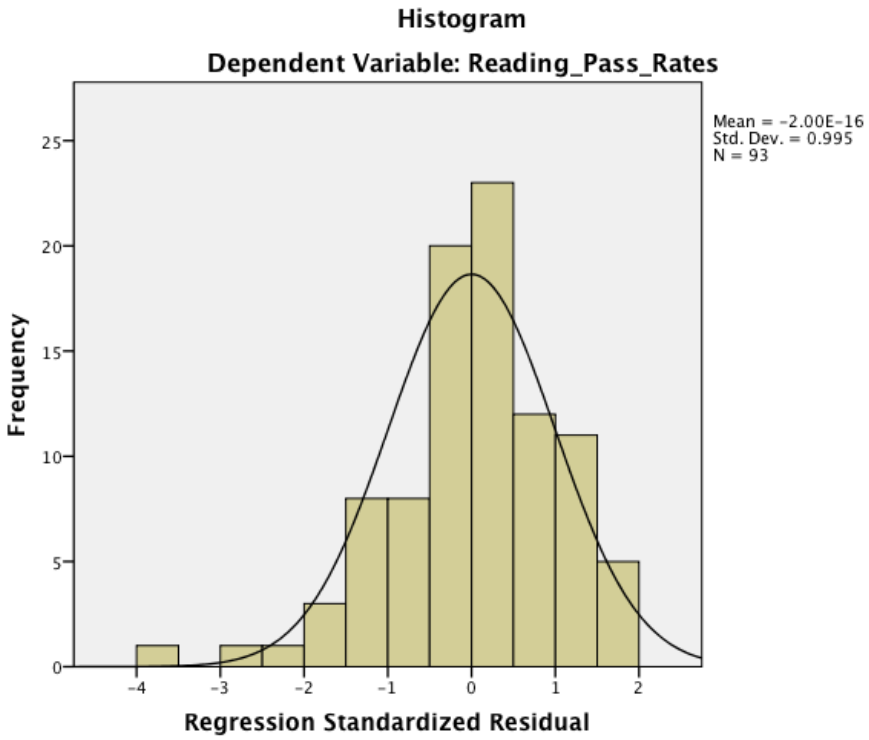

Figure 12. Histogram of the standardized residual scores with capacity building as the predictor variable.

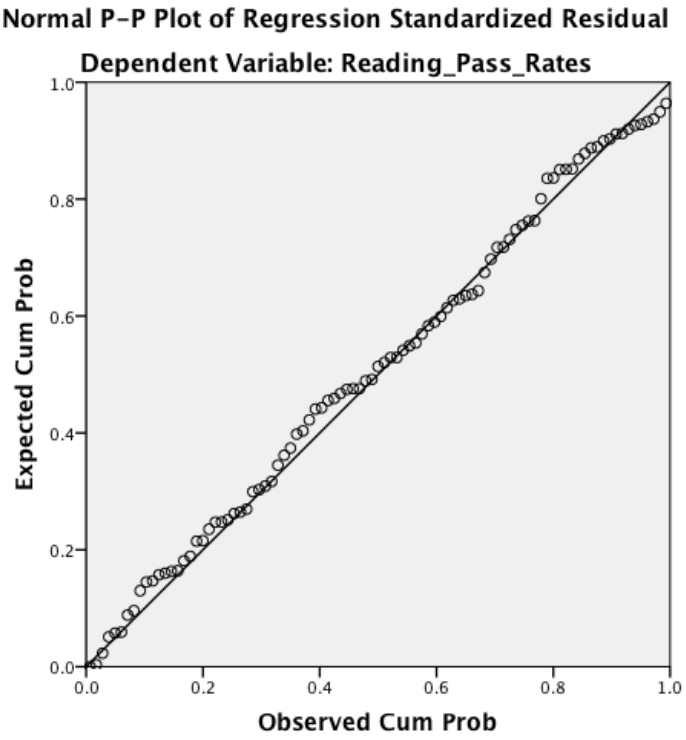

Figure 13. Normal probability plot of student reading scores with instructional support as the predictor variable.

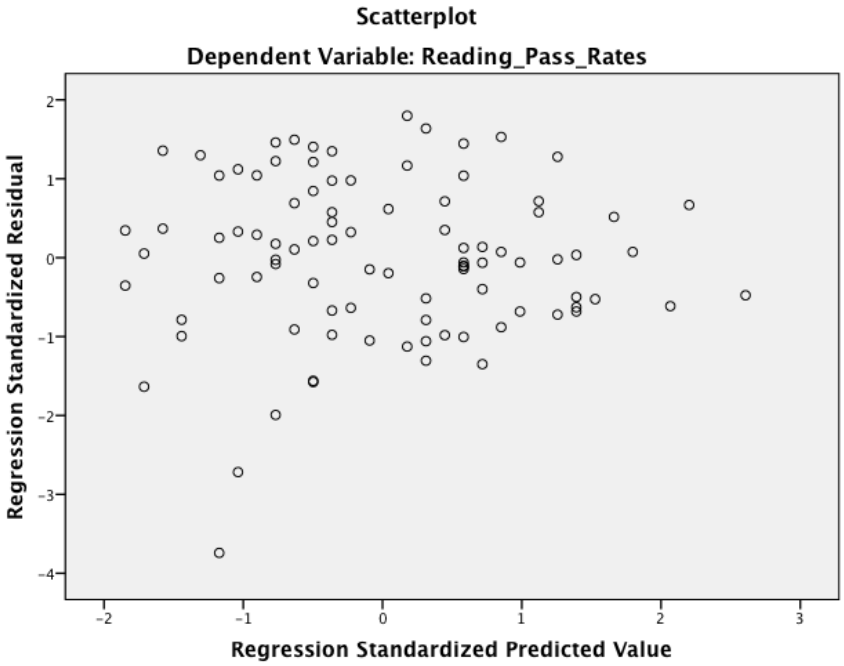

Figure 14. Scatterplot of the standardized residual scores with literacy instructional support as the predictor variable.

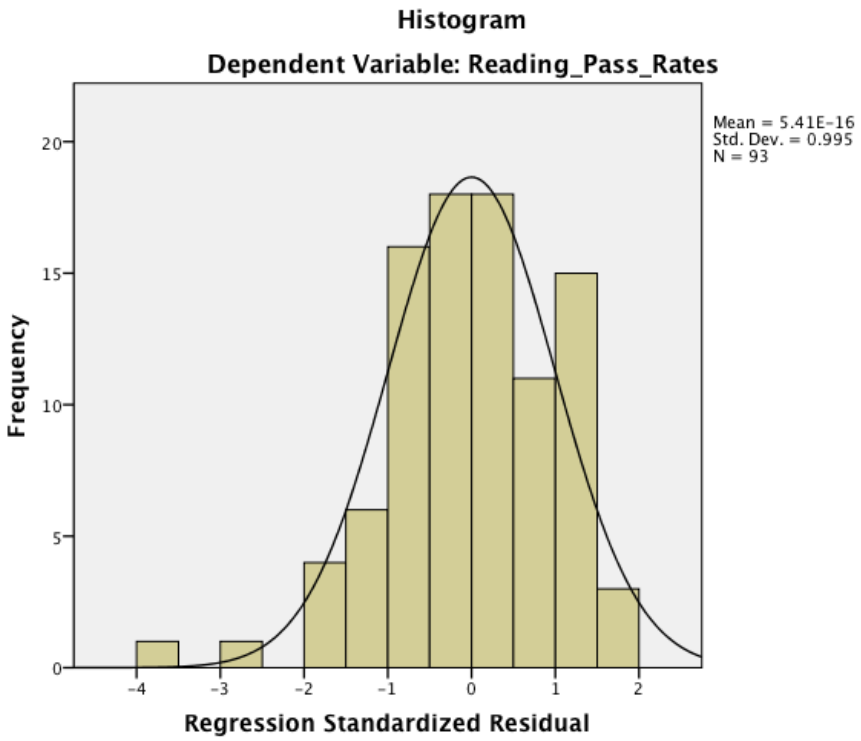

Figure 15. Histogram of the standardized residual scores with instructional support as the predictor variable.

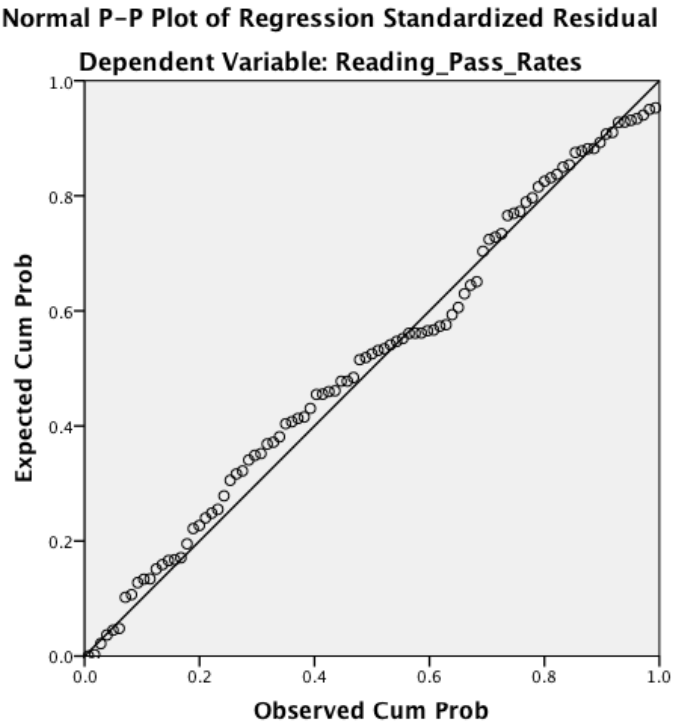

Figure 16. Normal probability plot of student reading scores with resource allocation as the predictor variable.

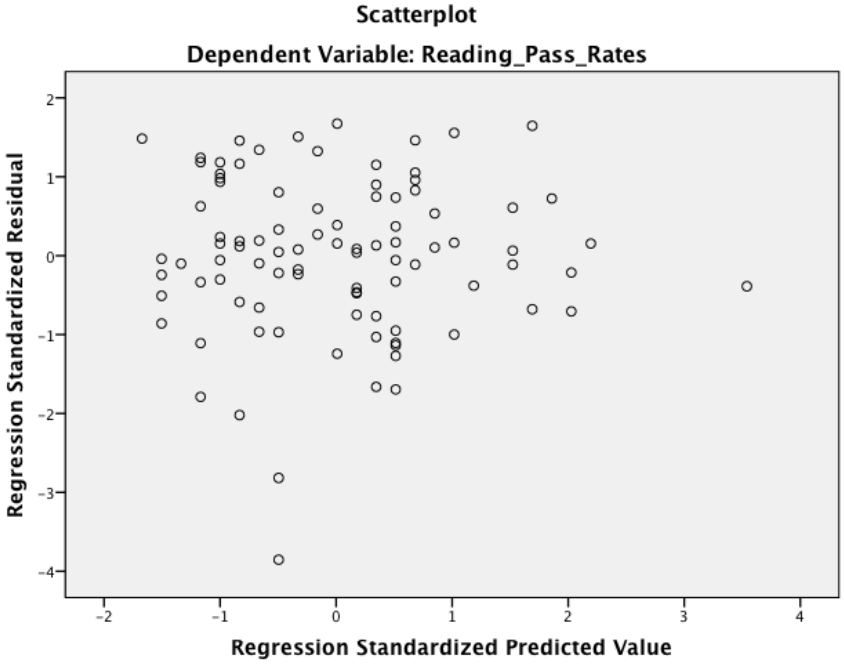

Figure 17. Scatterplot of the standardized residual scores with resource allocation as the predictor variable.

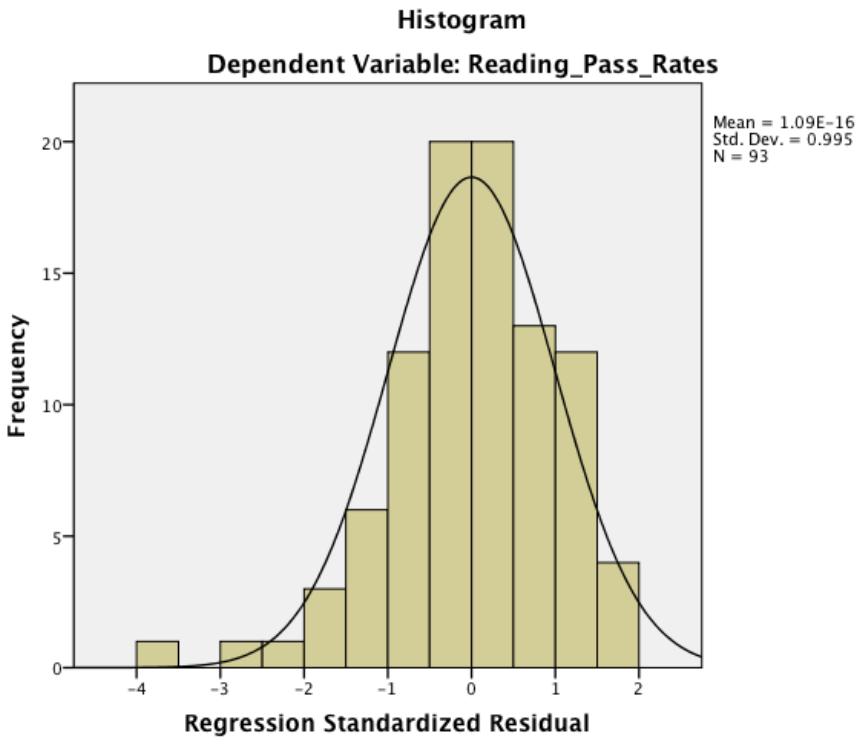

Figure 18. Histogram of the standardized residual scores with resource allocation as the predictor variable.