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Effectiveness of Reading and Writing Across the Curriculum on
Middle School Reading Comprehension and
Preparation for Common Core State Standards

by

Paula J. Wuebbels

A Dissertation submitted to the Education Faculty of Lindenwood University

in partial fulfillment of the requirements for the

degree of

Doctor of Education

School of Education

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Middle School Reading Comprehension and
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This dissertation has been approved in partial fulfillment of the requirements for the
degree of
Doctor of Education
at Lindenwood University by the School of Education

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Paula J. Wuebbels

Signature: Paula J. Wuebbels Date: 5/2/2014

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I would like to thank the staff members of the Study-Site School District for participating in my survey and the principals from the three middle schools who provided me with useful information that will benefit others who teach in a middle school and who are preparing to use the Common Core State Standards in their curriculums.

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Abstract

This research study was conducted to determine the impact of determine the perception of classroom teachers and building principals as to the effectiveness of required Reading and Writing Across the Curriculum in both core and non-core subject areas. Both core and non-core classes are presently required within the study school district to incorporate reading and writing strategies in their content areas. The researcher wanted to study the process to prepare administrators and teachers to work successfully with the advent of required common core standards for curriculum development. Strategies used in the study will help gather information to inform the preparation of administrators and teachers who adopt the Common Core State Standards in the area of Reading and Writing Across the Curriculum.

The researcher used an in-depth data-gathering method, in the form of an e-mail survey, provided to all the educators from the three study locations who responded to the initial e-mail invitation to participate in the study. She used cluster samples (about 30 surveys from each school) as subjects selected by using an intact group that was representative of the population of the three suburban Midwest middle schools.

This report was meant to extend the discussion between the effectiveness of reading and writing strategies in middle schools and preparing teachers for the Common Core State Standards. The author used a mixed method research design to find answers to her questions.

Table of Contents

Acknowledgements	iv
Abstract.....	v
List of Tables.....	ix
List of Figures	xi
Chapter One: Introduction	1
Background of the Study.....	1
Background of the Research Site	4
Rationale	6
Purpose of Study.....	8
Variables	10
Research Questions.....	10
Hypotheses	11
Limitations to the Study.....	12
Definition of Terms	13
Conclusion.....	15
Chapter Two: Review of Literature.....	17
Introduction	17
Organization of the Literature Review	17
Literacy	18
Middle School Students' Characteristics	23
Teachers' Perceptions	23
Reading and Writing Across the Curriculum.....	24

An Overview of Common Core State Standards.....	27
Marzano Coaching Strategies.....	28
Using Literacy Coaches to Address Middle School Students’ Needs	30
Motivation.....	32
Wide Range Studies.....	33
Other Areas of Impact.....	37
Conclusion.....	39
Chapter Three: Methodology	41
Purpose.....	41
The Research Site	41
Research Perspective	41
Population and Sampling Procedures	44
Participants.....	44
Independent Variables	46
Research Questions and Null Hypotheses	48
Research Question 1	48
Research Question 2	48
Triangulation of Results.....	49
Qualitative Instrument Design.....	51
Qualitative and Quantitative Analysis	54
Frequency of Responses	55
Limitations	60
Conclusion.....	60

Chapter Four: Results	64
Introduction	64
Data Analysis	65
Mixed-Method Analysis	65
Data Part 1	66
Data Part 2	75
Data Part 3	82
Data Part 4	85
Conclusion	85
Chapter 5: Discussion and Reflection	87
Analysis of Results	87
Personal Reflections	94
Limitations of This Study	95
Recommendations	96
References	99
Appendix A	110
Appendix B	111
Vitae	113

List of Tables

Table 1. Anchor Points Criteria.....	22
Table 2. Seven Interventions.....	26
Table 3. Triangulated Evidence	35
Table 4. Survey Results: Informative Overview	42
Table 5. Survey Results: Learning New CCSS Information	42
Table 6. Demographic Make-Up of Teacher Population.....	44
Table 7. Combined Demographic Teacher Population	45
Table 8. Demographic Information on Student Population	45
Table 9. MAP Table Communication Arts.....	47
Table 10. Frequency of Overall Results	56
Table 11. Frequency of Responses	57
Table 12. Frequency of Percentages.....	59
Table 13. Null Hypothesis # 1: Comparison of Core to Non-Core Teacher Responses ...	67
Table 14. Non-Core Teachers' Agreement vs. Core Teacher Agreement.....	68
Table 15. Null Hypothesis # 1: Overall Survey Rating Comparison of Core to Non-Core.....	68
Table 16. Null Hypothesis # 2: Comparison of Core Agreement to Disagreement	69
Table 17. Null Hypothesis # 2: Overall Rating Comparison of Core Agreement to Disagreement	70
Table 18. Null Hypothesis # 2: Comparison of Non-Core Agreement to Disagreement ..	70
Table 19. Null Hypothesis # 2: Overall Non-Core Teachers' Agreement to Disagreement	71

Table 20. Null Hypothesis # 3: Core Agreement to Disagreement for Prompts 3, 4, 5, and 7	72
Table 21. Hypothesis # 3: Core Agreement vs. Disagreement for Prompts 3, 4, 5, and 7	72
Table 22. Null Hypothesis # 3: Non-Core Agreement vs. Disagreement for Prompts 3, 4, 5, and 7	73
Table 23. Hypothesis # 3: Overall Survey: Non-Core Agreement vs. Disagreement for Prompts 3, 4, 5, and 7.....	73
Table 24. Null Hypothesis # 4: Comparison of Core to Non-Core Teacher Responses ...	74
Table 25. Hypothesis # 4: Overall Survey: Core Agreement vs. Non-Core Teachers for Prompts 3, 4, 5, and 7.....	74
Table 26. Survey Question 1	76
Table 27. Survey Question 2.....	77
Table 28. Survey Question 3.....	78
Table 29. Survey Question 4.....	79
Table 30. Survey Question 5.....	80
Table 31. Survey Question 6.....	81
Table 32. Survey Question 7.....	82
Table 33. Principals' Responses.....	84
Table 34. Comments from Teachers Regarding Common Core State Standards	95

List of Figures

Figure 1. Category of Teacher Respondents	85
Figure B1. What was the most helpful training and support you received in using basic literacy skills within your curriculum?.....	111
Figure B2. Can you provide an example of how teachers include reading and writing skills in their core classes?	112
Figure B3. Can you provide an example of how teachers include reading and writing skills in their core classes?	112

Chapter One: Introduction

Background of the Study

In April 1983, the National Commission on Excellence in Education published an article entitled *A Nation at Risk* led by the U.S. Secretary of Education, Bell. The finding in this report centered around four topics: content, expectations, time, and teaching. The commission recommended that schools adopt measurable standards, longer school years, improve teacher quality and allow more time for teacher professional development.

Researcher Hersh (2013), in reviewing *A Nation at Risk* stated

that reading scores are less positive than before. For Whites, reading performance is not substantially better now than in 1978, at the eighth grade level; however it is not worse either. For Blacks, reading performance has made great strides in improving performance in reading. In the past decade education has begun to focus on increased attention on improving the reading gap level for Blacks. (p 28)

Twenty-five years later Hersh (2013) described, “a nation that is economically and educationally more at risk than when the National Commission on Excellence in Education proclaimed it so in 1983” (p. 28). In his review Hersh stated that literacy instruction in the middle schools faced challenges. Stevens’ (2003) cooperative learning programs, entitled *Student Team Reading* and *Student Team Writing*, evaluated the use of students working in learning teams, and activities designed to involve teachers, teams of students, individual student practice and peer assessments.

He concluded middle school students achieved significantly higher in reading and writing on standardized testing in an urban setting using strategies involving team work. Sunderman, Amoa, and Meyers (1999) suggested in their literacy study about middle

schools that concerns over California's prior Language Arts curriculum supported the development and implementation of reading and writing programs. They concluded there is evidence that progress has been made in middle school literacy, but it was also clear that an immense number of current middle school students would graduate ill-equipped to comprehend difficult texts required to succeed to the next level.

The No Child Left Behind Act (NCLB) of 2001, as studied by Shaul (2006) mandated that states play an active role in the educational environment by directing these governmental entities to amend scholastic performance to improve the likelihood that all students could reach proficiency in reading and writing by 2014. Researcher Shaul, citing sources from the United States Government Accounting Office, stated that states were required to set annual proficiency targets using the model that computed positive adjustments in test scores over time. According to Kymes (2004), Missouri had aligned MAP testing with the Show-Me-Content Standards. The Show-Me Content Standards, (Missouri Department of Elementary and Secondary Education [MODESE], 1996) created by Missouri educators and adopted by the state Board of Education in 1996, described what graduates of the state's public schools must know and be able to do. There were 40 knowledge standards and 33 performance standards, according to MODESE (2011a).

The Common Core State Standards (CCSS), as described by MODESE (2011a), was the result of a state led initiative put into place by the National Governors Association Center for Best Practices and the Council of Chief State Officers. In 2010, the CCSS were adopted by Missouri and 45 other states. According to Bock and French (2014), opposition has mounted in several states to slow or discontinue their adoption.

The new standards corresponded what was anticipated of students at each grade level and allowed teachers to set-up personalized benchmarks for their students. The CCSS focused on core conceptual perceptions and processes starting in the initial grades, which should support the time needed to clarify core concepts and procedures, and give students the opportunity to conquer them.

Carmichael, Martino, Porter-Magee, and Wilson (2010) reviewed the Common Core State Standards, and based on the criteria concluded that 33 states' standards were inferior when compared to the CCSS in both math and reading. However, they found that three states, California, the District of Columbia, and Indiana, published English Language Arts standards that were superior to the CCSS. Comparing its published Missouri state standards to the CCSS, the Missouri Department of Elementary and Secondary Education (2011b) claimed students should be able to

 speak and write standard English, read and evaluate fiction, poetry and drama, read and evaluate nonfiction works, write formally, comprehend and evaluate content and artistic aspects of oral and visual presentations, participate in formal and informal presentations and identify and evaluate relationships between language and culture skills. (p. 6)

Watt (2011) evaluated the CCSS and concluded that the document conveyed what is expected of students at each grade level. He stated that these standards would allow teachers to be better prepared to know exactly what they needed to help students learn established individualized benchmarks. The Common Core initiative provided plans for teacher development, curriculum alignment, and accountability. However, the CCSS also provided uncertainty for state departments of education, teacher preparation programs,

teachers, and administrators working in schools. In addition, parents also were wary of yet another reform on the heels of No Child Left Behind.

In arguments against CCSS, Tienken (2012) stated there had been no affirmed data on the success of the CCSS. The researcher concluded that if state standards were the same as the Common Core State Standards for eighth grade, then the CCSS processed similar traits as the current state standards at the time of comparison. Tienken compared the scope of the CCSS to three states, California, Massachusetts, and Texas. According to his findings, the variance in the CCSS disappeared and the state standards were the similar in their expectations for eighth grade. Research by Jaeger (2013) also questioned the lack of research to support CCSS at the national level. The author, a school library coordinator from New York, argued CCSS for education did not include enough emphasis on logic and problem solving. She presented her assessment on the CCSS, and compared the expectations with the standards developed by the American Association of School Librarians (AASL). She concluded very few teachers understand inquiry-based learning and the need for higher-level thinking.

Goodman's (2012) research argued linking the quality of eighth graders education in low-scoring states, suggested that the CCSS could be beneficial in middle schools that have low achievers. Goodman connected the data on state levels from 1994-2011 with measures of the more current states' standards.

Background of the Research Site

Ray (1978) clarified that students begin exploring based on their prior knowledge of the world around them. They must begin with their previous understanding through experiences and the use of communication skills that relate to and reflect on how these

skills are a part of creating new meanings that students can grasp. Jaeger (2013) stated, “With the ability to communicate globally, create compelling presentations, and keep information literally at their fingertips, we do a disservice to this generation by not asking them to think deeply and conclude” (p. 47). Reed (2006) wrote that we were running out of time for Reading and Writing Across the Curriculum to improve students’ performance. The author concluded that this strategy of reading and writing across the curriculum had not been directly correlated to increasing student achievement in literacy; research showed that this strategy improved student comprehension and retention of content. Sanacore and Palumbo (2010) suggested independent reading and writing in the content area in middle schools was essential for advancing students’ literacy growth. According to Goodman (2012), with implementation of the Common Core State Standards, there was a significant shift in high expectation for literacy skills.

Avila and Moore (2012) questioned why the notion of secondary comprehending, also known as Reading and Writing Across the Curriculum, and content-area reading and writing were not standard in many schools. They answered their question by concluding teachers were not recognizing that reading and writing could support instructional goals, particularly those related to understanding content. Most core and non-core programs integrated reading and writing skills as a regular part of the curriculum. Motivating students to read and write outside the Communication Arts’ classroom allowed students’ literacy skills to build on a foundation for success. Furthermore Avila and Moore explored how teachers could use digital tools to introduce literacy and CCSS by having students demonstrate command of technology to produce, publish and evaluate an authors’ point of view. Shanahan (1985) cited philosophers, such as Dewey (1915) and

Thorndike (1917), who concluded that the importance of helping students foster critical understanding became the first characteristic of effective reading and writing strategies. Street and Stang's (2008) research showed that the concept of "the continued move to improve literacy skill of students" in the public schools encountered several obstacles, including a lack of preparation and time (p. 30). More professional development time for staff members was one of the recommendations from Street and Stang's study. Blakeslee's (2004) research disclosed that many districts simply did not allocate the necessary resources or did not know what it takes to develop quality Communication Arts programs that reach across the curriculum. Watt (2011), in evaluating the CCSS, suggested literacy deserved a place in the classrooms for its ability to help raise student achievement.

Rationale

Schoenbach, Greenleaf, and Hale (2010) found in their research that Reading and Writing Across the Curriculum had become a popular approach for schools to use as they attempted to increase student scores. Their research uncovered strategies that were effective in boosting student literacy which could be employed in all subject areas to improve students' reading and writing. Schoenbach et al.'s studies concluded that the "Reading Apprenticeship" instructional framework consisting of social, personal, cognitive, and knowledge building when entwined into the discipline, allowed students and teachers to have a clear dialogue and understanding of what they are reading. Since 1995 the authors developed a set of inquiry based professional development tools that measured teachers' expertise as readers and writers in their particular discipline. This measurement called the "Reading Apprenticeship" instructional framework helped

teachers support secondary school students to develop positive literacy skills. Several large-scale studies compared teachers using the “Reading Apprenticeship” program over a two-year period versus teachers who took a 10-day “Reading Apprenticeship” course. The researchers found that in the classes where teachers implanted the two-year program, students increased use of reading comprehension strategies. Kucan and Beck (1997) introduced metacognitive routines such as verbal dialogue and Jordan, Jensen, and Greenleaf’s (2001) theory on talking to the text concluded readers slowed down and thought about what they read so they can have a positive dialog with their teacher about what they comprehended. Another researcher, Bintz (2011) pointed to a need for more research pertaining to how teams of teachers could work to develop and implement a coherent school-wide program for teaching communication skills across the curriculum. This type and context of literacy support has not been extensively researched. Researcher Watt (2011) cited school districts would be required, in the two years following his publication, to initiate a curriculum based on the CCSS from the state in which they were located. The experiences of teachers in all subject areas, both core and non-core, designated with Reading and Writing Across the Curriculum, were expected to assist them in using these standards to increase the Communication Arts’ skills of students.

The CCSS for the Communication Arts represented a major shift in the focus of middle school education. This study investigated whether Reading and Writing Across the Curriculum was a program, which helped to increase the Language Arts’ capabilities and skills of students in anticipation of the CCSS in three suburban Midwest middle schools. Regarding literacy programs, Marzano (2007) stated, “There is a direct correlation between reinforcing how hard students try to succeed and students achieving

success” (p. 9). Sanacore and Palumbo (2010) suggested that leaders rethink how teachers invite students to read their own writing and use works from professionals or the writing of their peers to broaden opportunities for students to enter into the text for deeper understanding.

There are many things that teachers must do to try to help students reach the goals set in the CCSS. According to researcher Blintz (2011), a need exists for more research pertaining to how teams of teachers can develop and implement a coherent school-wide program for teaching Reading and Writing Across the Curriculum.

Purpose of Study

The purpose of this study was to ascertain the perceptions of classroom teachers and building principals regarding the effectiveness of the required program, Reading and Writing Across the Curriculum, towards cultivating student reading and writing in both core and non-core classes. Teachers of both core and non-core classes, within the study school district, were required to incorporate reading and writing instructional strategies in their content areas. The researcher studied this requirement to determine its perceived effectiveness in preparing both administrators and teachers to work successfully with the focus of the Common Core State Standards on development of literacy skills in curriculum development.

The researcher conducted a study of three middle schools in a suburban Midwest school district which showed a decline in achievement scores on the Missouri Assessment Program’s (MAP) Communication Arts assessment. An example of the decline occurred during the 2010-2011 school year when the average Communication Arts score declined by 2.6% from the previous school year (MODESE, 2012a). The

district instituted a state mandated School Improvement Plan (SIP) in the middle schools for the 2011-2012 school year, which included a focus on the development of student literacy skills and instructional skills to assist teachers to build on reading and writing in all subject areas, both core and non-core. The researcher determined to conduct a study to gather information about instructional reading and writing skills which could be used to prepare administrators and teachers in successfully adapting the CCSS, with an emphasis on the development of students' literacy skills.

Lewis, McColsky, Anderson, Bowling, Dufford-Melendez, and Wynn (2007) found that nearly all teachers interviewed believed their schools endeavor to incorporate reading was meaningful and successful. They described how "the student's confidence, motivation, and ability with reading-related tasks had improved. Additionally, most teachers felt that low-performers especially benefited from the Reading and Writing Across the Curriculum strategies" (Lewis et al., 2007, p. 10).

McConachie et al. (2006) found that some schools, in an effort to raise the literacy achievement of secondary school students, train their entire faculty in reading and writing techniques. Their study pointed out that some content-area teachers frequently resist this because they fear that placing extra emphasis on literacy instruction will dilute the academic rigor of the students' curriculum. The researchers concluded an

alternative approach called disciplinary literacy builds students' academic content knowledge and their reading, writing, and thinking skills at the same time.

Disciplinary literacy is based on the logic that students develop deep concrete knowledge in a discipline by using the habits of reading, writing, talking, and thinking which that control values and uses. (McConachie et al., p. 13)

At the time of this study, this researcher had five years of classroom experience teaching Family and Consumer Science, and Technology and Information Literacy classes to middle school students consisting of sixth, seventh, and eighth-graders. The study district, in which the researcher is employed, adopted a program titled Reading and Writing Across the Curriculum to improve the basic literacy skills of all students by requiring teachers in all subjects, both core and non-core, to teach English and assess the use of it by students in their courses.

Variables

The independent variable in this study was the strategies of Reading and Writing Across the Curriculum as applied in both core and non-core classrooms in the study district. There were two dependent variables in this study: (a) Teachers' perceptions of the effects of Reading and Writing Across the Curriculum strategies on student reading comprehension in both core and non-core classes; (b) Teachers' perceptions of the influence of Reading and Writing Across the Curriculum strategies in preparing them to work with the curriculum requirements within the new Common Core State Standards.

Research Questions

Research Question 1: How do middle school teachers and administrators perceive the effects of a Reading and Writing Across the Curriculum program on student reading comprehension in core and non-core classes?

Research Question 2: How do middle school teachers and administrators perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards?

The conclusions to the research questions are supported by quantitative analysis on results of perception surveys. The analysis is represented by the following hypotheses.

Hypotheses

H₁: Middle school teachers assigned to core academic classrooms will perceive effects of the Reading and Writing Across the Curriculum program differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey.

H₂: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them to increase student literacy as part of the requirements associated with the Common Core State Standards, as measured by the results of a teacher survey (core agreement compared to core disagreement; non-core agreement compared to non-core disagreement).

H₃: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards, as measured by satisfaction results on a teacher survey (core agreement compared to core disagreement; non-core agreement compared to non-core disagreement).

H₄: Middle school teachers assigned to core academic classrooms will perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey.

Limitations to the Study

The findings of this study may be subject to the following limitations, which can affect its validity. First, the study is restricted to specific grade levels within three middle schools in one district, and therefore the chosen population limits generalizability. The sample is purposive and convenient. Second, the administrators and teaching staff within each of the three schools may not have shared the same philosophy and teaching styles concerning Reading and Writing Across the Curriculum in both core and non-core subject areas. Third, professional development training activities concerning Reading and Writing Across the Curriculum may have differed from school to school. Fourth, the study did not account for the individual reading and writing skills of students, which may have influenced the amount of progress perceived by teachers. Fifth, teacher experience with the independent variable, Reading and Writing Across the Curriculum strategies, may have varied. Therefore, the period of time each student was exposed to the treatment may have varied. Finally, the existence of competing initiatives in the study schools may have provided confounding variables within study results. The study schools implemented a Positive Behavior Interventions System (PBIS) during the 2010-2011 and 2011-2012 school years. Data recently collected by the Missouri Department of Elementary and Secondary Education (2011b) indicated a possible correlation between PBIS implementation and student achievement. This may have affected the anticipated results on student achievement from implementation of Reading and Writing Across the Curriculum strategies.

Definition of Terms

Common Core State Standards (CCSS), as described by the Missouri Department of Elementary and Secondary Education (MODESE, 2011b), is a state-led initiative put into place by the National Governors Association Center for Best Practices and the Council of Chief State Officers. The standards communicate what is expected of students at each grade level. This should allow teachers to be better equipped to know exactly what they need to help students learn and establish individualized benchmarks for them. The Common Core State Standards focus on core conceptual understandings and procedures starting in the early grades, thus enabling teachers to take the time needed to teach core concepts and procedures well, and to give students the opportunity to master them.

Core Classes or “core academic classes” are ones in which all students must participate (Pedrotty et al., 2000). These core middle school classes include the following: reading or Language Arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography.

Course Level Expectations (CLE's) clarifies that students should be able to interpret and understand basic concepts on any particular subject they are learning by the end of the particular course. According to the Missouri Department of Elementary and Secondary Education (MODESE, 2011a), English Language Arts' students must develop and apply skills and strategies to the reading and writing process, and analyze and evaluate fiction, poetry, and drama from a variety of cultures and times. In addition students must develop and apply skills and strategies to comprehend, analyze and

evaluate nonfiction (such as biographies, newspapers manuals, etc.) from a variety of cultures and times.

English Language Arts (ELA) curriculum integrates the processes of reading, writing, and listening/speaking/viewing in order to help students communicate and interpret information in a variety of modes. The discipline of English Language Arts encompasses an array of subjects designed to give students the fundamental skills they need to comprehend and express ideas clearly and effectively through oral, written, electronic, and multimedia forms of communication. Students are taught to listen, read, speak, write, and think critically. The ability to communicate effectively is fundamental to a person's ability to interact with the people around them and participate fully within their community and society. Language Arts' skills are essential to learning and the ability to demonstrate what one has learned throughout all aspects of their education (MODESE, 2011a).

Grade Level Expectations (GLE's) identifies what all students should know or be able to do by the end of a particular grade. The GLE's are identified by MODESE, (2011b) as the essential content for each grade, while the activities within the curriculum indicate various instructional strategies based on best practices for teaching.

Non-Core Classes: some examples of non-core classes are art, band, family and consumer science, industrial arts, technology and information literacy, theater and drama. These classes are offered starting in middle school (MODESE, 2011a).

Reading and Writing Across the Curriculum is a program based on integrating "reading and writing" lessons into every class in all subjects both core and non-core.

Vacca (2002) claimed evidence of a growing awareness that content-area reading instruction is the responsibility of all teachers.

Show Me Standards are the Missouri 33 performance (skills) standards based on what students in Missouri public schools should be able to do and 40 knowledge (content) standards based on what students should know as a result of being involved in school (MODESE, 2011a).

Conclusion

Marzano (2007) stated that "Arguably the most basic issue a teacher can consider is what he or she will do to establish and communicate learning goals, monitor student progress, and celebrate success" (p. 9). Lyon (2010) reported that extensive research had been conducted on the subject of improving student achievement through the use of specific techniques teachers use to improve student learning. One of those techniques, according to Schoenbach et al. (2010) was Reading and Writing Across the Curriculum as a promising approach to raising Communication Arts' scores on the Missouri Achievement Program (MAP) test. Their research focused on strategies that were intended to boost student literacy. They concluded that it was no longer solely the responsibility of the Communication Arts teachers in a school to teach reading and writing, but it was the responsibility of all teachers. However, they recognized bringing reading and writing instruction into a non-core course could be challenging. Even though many teachers in non-core courses provided a reading assignment, they may have resisted the importance of teaching reading and writing skills during class.

Missouri Department of Elementary and Secondary Education (MODESE, 2011b) indicated that students in middle school should be able to speak and write standard

English, read and evaluate fiction, poetry and drama, read and evaluate nonfiction works, write formally and informally, comprehend and evaluate content and artistic aspects of oral and visual presentations, participate in formal and informal presentations, and identify and evaluate relationships between language and culture. Missouri's Common Core State Standards initiative was released in June, 2010. It included content and knowledge to be obtained through the use of higher order skills taught to students and built upon the strengths of the, then current, state standards. These CCSS were designed to help students prepare for success in the global economy (MODESE, 2012a).

Ediger (2000) found that increases in general academic skills appeared to result from specific literacy initiatives. His analysis of the use of reading and writing strategies in all content areas of the curriculum found that they increased student focus and concentration, skills with expression, persistence in working, imagination, creativity, and ability to engage in problem solving.

Chapter Two encompasses the review of the related literature and previous research linked to the problem being explored. In the literature review, the author discusses the middle school students' characteristics and the teachers' perceptions about reading and writing. In addition, the author researches an overview of the Common Core State Standards in relationship to the various portions of the research study. As a result of the research found in the literature review, the author used the information to create the survey and develop the research methods which were used in Chapter Three.

Chapter Two: Review of Literature

Introduction

According to researcher Archer (1921), in the 19th century an accepted model for schools in society was to train students to meet the demands of an industrial society, which involved working primarily in factories or in trades. Today, in the 21st century, the world has become much smaller due to rapid advances in technology, travel, and communication. Students are expected to be aware of other cultures, think creatively, be observant, and be problem solvers. Noddings (2005) stated that public schools were under fire to provide a quality education without financial resources. The No Child Left Behind Act of 2001 sought to change the culture of United States' schools and to close an achievement gap, which was perceived as the result of years of failing to meet the academic needs of minority students (Noddings).

States have pursued strategies and provided funding for these in order to improve academic outcomes, yet Noddings' (2005) research found that a cookie cutter approach to educating students often prevailed. Students may be rushed through a basic curriculum designed for students with homogenous, and not differentiated, learning styles, which may lead to boredom, underachievement, and discipline problems.

Organization of the Literature Review

This chapter contains information on various issues concerning literacy and discusses why schools and districts may be motivated to increase reading and writing skills in middle schools. This researcher organized the literature review by grouping the various aspects of different studies in related sections. The first section discusses the various literacy and possible motivation as to why schools or districts were motivated to

increase reading and writing skills in middle schools. A following section addresses the need for additional reading and writing skills for middle school students based on challenges districts face by requiring all core and non-core teachers to increase their curriculum-related reading and writing lessons. Other sections include studies on teachers' perceptions of using reading and writing in core and non-core classrooms, as well as studies of students' perceptions of increased reading and writing in classrooms outside the Communication Arts' classroom.

Throughout Chapter Two, the researcher presents information on similarities and differences between findings within various studies reviewed during the course of this research project. The researcher presents several studies on each subject area to provide the reader with a comprehensive view of the literature. Each topic considered during this process will enable comparisons of conclusions reached by other educational researchers.

Literacy

Across the country, numerous efforts were currently underway to provide struggling adolescent readers with high-quality interventions, materials, and instruction they needed to bring their literacy skills up to grade-level expectations. In their evaluation of a study on motivation for reading and middle school students' accomplishments on standardized testing in reading, Mucherah and Yoder (2008) proposed not rewarding middle school students for reading as a motivating factor "because many states require standardized exams and students who read poorly in adolescence are not likely to pass them" (p. 214). Middle school teachers can challenge, and motivate middle school students "to read and, therefore, it is one of the critical tasks in teaching" (p. 214). The researchers found, "Middle school teachers are consistently

searching for ways to motivate their students toward academic success since students who read poorly as adolescents are not likely to pass these exams” (p. 214). Their study examined the factors that impacted middle school students’ reading with particular emphasis on their comprehension. They concluded that perhaps both gender and grade could be a factor in reading comprehension. Wigfield and Guthrie (1997) discovered that females achieved higher reading levels and performance in reading comprehension on standardized tests when compared with males. The challenge, according to the researchers, was

to connect the teaching of reading and writing equally to all students and improve the middle school agenda, treating literacy instruction as a key part of the broader effort to ensure that all students must develop the knowledge and skills they need to succeed. (p. 425)

Brozo’s (2009) analysis of responses, or challenges, involving intervention for adolescent literacy provided evidence that many middle school students were in need of literacy support. His study reflected that two-thirds of eighth-graders were reading at a less than proficient level, “In no small way, this indicator of declining literacy achievement has shifted national attention towards struggling and striving adolescent readers” (p. 277). He concluded that it could be difficult for teachers to incorporate reading and writing skills in everyday lessons structured for middle school students. Shanklin (2008) suggested that it was the responsibility of the middle schools to develop an approach to implementing tiered interventions for middle school literacy. If core teachers failed to offer reading and writing lessons daily, then students would lose out on valuable literacy skills.

Palumbo and Sanacore's (2009), studies examined how middle school literacy learners achieved success, through reviewing cases involving successful middle school students in the area of literacy. They concluded, "If teachers are to effectively teach subject-matter knowledge, they need to increase their students' vocabulary knowledge" (p. 276).

Palumbo and Sanacore's (2009) research showed the importance of using subject matter vocabulary words as a tool for improving reading and writing skills students needed to understand the concepts in any discipline, specifically to make meaningful language skills for that subject count. Additionally, reading on a daily basis helps struggling students become more fluent in their communication skills. They identified eight extracurricular activities appropriate for teachers to practice in their classrooms: (a) homework that is interesting, (b) reading aloud to other class members, (c) working with individuals who struggle, providing easy access to course material, (d) allowing students to express choice of illustration through practical arts courses, (e) relationships with the students' parents, outside course or professional development for teachers, and (f) securing outside financial resources. They concluded teachers and administrators needed to find better strategies to help struggling students (Palumbo & Sanacore). Chall and Jacobs (2003) suggested teachers could use subject-matter textbooks to increase reading skill levels of struggling students who needed more time with their reading skills.

Ma'ayan (2010) also developed literacy solutions for a failing middle school student. This researcher followed a female student whose low-test scores and failing grades went unnoticed by state assessments. This plan was a product of the researcher's observation of a female student's behavior in the classroom and in the school hallways.

The collection of qualitative data gathered through observation contained the researcher's reflection, "I found that although the female subject was silent in the classroom, in a small literacy discussion group with six other girls she came into her voice and was able to talk about topics significant in her life" (p. 653).

Providing support for individual students has been a focus of educational efforts to promote teacher collaboration. Ma'ayan (2010) suggested students who read and write in subjects, in which they are interested and familiar, are likely to find success with improving Communication Arts' skills. In a review of *The Writers Matter Program*, Yost and Voegel (2012) suggested that school writing seemed to provide a productive challenge to students through encouraging them to write about their personal feelings and views. Allowing students to confidentially write about what they thought and believed motivated middle school students to complete their writing assignments and meet the goals of the school curriculum. This encouraged students to continue to challenge themselves to increase their writing capabilities and broaden their choice of writing subjects. Middle school students who wrote about themselves appeared to take ownership of their writing, according to the study. Their motivation to write compositions increased and they gained confidence in their abilities to communicate and connect more readily with students from other cultures. The study showed that development by students of writing techniques helped to promote their ability to think spontaneously, solve problems, develop poise and presence, and increase their concentration using both conceptual and analytical thinking skills (Yost & Voegel).

Table 1.

<i>Anchor Points Criteria</i>						
Reading Aspects	1	2	3	4	5	6
Comprehension	Does not understand the story	Has some understanding of the story	Good Understanding of the story	Good comprehension of the story	Good Comprehension of the story	Excellence comprehension of the story
Connection to Story	Writing does not have connection to the story	Writing has some connection to the story	Writing has a connection to the story	Writing has a connection to the story	Writing has a connection to the story	Writing has a complete connection to the story
Structure	Writing does not give a complete end to the story	Writing gives an ending to the story	Writing gives an ending to the story	Beginning to develop ideas and main ideas	Good development of ideas and main idea, Writing stays with the same subject. Good story development	Great development of ideas and main idea. Writing is creative. Superior word use, Variety in sentence pattern. Complete story: beginning, middle, and end.
Strategies			Weak story development, does not incorporate the following reading strategies, predicting, use of title, use of introduction	Story development, beginning, middle and ending. Does not incorporate strategies.	Uses some reading strategies.	Complete use of reading strategies

Middle School Students' Characteristics

Farr et al. (1990) studied writing in response to reading at a school district in Illinois. The researchers selected reading material that would stimulate three customary styles of writing: 1) retelling, which promoted reading comprehension, 2) extending, means of extending items the information they had gained from reading, and 3) critiquing ideas they came up with in reading. The new program was called "Writing in Response to Reading" (p. 27). To fairly grade progress, the district set up a rubric which anchored the program to assist teachers with rating compositions. Table 1 identifies the sample rubric. Farr et al. (1990) found, "Reading and writing are interlocked with teaching and learning; reading and writing are personal behaviors and language development crosses all disciplines and subject areas" (p. 21).

Teachers' Perceptions

Researchers Lewis et al. (2007) found that nearly all teachers interviewed "believed their schools efforts to incorporate reading was overall worthwhile and effective. They described how the students' confidence, motivation, and ability with reading-related tasks had improved. Additionally most teachers felt that low-performers, especially, benefited from the strategies" (p. 8). To raise the literacy achievement of secondary school students, some schools trained their whole faculty in general reading and writing strategies. According to researchers McConachie et al. (2006), content-area teachers often resisted this approach, fearing that setting aside time for literacy instruction would dilute the academic rigor of the students' curriculum.

Recent studies from Anderson and Briggs (2011) indicated that connecting reading and writing had important implications for all students and helped to build the

common ground between reading and writing. The researchers surveyed teachers to find a common ground using strategic processing. The writers argued that teachers needed to use specific Language Arts' skills that helped children connect reading and writing. They concluded their study with observing that when teachers allow students to make connections to writing, children will learn more quickly. By observing the activities of struggling learners reading and writing continuous text, "common ground between reading and writing became evident" (p. 547). The researchers concluded

that most teachers believed that literacy was integral to their content area and they reported viewing themselves as literacy teachers as well as content teachers in finding the common ground. The teachers reported that content literacy professional development with coaching and collaboration supported teachers' efficacy with literacy teaching and their implementation of content literacy practices. (p. 547)

Reading and Writing Across the Curriculum

Nathanson (2006) discovered that, in order to improve students' academic abilities, the use of reading and writing instruction and literacy assignments in non-Communication Arts' classes was essential. The importance of reading and writing on subjects important or interesting to the student was demonstrated by the lasting impression that was made on the students' writing and reading.

Schoenbach et al. (2010) studied strategies proven to boost the literacy skills of students and concluded it was no longer only the responsibility of the Communication Arts' department to educate students to read, write, and communicate. All subject matter areas, both core and non-core, were faced with the challenge to bring reading and writing

into their curriculum. Alvermann and Moore (1991) suggested there were examples of practical arts' classroom teachers requiring reading in their subject areas in contrast with the lack of reading previously required. In their study, evidence suggested reading and writing could benefit any student, no matter the content area. Reading and writing could help students retain content, which in turn helped students achieve success. And students needed to know how to read and write in order to be successful in a practical arts' class (Reed, 2006).

Wilfong (2009) described her research involving a textbook strategy. Using a technique she called *Textmasters* sessions, teachers scheduled reading portions of a unit chapter. Students then shared their readings with others, and the group work ended with specific activities geared for that chapter of the textbook. Exit slips were handed to students to use to make comments on this type of reading comprehension strategy. The results of the data gathered on the exit slips showed that students made the connections to improved comprehension of reading and writing skills when they read with a small group of their peers, shared the information, and referenced the textbook to answer the questions.

Researchers Lewis et al. (2007) identified seven interventions needed for core and non-core teachers to help them improve reading outcomes on the secondary level. Some intervention strategies suggested were:

- 1) supplementary materials in support of content-area reading skills, 2) differentiating reading instructions, 3) reading in the content area, 4) classroom goals focused on improved reading comprehension, 5) use of common vocabulary strategies, 6) engaging students as critical readers, and 7) additional professional

development for teachers with intensive skill development and intensive clinical development. (p. 10)

The researchers suggested before schools could select an approach to support these kinds of interventions, decision-making teams must be able to zero in on the key knowledge or skills teachers needed to improve instructional reading and writing strategies. Following a decision-making process, as described in Table 2, should help a district or school organize a Reading and Writing Across the Curriculum initiative.

Table 2.

Seven Interventions

Instructional Reading and Writing Strategies	Revise and Improve
1. Use data to identify need	Contemplate
2. Examine studies and research	Contemplate
3. Use professional wisdom	Contemplate
4. Consider contextual constraints	Contemplate
5. Make the best choice based on information	Contemplate
6. Monitor and assess implementation	Contemplate
7. Evaluate outcomes	Contemplate

Lewis et al. (2007) studied a three-year period and compared the effectiveness of interventions in various schools in southern states using the seven strategies. The analysis contained in the studies provided a plan for gathering information from various state agencies, to search for intervention plans designed to help content leaders increase their focus on literacy, and to evaluate reports on effectiveness. The National Institute of Mental Health (2012) defined evidence-based administrative policy as seeking out the best available research studies before adopting any agendas or practices, which place a

high demand on available resources. Lewis et al. (2007) displayed the evidence-based decision-making cycle that could assist policy makers enhance the likelihood that a district or school's Reading and Writing Across the Curriculum initiative would result in a positive outcome.

Tierney (1990) conducted a study pointing to four major developments over the previous 20 years that expanded the understanding of the importance of reading and elevated its status to creative endeavor. Tierney stated "If viewing reading as writing expanded our views of reading, interest through engagement in reading deepened them" (p. 6). Tierney found in his study that a reader's journey through text was likely to be full of personal experiences in which the student makes discoveries and is moved to voice opinions and react to what he or she read. The study suggested that one of the keys to improving literacy was to find common ground with programs similar to Reading and Writing Across the Curriculum. Reading programs helped students develop a correlation linking to an interest in reading and allowed students to make sense of what they comprehended.

An Overview of Common Core State Standards

The Common Core State Standards (CCSS), as described by the Missouri Department of Elementary and Secondary Education (MODESE, 2012b), is a state-led initiative put into place by the National Governors Association Center for Best Practices and the Council of Chief State Officers. The standards communicate what is expected of students at each grade level. The CCSS focus on core conceptual perceptions and methods starting in the early grades, thus enabling teachers to take the time needed to teach core concepts and techniques, and to give students the opportunity to grasp them.

Gewertz (2012) promoted the importance of incorporating Language Arts into both core and non-core courses in order to help teachers meet the goals of CCSS. Seven middle schools in the state of Kentucky were among the first to connect both core and non-core classes to the CCSS. These schools followed their vision of increasing student literacy by employing teaching instruments and strategies developed by the Literacy Design Collaboration based on the work by Crawford, Galiatsos, Lewis, and Otteson (2011), consultants working through the Bill and Melinda Gates Foundation. According to Gewertz “The centerpiece of an English/language arts tool kit is a collection of template tasks that demand student reading, writing and which can be customized to each teacher’s subject matter” (p. 18). Kucan and Beck (2003) hypothesized that peer discussions among middle school students after reading non-fiction textbooks engages the student in higher-level thinking.

In Gewertz’s (2012) study, teachers were observed using the Depth of Knowledge (DOK) template designed by University of Wisconsin-Madison professor, Webb, as a tool to align standards and assessments with student tasks. Webb's DOK provided a vocabulary and a frame of reference when thinking about students and how they understand and absorb the content. DOK offered a common language to understand rational thinking in assessments, as well as curricular units, lessons, and tasks. Webb developed four DOK levels, which grow in cognitive difficulty and provide educators a strategy for creating more cognitively engaging and thought-provoking tasks.

Marzano Coaching Strategies

Much of the previous research on Reading and Writing Across the Curriculum centered on strategies used to impact academic content. Marzano and Pickering (2005)

stated that “Simply using any strategy does not guarantee results” (p. 3). In their research they found literature which showed progressive effects on student achievement. Their research provided evidence that educators who take a systematic approach to vocabulary and have students identifying and comprehending essential reading concepts in any given subject area, ensure that their retention of knowledge, understanding, and academic achievement increases. Deci, Koestner, and Ryan (2001) observed ways of using rewards for students which can have a positive effect on motivation. Their theory suggested the negative impact occurs by simply offering rewards to encourage student motivation to keep them interested and then assessing why so many students are not interested in learning within the current educational system. Marzano (2007) suggested learning goals for many teachers are associated with specified assignments. And, the learning goal is based on determining what a student will know and be able to do as a result of instruction. An example Marzano used for Language Arts contained the following learning goal that expects students will be able to study words out loud which are currently not part of the students’ everyday vocabulary but which they have previously heard. The learning activity associated with this goal was students witnessing the teacher verbally saying a word, mixing the word in a sentence, and then engaging the students in the same task.

Marzano and Pickering’s (2005) research identified studies which showed progressive effects on student achievements. Their research stated educators who take a systematic approach to teaching vocabulary and helping students identify and comprehend essential reading concepts in any given subject area, increase students’

retention of knowledge, deepen their understanding, and promote greater academic achievement.

Marzano's (2007) research concluded a comprehensive approach to reading and writing was the most effective way for students to process new information. This meant students must be actively engaged by the teacher as they performed or produced to process new information, a cycle that revolved around continuing interaction between teachers and students using content. Cobb, Yackel, and Wood (1992) described this as "The teaching-learning process is interactive in nature and involves the implicit and explicit negotiation of meaning" (p. 5).

Using Literacy Coaches to Address Middle School Students' Needs

Biancarosa and Snow (2004) contributed to the conversation concerning Reading and Writing Across the curriculum by stating,

Ensuring adequate literacy development for all students in the middle and high school years is more a challenging task than ensuring excellent reading education in the primary grades because secondary school literacy skills are more complex, more embedded in subject matter, and determined by diverse means. In addition, adolescents are not as universally motivated to read better or to be as interested in school-based reading as a kindergartner. (p. 1)

Findings of Biancarosa and Snow (2007) indicated that most content area teachers believed that literacy was fundamental to their discipline area and teachers recounted viewing themselves as literacy teachers as well as content area instructors.

Meyer's (2011) study of middle school students suggested that middle school students performed below average on state assessments due to maturity and lack of good writing skills. Fisher, Frey, and Lapp (2012) argued that getting middle school students academically ready required a delicate balance. Students were transitioning between elementary and high school, and teachers needed to find a balance to encourage independence and personal responsibility. Middle school students were exposed to knowledge through culture, places, and experiences and by reviewing what students already knew. Teachers could be successful in introducing new material, encouraging lessons with reading assignments, and building background comprehension. Vocabulary assignments could allow visual recognition permit teachers to get a sense if students grasp the concepts. If they had prior knowledge, students would use the vocabulary words on an everyday basis. The researchers hypothesized that in order for middle school students to become skillful readers, teachers should examine related knowledge and expressions of language before determining which literacy skills to build on. Their research suggested that school-based coaching or professional development efforts was one way districts were using coaches to improve the literacy for middle school students. Marzano (2007) prescribed Quality Instruction Leaders (QIL). His strategy included, having QIL leaders work with teachers identifying similarities and differences, noting graphic forms as an effective way to represent similarities and differences, teaching skills promoting comprehension, and suggested opportunities for students to extend their learning opportunities beyond their classroom.

Payne (2005) acknowledged,

Using Mental Models for learning and reasoning, people can move from the concrete to the abstract. People in poverty can take accurate information when presented in a meaningful way by facilitators who provide a relationship of mutual respect and act as co-investigators. (p. 181)

Payne concluded teaching students to organize information was a skill based on teaching them to build cognitive strategies which allowed students to think about their learning and promoting a high-level support system for the students which led to academic success. This was followed by a program entitled Vocabulary Instructors (VIP) using tools developed by Marzano and Pickering (2005) who stated, “Teaching vocabulary terms in a specific way is probably the strongest action a teacher can take to ensure that students have the academic background knowledge they need to understand the content they will encounter in school” (p. 1). They stressed the importance of vocabulary instruction in every academic discipline and its relationship to academic success.

Motivation

Schmoker (2001) found that effective instruction resulted when educators formed collaborative teams and chose a ‘rapid goal’ such as improving reading and writing skills for students. Success followed team use of a process which allowed groups of teachers to brainstorm ideas, single out a few strategies to implement and, after implementation, discuss the results prior to brainstorming more strategies. Schmoker (2001) maintained that it was critical to academic success for teachers and administrators to learn from each other, reinforcing his position that collaboration was not just a goal for teachers.

Schmoker (2009) acknowledged there was alignment between actions and intended outcomes. Business practices could help form new norms for old ways of

energizing students and teachers who already experienced success in the classroom. Effective teachers enhanced the energy by asking the right questions. The focus for leadership was on asking questions and based on finding ways to enhance student achievement. Successful schools had professionals who asked themselves tough questions focused on the achievement of their students. Williams and Coles (2007) suggested we replace activities such as drawing what the word or sentence means and other, similar activities used too much time should be replaced with simple lessons on reading and writing, in order to improve the literacy skills of students.

Ananda (1998) noted that one of the most powerful tools to energize teachers was publicly honoring employees and teams. Recognition for a job well done was the top motivator for employee performance. This practice was practiced in the business world and could be implemented successfully with teachers and administrators. Ananda's research found that rewards, as part of the workplace, signified completion of projects and of reaching goals and objectives. Every school needed to create a routine for honoring and nurturing results-oriented accomplishments. New and seasoned teachers could exercise leadership when they were members of teams. When teachers collaborate and share strategies, they can improve instructions. If educators work in teams they can incorporate new strategies to promote the success of every student.

Wide Range Studies

Aulls (2003) conducted a three-part study to determine how middle school students, "most often acquire new knowledge from moderately unfamiliar texts" (p. 178). Teachers counted on the students' proficiency to take charge and be responsible for their actions to ensure that students comprehended the information they know (Aulls, 2003).

In the first study, the researcher examined, over a 13-week period, the impact of reading and writing on students' aptitude to write coherent essays on recognizable and unfamiliar topics, other than those typically used in Communication Arts classrooms. Two teachers had strong backgrounds in writing the curriculum and understood reading and writing strategies, whereas the other two teachers had no knowledge of reading and writing strategies. Afflerbach and Walker (1992), Derry and Murphy (1986), and Pressley, El-Dinary, Gaskins, and Schuder (1992), hypothesized that when students were placed in unfamiliar territory when writing on an unfamiliar topic, comparisons between pre- and post-unit writings would reveal differences in student learning, since less knowledgeable teachers may deliver unsatisfactory lessons and engage in less checking of the application of reading and writing strategies.

In order for the first study to be transferable to reading and writing in non-core classes, Aulls (2003) noted in study two that it was important to demonstrate that strategies used in Communications Arts were similar to those applied to written essays in other subjects.

Aulls's (2003) second study tested the cross-subject transfer of essay writing learned in Communication Arts, and how similar strategies might be used in other classes outside the Communication Arts' classroom. Based on the results from the first study, the researchers hypothesized that students of highly qualified and efficient teachers, who had obtained an understanding of the strategies taught in Communication Arts would continue to improve their skills in essay writing when compared to students in seventh-grade geography.

Table 3.

Triangulated Evidence

	Study 1	Study 2	Study 3
Sample	One hundred and twenty grade- seven students and four teachers	Seventh grade students from geography and two English enrichment classes	Fifty of the 60 students from two seventh grade classes who continued to be in math, history and science by two of the teachers used in study 1 and 2
Curriculum	Providing students with knowledge of the properties of plan, draft and revises compositions, identify topics, activities to include both teachers and students, using expository reading and writing curriculum	Geography essay collected from seventh grade students one month after students completed the expository reading and writing units.	Eighth-grade students social study classes a year later after completing units in expository reading and writing curriculum units
Procedures	Students assigned two topics to write about at the beginning and ending of unit	Essay topics the same in all classes	Teachers agreed to use the same text material and activities of the previous studies using the unit on Ancient Egypt
Measures	Organized a set of variables that represented a set of text properties such as knowledge necessary to invent main ideas, and comments in topics.	Geography essays and English essays were scored independently Essay topics the same in all classes, a) pre-unit English essays and January geography essays, b) post-unit English essays and January geography essays, c) January and March geography essays	The scores used from post-unit English and March geography essays and potential estimate of students' knowledge

Results	The Wilks Lambda (Grilo & Coelho, 2010) test indicated significant differences for both the familiar and unfamiliar topics, average student in all four classes wrote a better essay in the reading and writing portion of the curriculum	Using three-time ordered contrasts for each essay, Omnibus Wilks Lambda test indicated significant differences between unfamiliar topic English essays and the geography essays for all five variables	The results of study 3 supported the other two studies. The Towl stanine score (Hammill & Larsen, 1978) was used to estimate students general written language ability
Discussion	Scores results offer positive evidence that expository reading and writing curriculum units results an increase in one or more of the properties	This study provided strong evidence that the expository reading and writing curriculum that students in all classes maintained essay performance across time intervals and subject specific writing assignments	Twenty-one percent of the correct responses came from what students learned in the expository reading and writing curriculum unit

In the second phrase of study, two classes were compared, one with students in a regular geography course, the other with students enrolled in an enrichment geography course.

Teachers considered learners in the enrichment classes were on the top of the academic scale. Aulls (2003) noted,

It does not follow from research that they would naturally process the domain-specific knowledge taught in the expository reading and writing curriculum, however, they might be expected to have a larger general vocabulary, and therefore might obtain a higher amplitude score than students from the enrichment Geography classes. (p. 199)

The researcher determined that the capacity of study two would assist in supporting a third study, which attempted to establish whether students whose teachers

were the most knowledgeable about Communication Arts' strategies could also use their comprehension strategies in an eighth-grade social studies curriculum. Paris, Lipson, and Wixson (1983) found that "evidence for the transfer of expository prose knowledge is thought to depend upon students being able to use it in a variety of situations" (p. 205). The triangulated evidence in Table 3 indicates how the three studies varied.

The Wilks Lambda statistics, used in this study to test the independence of several sets of variables with a multivariate normal distribution, were used where two or more of sets had an odd number of variables (Grilo & Coelho, 2010). Stanine (standard nines) were a 9-point scoring system. Stanines 4, 5, and 6 represented approximately the middle half of scores, or average range, and Stanines 1, 2, and 3 represented approximately the lowest one fourth. Stanines 7, 8, and 9 were approximately the highest one fourth (Hammill & Larsen, 1978).

Aulls (2003) concluded in his study that it was possible to teach students knowledge of expository strategies for reading and writing that could be applied in subjects outside the Communication Arts' classroom.

Other Areas of Impact

There were several other areas that impacted non-core classes, including independent reading and teachers' attitudes. Chung and Ro (2010) conducted studies which showed that practical arts' classes not only promoted learning and allowed better understanding of work in the daily lives of students, but also helped students find ways to solve work-related problems, "by fostering basic reading skills and attitudes necessary for performing schoolwork" (p. 116). This study concluded with its findings about the importance of the student need to develop critical thinking skills in everyday life. The

authors maintained that performance tasks designed by teachers for students to complete would allow teachers to assess mastery of basic skills by students and help them to grow as they learned how to apply problem-solving skills.

Sanacore and Palumbo (2010) suggested through their studies that reading and writing “is essential for advancing students literacy growth throughout the grades and middle school students should profit from opportunities to engage in actual reading” (pp. 180-181). Their study concluded that reading from informational textbooks increased vocabulary and literacy skills. It was evidenced that teachers knew independent reading was more effective when readers were exposed to a wide range of reading material, which also enriched student understanding in a variety of subjects. Middle-school students were challenged when presented with opportunities to read different kinds of material.

Akos, Charles, Orthner, and Cooley (2011) proposed that a teacher’s attitude was important to the “success of school-based interventions because all teachers play an integral role in implementing classroom strategies to meet curriculum standards” (p. 1). Street and Stang (2008) pointed to a lack of self-confidence within teachers and inadequate professional development in reading and writing skills as main reasons why educators failed to incorporate standards into their curriculum of expertise. In another study, Hammerman (2005) offered, “classroom teachers have the luxury of designing and using a number of assessments to monitor the learning standards and to guide the instructional process” (p. 26). Professional development opportunities enabled improved lessons for students to include increased writing and reading skills. Adding these skills to their everyday lessons helped encourage students to build on previous lessons learned.

Zito and McQuillan (2010) found that students could become self-motivated, thus leading to a stronger commitment to academic success. Black and William's (1998) proof of understanding theory suggested student motivation came from pupils' thinking about how they felt about school, the assignments they were given, and why they should learn something new. Nathanson's (2006) research suggested that using narrative reading and writing across content areas, and implementing reading and writing strategies in non-content areas, such as practical art classes, allowed students a clear understanding of the subject matter. He built a case for teachers to study the strategies and techniques of a Communication Arts' class and then apply these to increase student engagement in other content areas.

Conclusion

Childe, Sands, and Pope (2009) found that curriculum was not something to be delivered, but to be co-constructed by teachers and students. Teaching practical work provided a model of how this might be done. Most educators understood this was the way for students to become motivated to apply what they knew when they learned new information and gained the knowledge to create new understandings and theories of the world as they transformed and applied knowledge in new situations. Scruggs, Mastropieri, and McDuffie (2007) promoted the use of scaffolding, meaning that previous knowledge and understanding were directly linked to what follows in the curriculum.

Reading and Writing Across the Curriculum became a popular approach to raising Communication Arts' scores on the Missouri Assessment Program (MAP), according to Schoenbach et al. (2010). They concluded, after reviewing strategies which boost student

literacy, it is not just the responsibility of a Communication Arts' department to educate students in reading and writing. Students who participated in non-core classes expanded their knowledge in basic reading skills, developed growth skills with area language development, and increased their writing skills. Increases in general academic skills appeared to reinforce these specific literacy-related developments. Garcia (2010), in her analysis of using Communication Arts' curriculum in all content areas, found "these skills add to students' focus and concentration, ability to express themselves orally and in writing, persistence, and imagination, creativity, and inclinations to engage in problem solving" (p. 3).

Bintz (2011) pointed to a need for more research pertaining to how teams of teachers could develop and implement a coherent school-wide program for teaching communication skills across the curriculum. This type and context of literacy support has not been extensively researched. School districts will be required to initiate a curriculum based on the CCSS from the state in which they are located. The experiences of teachers in all subject areas, both core and non-core designated with Reading and Writing Across the Curriculum, are expected to assist them in using these standards to increase the Communication Arts' skills of students. Research can provide evidence to develop a clear understanding of how the Reading and Writing Across the Curriculum program can help teachers use the CCSS to assist students in achieving academic success.

Chapter Three outlines the details of this research study, including a description of the research site, participants, and methodology.

Chapter Three: Methodology

Purpose

The purpose of this study was to determine the perceptions of classroom teachers and building principals as to the effectiveness of required Reading and Writing Across the Curriculum in both core and non-core subject areas. Both core and non-core classes within the study school district incorporated reading and writing strategies in their content areas. The researcher wanted to study the process to promote preparation for administrators and teachers to work successfully with the advent of required Common Core State Standards for curriculum development. This was a sequential mixed-methods study using analysis of both qualitative and quantitative data.

The Research Site

The researcher conducted the study at three middle schools located at a Midwest suburban school district, with permission from the superintendent of the school district. Total enrollments for each of the three studied schools were approximately 2,513 students. Non-core classes include art, band, choir, drama, family and consumer science, industrial technology, musical keyboarding, and technology and information literacy classes.

Research Perspective

In this study the researcher attempted to gain an understanding of how teachers assessed the effectiveness of required Reading and Writing Across the Curriculum strategies in improving student reading comprehension and preparing teachers for a curriculum reflecting use of CCSS in three Midwest suburban middle schools.

Gewertz’s (2012) study concluded that Reading and Writing Across the Curriculum was an important classroom component to assist teachers in working with the CCSS. In the three study-site schools, the district conducted a seminar for all middle school teachers designed to provide an overview of the CCSS. In Table 4, results from a survey the school district conducted after the seminar are displayed, based on responses from 138 participants. Table 4 displays results to a question asking participants if they gained an informative overview regarding Common Core State Standards.

Table 4.

Survey Results: Informative Overview

Likert Scale Continuum	Response Percent	Response Count
Strongly Agree	39.40%	54
Agree	51.80%	71
Somewhat Agree	8.00%	11
Disagree	0.70%	1
Strongly Disagree	0.00%	0

Source: (personal communication, Dr. Laura Brock, December, 2012)

Table 5 displays results to a question asking participants if they believed they gained new information during the professional development session with regard to CCSS.

Table 5.

Survey Results: Learning New CCSS Information

Likert Scale Continuum	Response Percent	Response Count
Strongly Agree	39.90%	55
Agree	49.30%	68
Somewhat Agree	8%	11
Disagree	2.90%	4
Strongly Disagree	0.00%	0

Source: (personal communication, Dr. Laura Brock, December, 2012)

The researcher used the results of the survey to determine how prepared administrators and teachers will be to work successfully with the advent of required CCSS for curriculum development. To begin the research process, principals and teachers within the three middle schools were contacted by the researcher by e-mail to explain the proposed study and request participation. Principal and teacher volunteers were contacted by the researcher with an 'Informed Consent for Participation' (Appendix A) detailing the study, and a request for participation in a confidential and anonymous survey. The researcher requested a permission signature from each of the three building principals in the middle schools to allow email contact with teachers. The quantitative portion of this study was conducted from a pragmatist perspective, which provided a rule for clarifying the contents of hypotheses, according to Pihlstrom and Rydenfelt (2009). The author of this study used an in-depth data-gathering method, in the form of an e-mail survey provided to all the educators from the three study locations, sent to all who responded to the initial e-mail invitation to participate in the study. The sampling method employed cluster samples. Bluman (2010) stated, cluster sampling involves "subjects selected by using an intact group that is representative of the population" (p. 13). Participant responses were categorized into administrators and teachers, as one set of clusters, and into core-classroom teachers and non-core classroom teachers as a second set of clusters. A cluster of three out of five middle schools in the Midwest suburban district were chosen to represent the population of middle school teachers surveyed.

For this study, the researcher computed a mean score for the Likert-type surveys for both positive and negative classified responses, and a *t*-test was applied to determine the statistical significance of the difference between the positive and negative scores.

This quantitative measurement compared the total ratings for each of the two categories (positive-to-negative). Results determined whether or not the null hypotheses were rejected.

Population and Sampling Procedures

Cluster sampling was used to determine the model used in this study. For the purpose of this study, the researcher divided the population into two groups: core classroom teachers and non-core classroom teachers. At the time of this study the three middle schools had a total of 219 teachers. Table 6 shows the demographic make-up of the teacher population at that time of the study (MODESE, 2013).

Table 6.

Demographic Make-Up of Teacher Population

Name of School	Number of Core Teachers	Number of Non-Core Teachers	Average Salary	Average Years of Experience Teaching	Teachers With a Master’s Degree or Higher
Midwest Suburban Middle School A	22	31	\$57,363	13.1	79.30%
Midwest Suburban Middle School B	24	31	\$59,918	15.9	80.30%
Midwest Suburban Middle School C	21	27	\$58,374	14	84.10%

Participants

All teachers are employed in the suburban Midwest school district for a contracted period of nine months and are tenured after completing five successful years in the district. The researcher computed and compared the total ratings on the perception survey for each of the two categories to determine the overall positive or negative perceptions of teachers and principals toward the effectiveness of the Reading and

Writing Across the Curriculum program in improving basic literacy skills from school-to-school and for core classes and non-core classes. Also measured were perceptions of preparing principals and teachers for curriculum requirements of the Common Core State Standards.

After choosing three middle schools out of five in the suburban Midwest school district, the researcher examined the demographic information from each chosen school and combined the data for all the three middle schools in Table 7 (MODESE, 2013).

Table 7.

Combined Demographic Teacher Population

Demographic Teacher Population	Core Classroom Teacher	Non-Core Classroom Teacher	Average Salary	Average Years of Experience Teaching	Teachers With a Master's Degree or Higher
219	67	152	\$58,551.67	14.33	81.2%

Table 8.

Demographic Information on Student Population

Name of School 2012	Total Enrollment	Asian	Black	Hispanic	Indian	White	Free and Reduced Lunch
Midwest Suburban Middle School A	923	2.10%	6.80%	1.50%	0.10%	89.30%	16.6%
Midwest Suburban Middle School B	841	2.60%	5.60%	1.20%	0.00%	90.00%	10.4%
Midwest Suburban Middle School C	749	2.70%	5.70%	2.30%	0.10%	88.80%	18.4%

The researcher examined the demographic information on student populations from each chosen school in the three suburban Midwest middle schools in Table 8 (MODESE, 2013).

Using data from the Missouri Department of Elementary and Secondary Education (2013), the researcher examined the past five years of the Adequate Yearly Progress (AYP) in all three of the suburban Midwest middle schools. In middle school A, the school did not meet AYP in Communication Arts in 2007, 2008, 2009, and 2011. The school did meet AYP in Communication Arts in 2010. In middle school B, the school did not meet AYP in 2007, 2009, and 2010. In 2008 and 2011, school B did meet AYP. In middle school C, the school did not meet AYP in Communication Arts in all of the five years examined in this study, 2007, 2008, 2009, 2010, or 2011. Table 9 contains a breakdown over a five year period of the combined Missouri Assessment Program (MAP) sixth, seventh, and eighth grade results for Communication Arts (MODESE, 2013).

Independent Variables

This mixed-methods study included 170 middle school teachers. They were provided with a survey containing statements which asked for their perceptions of the effects of concepts and strategies used to meet the, then current, Reading and Writing Across the Curriculum requirements. Each survey statement was rated by the teacher according to a Likert-scale continuum: (1) Strongly Disagree, (2) Disagree, (3) Neither Agree nor Disagree, (4) Agree, and (5) Strongly Agree. Ratings in the ‘Strongly Agree’ and ‘Agree’ categories were marked as positive. Ratings in the ‘Strongly Disagree’ and ‘Disagree’ categories were marked as negative.

Table 9.

MAP Table Communication Arts

Name of School/Year	2007	2007	2008	2008	2009	2009	2010	2010	2011	2011
	Basic or Below	Proficient	Basic or Below	Proficient	Basic or Below	Proficient	Basic or Below	Proficient	Basic or Below	Proficient
Midwest Suburban Middle School A	51%	35.5%	46.9%	36.2%	41.8%	39.2%	39.9%	41.1%	34.1%	36.8%
Midwest Suburban Middle School B	41.8%	41.6%	40.4%	44.5%	49.5%	45.8%	32.7%	39.7%	28%	41.9%
Midwest Suburban Middle School C	50.2%	36.5%	55.8%	37.1%	51.4%	36.3%	39.3%	40.9%	41.8%	36.8%

Source: MODESE, 2013

Research Questions and Null Hypotheses

Research Question 1: How do middle school teachers and administrators perceive the effects of the Reading and Writing Across the Curriculum program on student reading comprehension in core and non-core classes? The researcher worked with the following null hypotheses.

H₀₁: Middle school teachers assigned to core academic classrooms will not perceive effects of the Reading and Writing Across the Curriculum program differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey.

H₀₂: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is not preparing them to increase student literacy as part of the requirements associated with the Common Core State Standards, as measured by the results of a teacher survey (core agreement compared to core disagreement; non-core agreement compared to non-core disagreement).

H₀₃: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards, as measured by satisfaction results on a teacher survey (core agreement compared to core disagreement; non-core agreement compared to non-core disagreement).

Research Question 2: How do middle school teachers and administrators perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards? The following null hypothesis contributed to the results for Research Question 2.

H₀₄: Middle school teachers assigned to core academic classrooms will not perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey.

Triangulation of Results

One goal of this study was to determine the relationship between educators' perceptions of the effectiveness of required Reading and Writing Across the Curriculum strategies and preparing teachers for Common Core State Curriculum. The researcher analyzed the data from respondents who participated in a confidential and anonymous survey. Each survey statement was rated by the teacher according to a Likert-scale continuum. Ratings in the 'Strongly Agree' and 'Agree' categories were marked as positive. Ratings in the 'Strongly Disagree' and 'Disagree' categories were marked as negative. The researcher computed and compared the total ratings for each of the two categories to determine the overall perceptions of teachers and principals toward the effectiveness of the Reading and Writing Across the Curriculum program in improving basic literacy skills from school to school and non-core classes, and in preparing principals and teachers for curriculum requirements from the Common Core State Standards.

Each survey statement was followed with an open-ended question asking the participant to reflect their understanding of the survey statement and how the contents of the statement are evidenced in her/his working environment. Answers to the open-ended

questions following each survey statement are summarized in Chapter Three and used to provide answers to the two research questions for this study.

One administrator, principal or assistant principal, from each building was interviewed to gain his or her perceptions of how teachers include reading and writing in the curriculum, the types of training provided to teachers in basic literacy skills the support they receive, and their beliefs as to how Reading and Writing Across the Curriculum can benefit the school's involvement with the present Common Core State Standards. Information from the interviews are combined and summarized in Chapter Three to address the research questions.

On part 2 of the teacher survey, the respondents answered the open-ended questions following each survey statement, which are summarized in Chapter Three and were used to provide answers to the two research questions for this study. On part 3, one administrator, principal or assistant principal, from each building was interviewed to gain his or her perceptions of how teachers included reading and writing in the curriculum, the types of training provided to teachers in basic literacy skills, the support they receive, and beliefs as to how Reading and Writing Across the Curriculum can benefit the school's involvement with the present Common Core State Standards. Information from the interviews was combined and summarized in Chapter Four to address the research questions.

Part 4 of the study was used to collect demographic data from the sample population. It included the question whether the respondent was a core teacher or non-core teacher. The author collected data through SurveyMonkey.com to determine the

total number of responses for each answer to each question as well as percentages of responses for each answer to each question.

Qualitative Instrument Design

The teachers' survey consisted of eight parts. Part 1 of the survey asked to what extent the teachers in their respective schools include reading and writing in their core-class lessons. Each survey statement was rated by the teacher according to a Likert-scale continuum: (1) Strongly Agree, (2) Agree, (3) Neither Agree nor Disagree, (4) Disagree, and (5) Strongly Disagree. Ratings in the 'Strongly Agree' and 'Agree' categories were marked as positive. Ratings in the 'Strongly Disagree' and 'Disagree' categories were marked as negative. Using quantitative method represented by the Likert scale, the researcher surveyed educators who taught Communication Arts' courses in three middle schools concerning the required writing activities of their students. An additional question asked the participants to provide an example of how teachers included reading and writing skills in their core-class lessons.

Part 2 of the survey asked participants if teachers included reading and writing skills in their non-core class lessons. An additional question asked the participants to provide an example of how teachers included reading and writing skills in their non-core class lessons.

Part 3 of the survey asked participants if they received training and support in initiating and implementing reading and writing skills into their curriculum. In a follow-up question participants were asked what was most helpful training and support they received in using basic literacy skills within their curriculum.

Part 4 of the survey asked the certified staff if they supported the use of basic literacy skills, such as those contained in the initiative Reading and Writing Across the Curriculum, when teaching in their subject's discipline. The second part of this survey question asked how much instruction time was devoted to teaching basic literacy skills during the teachers' lessons.

Part 5 of the survey asked the participants which basic literacy skills the teachers employed in the curriculum and were they in support of the adopted Common Core State Standards required for schools. The follow-up question asked how the basic literacy skills contained in the initiative Reading and Writing Across the Curriculum related to the Common Core State Standards.

Part 6 of the survey asked participants if their school administrators supported inclusion of basic literacy skills in all core and non-core classes in their school. The follow-up question asked how the principal or assistant principal supported inclusion of basic literacy skills into the curriculum.

Part 7 of the survey consisted of a statement concerning whether or not the impact from the use of Common Core State Standards in the school was significant because of the school's involvement in the program, Reading and Writing Across the Curriculum. The follow-up question asked if there appeared to be a significant impact on the Common Core State Standards.

The researcher designed the final portion of the survey to collect data regarding which type of class, core or non-core, was taught by the teacher. Part 8 consisted of asking one administrator, principal or assistant principal, from each building for an interview to gain their perceptions of how teachers included reading and writing in their curricula, the type

of training provided to teachers in basic literacy skills and the support they received, and beliefs as to how Reading and Writing Across the Curriculum could benefit the school's involvement with the Common Core State Standards. Information from the interviews was combined and summarized in Chapter Four and addressed conclusions to the research questions. The researcher designed the following questions to gain a sense of how the process of reading, writing and listening/speaking/viewing helped students communicate and interpret information in a variety of classroom settings.

1. How do teachers in your school include reading and writing in their core-class curriculum?
2. How do teachers in your school include reading and writing in their non-core class curriculum?
3. What were the most helpful training and support received in using basic literacy skills within their curriculum?
4. How do you support inclusion of basic literacy skills into the curriculum?
5. How can Reading and Writing Across the Curriculum program benefit the school's involvement with the implementation of the Common Core State Standards?

The survey used in this study was designed by the researcher to examine how the Missouri Department of Elementary and Secondary Education's (MODESE, 2011b) Show-Me Standards clearly focused on middle school students' speaking and writing of standard English and reading both fiction and non-fiction works for meaning (MODESE, 2011b). The Common Core State Standards initiative (MODESE, 2012b) included content through higher-order skills and built on the strengths of the current Show-Me

Standards. These standards were meant to help students prepare for success in the global economy. Therefore, these Common Core State Standards enabled students who participated in non-core classes to expand their basic reading skills, develop facility with language development, and increase writing skills. Garcia (2010) found, in an analysis of the use of Communications Arts' skills in all content areas, that the added skills contributed to students' focus and concentration, ability to express themselves orally and in writing, and their persistence, imagination, creativity, and inclinations to engage in problem solving.

Qualitative and Quantitative Analysis

The researcher used SurveyMonkey.com to collect the necessary data for this study. SurveyMonkey.com provided the researcher with the total number of responses for each question. The system results were used to create an Excel spreadsheet, which listed the questions and number of responses from each Likert-type ratings scale: (1) Strongly Agree, (2) Agree, (3) Neither Agree nor Disagree, (4) Disagree, and (5) Strongly Disagree. Ratings in the 'Strongly Agree' and 'Agree' categories were marked as positive. Ratings in the 'Strongly Disagree' and 'Disagree' categories were marked as negative. The study asked the certified staff members of three Midwest suburban middle school teachers for their level of agreement or disagreement with specific statements. No teacher names were listed on the surveys or spreadsheet. The researcher sorted out the spreadsheet by question, the Likert-type ratings scale, and the responses. The principal e-mail interview responses were placed into a word table to categorize the differences in their responses. No names were listed on the table.

A mean score for both positive and negative classified responses was computed and a *t*-test for difference in means was applied to determine the statistical significance of the difference between the positive and negative scores. This quantitative measurement compared the total ratings for each of the two categories (positive and negative) and determined the perceptions of teachers and principals towards the effectiveness of Reading and Writing Across the Curriculum processes and strategies in improving basic literacy skills from school-to-school in both core and non-core classes, and in preparing teachers and principals for a curriculum based on the requirements demanded of the Common Core State Standards.

One of the goals of this study was to determine the relationship between the Reading and Writing Across the Curriculum program in improving basic literacy skills for middle school students and preparing teachers for curriculum requirements from the CCSS. The researcher analyzed the data from the results of the teachers' surveys and the interviews of the principals.

Frequency of Responses

The author designed the survey to collect data from the sample population. After entering all the data into a spreadsheet from the teachers' survey responses, the researcher was able to obtain reports of the compiled data. These reports displayed the number and percentage of each question. Compiling the data provided the researcher with two reports, one showing the number of responses from each question and the other showing the percentage of responses from each question. Table 10 shows the frequency of overall results from each of the questions answered in the survey.

Table 10.

Frequency of Overall Results

Schools A, B, & C	Core	Non- Core	Core	Non-Core	Core/ Non-Core	Core	Non-Core	Core	Non- Core	Total
Question Numbers	<i>Strongly Agree</i>	<i>Strongly Agree</i>	<i>Agree</i>	<i>Agree</i>	<i>Neither Agree nor Disagree</i>	<i>Disagree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Strongly Disagree</i>	
Question 1	12	18	12	17	12	4	7	0	0	82
Question 2	8	12	7	20	26	2	7	0	0	82
Question 3	11	22	7	11	14	4	8	1	4	82
Question 4	21	23	12	14	8	0	0	0	2	80
Question 5	19	9	16	9	18	4	2	0	2	79
Question 6	17	15	16	10	13	1	2	0	3	77
Question 7	14	11	7	7	28	6	0	6	0	79

Table 11.

<i>Frequency of Responses</i>				
Schools A, B, & C	Core	Non-Core	Core	Non-Core
Questions	Agree	Agree	Disagree	Disagree
1. Teachers in my school include reading and writing skills in their core class lessons.	24	35	4	7
2. Teachers in my school include reading and writing skills in their non-core class lessons.	15	32	2	7
3. I received training and support in initiating and implementing reading and writing skills into my curriculum.	18	33	5	12
4. I support the use of basic literacy skills, such as those contained in the initiative Reading and Writing Across the Curriculum, when teaching in my subject area discipline.	33	37	0	2
5. The basic literacy skills I employ in my current curriculum are supportive of the recently adopted Common Core State Standards required for schools.	35	18	4	4
6. School administrators actively support inclusion of basic literacy skills in all core and non-core classes in my school.	33	25	1	5
7. Impact from the use of Common Core State Standards in my school curriculum is significant because of my school's involvement in the program titled: Reading and Writing across the Curriculum.	21	18	12	0
8. For the purpose of this survey please identify your area of expertise.	Core	Non-Core		
	50	32		

After noting the responses for each statement, the researcher grouped the responses to effectively complete the data analysis. Responses were grouped as ‘Strongly Agree’ and ‘Agree’ together and the responses ‘Strongly Disagree’ and ‘Disagree’ together.

In Table 11 the frequency of responses is categorized separated by core and non-core teachers’ responses.

After noting the responses for each statement, the researcher grouped the responses to effectively complete the data analysis. Responses were grouped as ‘Strongly Agree’ and ‘Agree’ together and the responses ‘Strongly Disagree’ and ‘Disagree’ together. In Table 12 the frequency of percentages is categorized separated by core and non-core teachers’ responses.

The researcher analyzed data from the teacher survey to determine if there was a statistical difference between the proportion of core teachers who agreed with the non-core teachers and the core teachers who disagreed with the non-core teachers in responding to the survey. Ratings in the ‘Strongly Agree’ and ‘Agree’ categories were marked as positive. Ratings in the ‘Strongly Disagree’ and ‘Disagree’ categories were marked as negative. The results of the analysis are reported in Chapter Four.

Table 12.

<i>Frequency of Percentages</i>				
Schools A, B, & C	Core	Non-Core	Core	Non-Core
Questions	Agree	Agree	Disagree	Disagree
1. Teachers in my school include reading and writing skills in their core class lessons.	24.00%	54.69%	4.00%	10.94%
2. Teachers in my school include reading and writing skills in their non-core class lessons.	15.00%	50.00%	2.00%	10.94%
3. I received training and support in initiating and implementing reading and writing skills into my curriculum.	18.00%	51.56%	5.00%	18.75%
4. I support the use of basic literacy skills, such as those contained in the initiative Reading and Writing Across the Curriculum, when teaching in my subject area discipline.	33.00%	57.81%	0.00%	3.13%
5. The basic literacy skills I employ in my current curriculum are supportive of the recently adopted Common Core Standards required for schools.	5.00%	28.13%	4.00%	6.25%
6. School administrators actively support inclusion of basic literacy skills in all core and non-core classes in my school.	33.00%	39.06%	1.00%	7.81%
7. Impact from the use of Common Core Standards in my school curriculum is significant because of my school's involvement in the program titled: Reading and Writing across the Curriculum.	21.00%	28.13%	12.00%	0.00%
8. For this purpose of this survey please identify your area of expertise.	Core	Non-Core		
	50	32		

Limitations

There are potential limitations to the generalizability of this study. This study is restricted to specific grade levels within three middle schools in one district, and therefore the chosen population limits generalizability. The sample is purposive, convenient, and relatively small in comparison to other locations throughout the United States. Administrators and teaching staff within each of the three schools may not have shared the same philosophy and teaching styles concerning Reading and Writing Across the Curriculum in both core and non-core subject areas. Professional development training activities concerning Reading and Writing Across the Curriculum may have differed from school to school. The study did not account for the individual reading and writing skills of students, which may have influenced the amount of progress perceived by teachers. Teacher experience with the independent variable, Reading and Writing Across the Curriculum strategies, may have varied. The existence of competing initiatives in the study schools may have provided confounding variables within study results. Teachers in the study-schools had varied educational backgrounds, ranging from bachelor's degrees through educational doctorates. In addition, the research was employed within one of the study schools as a non-core teacher.

Conclusion

Both core and non-core classes are required within the study school district to incorporate reading and writing strategies in their content areas. The researcher wanted to study the process to identify and offer strategies to prepare administrators and teachers to work successfully with the advent of the required Common Core State Standards for curriculum development.

The purpose of this study was to determine the perception of classroom teachers and building principals as to the effectiveness of the required Reading and Writing Across the Curriculum in both core and non-core subject areas.

Because there were several parts to this study, the author decided that a mixed-method research design would be the best way to find answers to research questions. To address the first research question, the researcher examined the perceptions of teachers and administrators in one district's three suburban middle schools on the effects of the Reading and Writing Across the Curriculum program on student reading comprehension in core and non-core classes.

The researcher was working with the following null hypotheses: H₀₁: Middle school teachers assigned to core academic classrooms will not perceive effects of the Reading and Writing Across the Curriculum program differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey; H₀₂: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is not preparing them to increase student literacy as part of the requirements associated with the Common Core State Standards, as measured by the results of a teacher survey; and H₀₃: Middle school teachers will not perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards, as measured by satisfaction results on a teacher survey.

The researcher created a teacher survey, which she used to collect the qualitative data needed to answer this research question. Each part of the survey was closely associated with previous educational literature on literacy. To analyze the data the

researcher classified the teacher survey to determine if there was statistical difference between the proportion of core teachers who agreed with the non-core teachers and the core teachers who disagreed with the non-core teachers in responding to the survey. Ratings in the 'Strongly Agree' and 'Agree' categories were marked as positive. Ratings in the 'Strongly Disagree' and 'Disagree' categories were marked as negative. A mean score for both positive and negative classified responses was computed and a *t*-test was applied to determine the statistical significance of the difference between the positive and negative scores.

The researcher designed the second research question to examine how teachers and principals in one district's three suburban middle schools perceived the Reading and Writing Across the Curriculum program in preparing them for curriculum requirements associated with the Common Core State Standards. When analyzing data to answer the question the researcher was working with the null hypothesis: H_{04} : Middle school teachers assigned to core academic classrooms will not perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey.

To analyze data from part 2, the researcher charted the written responses to survey questions in a table. The information from the response questions was combined and summarized in Chapter Four. To analyze the data from part 3, the interviews from three principals were put into a table to compare and contrast the answers. The results are summarized in Chapter Four. In part 4, the researcher collected and summarized demographic information about the sample population.

In Chapter Four, the researcher described in detail the statistical analysis conducted in the study. Results are reported with discussion of the perceptions of the effectiveness of required Reading and Writing Across the Curriculum strategies in improving student reading comprehension and preparing teachers for a curriculum based on the Common Core State Standards in three suburban Midwest middle schools.

Chapter Four: Results

Introduction

Reading and Writing Across the Curriculum became a popular approach to raising Communication Arts' scores on the Missouri Assessment Program, according to Schoenbach et al. (2010). Their research examined strategies to improve literacy of students by concluding it was no longer only the Communication Arts department's responsibility to educate students in reading and writing. Students who participated in non-core classes expanded their knowledge in basic reading skills, developed facility with area language development, and increased their writing skills. Increases in general academic skills proved and appeared to reinforce literacy related developments. The Common Core State Standards initiative released in June, 2010 included content and knowledge built through use of higher order skills and upon strengths and lessons of current state standards, according to Missouri Department of Elementary and Secondary Education (2012b). These standards were meant to help students prepare to succeed in a global economy.

The researcher designed this study to answer two research questions. The first question was: How do middle school teachers and administrators perceive the effects of the Reading and Writing Across the Curriculum program on student reading comprehension in core and non-core classes? The researcher was working with the null hypotheses: H₁: Middle school teachers assigned to core academic classrooms will perceive effects of the Reading and Writing Across the Curriculum program differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey; H₂: Middle school teachers will verify that the Reading and Writing

Across the Curriculum program is preparing them to increase student literacy as part of the requirements associated with the Common Core State Standards, as measured by the results of a teacher survey; and H₃: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards, as measured by satisfaction results on a teacher survey.

The second question was: How do middle school teachers and principals perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards? For this question the researcher was working with the null hypothesis: H₄: Middle school teachers assigned to core academic classrooms will perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey.

Data Analysis

In order to answer the questions asked in her study, the researcher collected and analyzed qualitative data. She examined the qualitative data to determine perceptions of required Reading and Writing Across the Curriculum programs and teachers' preparation of the curriculum requirements associated with the Common Core State Standards, in one's district three suburban middle schools.

Mixed-Method Analysis

The researcher used four types of data in this study. For the first type she computed the means from the survey and applied a z -test for the difference in means

analyzing the results of the survey. In the second type, the researcher compiled responses with open-ended survey questions. In the third type, the researcher completed responses to e-mail inquiry from three of the nine principals from the three suburban Midwest middle schools included in the study. In the fourth type, the researcher collected demographic data. The data analysis on this portion analyzed perceptions of how teachers include reading and writing in their curriculum, the types of training provided to teachers in basic literacy skills, the support they receive from the suburban Midwest school district, and their beliefs as to how Reading and Writing Across the Curriculum benefited the school's involvement with the present Common Core State Standards movement.

Data Part 1

On part 1 of the survey, the teachers were instructed to rate each statement according to a Likert scale continuum: 1) Strongly Agree, 2) Agree, 3) Neither Agree nor Disagree, 4) Disagree, 5) Strongly Disagree. Ratings in the 'Strongly Agree' and 'Agree' categories were marked as positive. Ratings in the 'Strongly Disagree' and 'Disagree' categories were marked as negative.

H₀₁: Middle school teachers assigned to core academic classrooms will not perceive effects of the Reading and Writing Across the Curriculum program differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey.

To provide a comparison of core teachers' perceptions to non-core teachers' perceptions of the effect of the Reading and Writing Across the Curriculum program with regard to its effects, the researcher applied a z-test for difference in proportion to the

percentage of agreement. The measure of agreement was represented by the proportion of ‘Agree’ and ‘Strongly Agree’ combined. In Table 13, results of comparison of each question’s z-test value to the critical value of ± 1.96 is displayed. The null hypothesis was rejected for each of survey prompts 1, 2, 3, 4, and 5. These questions indicated significant differences in core-teacher perceptions compared to non-core-teacher perceptions. In each case, the non-core teacher perceptions indicated higher positive agreement with survey prompts, observably for prompts 6 and 7.

Table 13.

Null Hypothesis # 1: Comparison of Core to Non-Core Teacher Responses

Q	z-test value	Reject null?	
1	3.56	yes	Non-core agreement significantly higher than core.
2	4.83	yes	Non-core agreement significantly higher than core.
3	4.52	yes	Non-core agreement significantly higher than core.
4	3.13	yes	Non-core agreement significantly higher than core.
5	4.16	yes	Non-core agreement significantly higher than core.
6	0.79	no	Non-core agreement observably higher than core.
7	1.02	no	Non-core agreement observably higher than core.

Note: Critical Value= ± 1.96 , N=50 Core Teachers, N=32 Non-Core Teachers

Non-core-teacher perceptions were in stronger agreement than core-teacher for the topics listed in Table 14. The researcher also assigned a total average rating to each Likert-type survey to provide an average perception of agreement for core and non-core teachers. The results of a z-test for difference in means is displayed in Table 15. There was a significant difference in agreement, with non-core teachers’ agreement higher than core teachers.

Table 14.

Non-Core Teachers' Agreement vs. Core Teacher Agreement

1. Teachers in my school include reading and writing skills in their core class lessons.
 2. Teachers in my school include reading and writing skills in their non-core class lessons.
 3. I received training and support in initiating and implementing reading and writing skills into my curriculum.
 4. I support the use of basic literacy skills, such as those contained in the initiative Reading and Writing Across the Curriculum, when teaching in my subject area discipline.
 5. The basic literacy skills I employ in my current curriculum are supportive of the recently adopted Common Core State Standards required for schools.
 6. School administrators actively support inclusion of basic literacy skills in all core and non-core classes in my school.
 7. Impact from the use of Common Core State Standards in my school curriculum is significant because of my school's involvement in the program titled: Reading and Writing Across the Curriculum.
 8. For the purpose of this survey please identify your area of expertise, Core or Non-Core.
-

Table 15.

Null Hypothesis # 1: Overall Survey Rating Comparison of Core to Non-Core

z-test value	Reject null?	
3.13	yes	Non-core agreement significantly higher than core.

H_{02a}: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is not preparing them to increase student literacy as part of the

requirements associated with the Common Core State Standards, as measured by the results of a teacher survey (core agreement compared to core disagreement).

To provide a comparison of core teachers’ perceptions of the effect of the Reading and Writing Across the Curriculum program with regard to student literacy, the researcher applied a *z*-test for difference in proportion to the percentage of core teacher agreement compared to core teacher disagreement.

As indicated in Table 16, comparison of each question’s *z*-test value to the critical value of ± 1.96 , resulted in the rejection of the null hypothesis for each of the following prompts: 1, 2, 3, 4, and 6.

Table 16.

Null Hypothesis # 2: Comparison of Core Agreement to Disagreement

Q	<i>z</i> -test value	Reject Null?	
1	3.39	yes	Core agreement significantly higher than disagreement.
2	2.71	yes	Core agreement significantly higher than disagreement.
3	2.42	yes	Core agreement significantly higher than disagreement.
4	5.14	yes	Core agreement significantly higher than disagreement.
5	0.29	no	Core agreement observably higher than disagreement.
6	4.95	yes	Core agreement significantly higher than disagreement.
7	1.48	no	Core agreement observably higher than disagreement.

Note. Critical Value=1.96, N=50 Core Teachers, N=32 Non-Core Teachers

These questions indicated significant difference in core teacher agreement compared to core teacher disagreement. In each case, the core teacher agreement was higher than core teachers’ disagreement with survey prompts; observably for prompts 5 and 7.

Table 17 provides the results of comparing the overall survey results for core teacher agreement to survey prompts to overall disagreement.

Table 17.

Null Hypothesis # 2: Overall Rating Comparison of Core Agreement to Disagreement

<i>z</i> -test value	Reject null?	
3.02	yes	Core agreement significantly higher than disagreement.

H_{02b}: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is not preparing them to increase student literacy as part of the requirements associated with the Common Core State Standards, as measured by the results of a teacher survey (non-core agreement compared to non-core disagreement).

To provide a comparison of non-core teachers’ perceptions of the effect of the Reading and Writing Across the Curriculum program with regard to student literacy, the researcher applied a *z*-test for difference in proportion to the percentage of core teacher agreement compared to non-core teacher disagreement.

As indicated in Table 18 comparison of each question’s *z*-test value to the critical value of ±1.96 resulted in rejection of the null hypothesis for each of the following prompts: 1, 2, 3, 4, 5, 6 and 7.

Table 18.

Null Hypothesis # 2: Comparison of Non-Core Agreement to Disagreement

Q	<i>z</i> -test value	Reject null?	
1	5.64	yes	Non-core agreement significantly higher.
2	5.12	yes	Non-core agreement significantly higher.
3	4.20	yes	Non-core agreement significantly higher.
4	7.09	yes	Non-core agreement significantly higher.
5	3.44	yes	Non-core agreement significantly higher.
6	4.40	yes	Non-core agreement significantly higher.
7	4.66	yes	Non-core agreement significantly higher.

Note. Critical Value= 1.96, N=50 Core Teachers, N=32 Non-Core Teachers

These questions indicated significant difference in perceptions of non-core teacher agreement compared disagreement. In each case, the non-core teacher perceptions indicated agreement than disagreement with survey prompts.

Table 19 indicates the overall survey agreement compared to disagreement by non-core teachers.

Table 19.

Null Hypothesis # 2: Overall Non-Core Teachers' Agreement to Disagreement

<i>z</i> -test value	Reject null?
4.9	yes
Non-core agreement significantly higher.	

H_{03a}: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards, as measured by satisfaction results on a teacher survey (core agreement compared to core disagreement).

To provide a comparison of core teachers' perceptions of the effect of the Reading and Writing Across the Curriculum program with regard to curriculum requirements, the researcher applied a *z*-test for difference in proportion to the percentage of core teacher agreement compared to core teacher disagreement.

As indicated in Table 20, comparison of each question's *z*-test value to the critical value of ±1.96 resulted in rejection of the null hypothesis for each of the following prompts: 3 and 4.

Table 20.

Null Hypothesis # 3: Core Agreement vs. Disagreement for Prompts 3, 4, 5, and 7

Q	z-test value	Reject Null?	
3	2.42	yes	Core agreement significantly higher than disagreement.
4	5.14	yes	Core agreement significantly higher than disagreement.
5	0.29	no	Core agreement observably higher than disagreement.
7	1.48	no	Core agreement observably higher than disagreement.

Note. Critical Value=1.96, N=50 Core Teachers, N=32 Non-Core Teachers

These questions indicated significant differences in core-teacher agreement compared to core disagreement with survey prompts. In each case, the core teacher agreement was higher agreement than disagreement with survey prompts, observably for prompts 5 and 7. Table 21 indicates that overall ratings of agreement with survey prompts 3, 4, 5, and 7 was significantly higher than disagreement for core teachers.

Table 21.

Hypothesis # 3: Core Agreement vs. Disagreement for Prompts 3, 4, 5, and 7

z-test value	Reject Null?	
2.53	yes	Core agreement significantly higher.

H_{03b}: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards, as measured by satisfaction results on a teacher survey (non-core agreement compared to non-core disagreement).

To provide a comparison of non-core teachers’ perceptions of the effect of the Reading and Writing Across the Curriculum program with regard to curriculum requirements, the researcher applied a z-test for difference in proportion to the percentage of non-core teacher agreement compared to non-core teacher disagreement.

As indicated in Table 22, comparison of each question’s z-test value of to the critical value of ± 1.96 resulted in rejection of the null hypothesis for prompts 3, 4, and 5.

Table 22.

Null Hypothesis # 3: Non-Core Agreement vs. Disagreement for Prompts 3, 4, 5, and 7

Q	z-test value	Reject Null?	
3	4.52	yes	Non-core agreement significantly higher.
4	3.13	yes	Non-core agreement significantly higher.
5	4.16	yes	Non-core agreement observably higher.
7	1.02	no	Non-core agreement observably higher.

Note. Critical Value=1.96, N=50 Core Teachers, N=32 Non-Core Teachers

These questions indicated significant differences in non-core teacher agreement and disagreement with survey prompts 3, 4, and 5. In each case, the non-core teacher response indicated agreement was higher than disagreement with survey prompts, observably for prompt 7. Table 23 indicates that overall ratings of agreement with survey prompts 3, 4, 5, and 7 is significantly higher than disagreement for non-core teachers.

Table 23.

Hypothesis # 3: Overall Survey: Non-Core Agreement vs. Disagreement for Prompts 3, 4, 5, and 7

z-test value	Reject Null?	
4.78	yes	Non-core agreement significantly higher.

H₀₄: Middle school teachers assigned to core academic classrooms will not perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey.

To provide a comparison of non-core teachers’ perceptions of the effect of the Reading and Writing Across the Curriculum program with regard to preparation for CCSS, the researcher applied a z-test for difference in proportion to the percentage of non-core teacher agreement compared to core teacher disagreement.

As indicated in Table 24, comparing each question’s test value to the critical value of ±1.96 resulted in rejection of the null hypothesis each of the prompts 3, 4, and 5.

Table 24.

Null Hypothesis # 4: Comparison of Core to Non-Core Teacher Responses

Q	z-test value	Reject null?	
3	4.52	yes	Non-core agreement significantly higher than core.
4	3.13	yes	Non-core agreement significantly higher than core.
5	4.16	yes	Non-core agreement significantly higher than core.
7	1.02	no	Non-core agreement observably higher than core.

Note: Critical Value=1.96, N=50 Core Teachers, N=32 Non-Core Teachers

These questions indicated significant differences in core-teacher agreement compared to core agreement. In each case, the non-core teacher agreement was higher than core teachers’ agreement with survey prompts, observably for prompt 7. Table 25 indicates perception of agreement by non-core teachers on overall ratings is higher than core teachers.

Table 25.

Hypothesis # 4: Overall Survey: Core Agreement vs. Non-Core Teachers for Prompts 3, 4, 5, and 7

z-test value	Reject null?	
3.08	yes	Non-core agreement significantly higher than core.

Data Part 2

Part 2 of the teacher survey was comprised of a series of seven questions as a follow-up of each of the survey questions designed to gain insight into perceptions related to the effectiveness of the literacy program in three suburban Midwest middle schools, as teachers prepared for the Common Core State Standards. Respondents were asked to comment further, following each survey question. The results shown in each of the following tables compare and contrast respondents' answers. The respondents' written answers to the open-ended questions have been summarized and provide a detailed answer to the first research question for this study: How do middle school teachers and administrators perceive the effects of a Reading and Writing Across the Curriculum program on student reading comprehension in core and non-core classes?

For follow-up question 1, 50% of the survey respondents, who were core teachers, answered the question. Table 26 shows each of the statements and the percentage of similar responses found throughout the responses.

Comparing and contrasting the results in Table 26 summary of question 1, indicated that respondents provided many examples of how teachers included reading and writing in their core class lessons. In contrast, 8% of respondents said they were comfortable with the reading and writing in their content area.

Table 26.

Survey Question 1

Question # 1 Can you provide an example of how teachers include reading and writing skills in their core class lessons?	Percent of responses	Coded Theme for
	Core	Written Responses
	13%	Teachers use topics to do co-curricular lessons in reading and writing, do performance such as research and debates
	26%	Teachers use reading strategies, vocabulary notebooks, journals, written assignments
	8%	Most teachers still say they are not comfortable with reading/writing instruction in their content area
	6%	Summary and analysis of current articles relating to content
	5%	Constructed response questions on summative assessments
	9%	Have to answer comprehension questions about what they have read
	25%	Core classes use textbooks
	8%	Students learning non-fiction pieces tied to the concept/skills being taught

For question 2, 33% of the survey respondents, who were non-core teachers, answered the question. Table 27 shows each of the statement and the percentage of similar responses.

Table 27.

Survey Question 2

Can you provide an example of reading and writing skills in your non-core class curriculum?	Percent of Responses	Coded Theme for
	Non-Core	Written Responses
	14%	Vocabulary notebooks, journals, content-area
	24%	Constructed response questions on formative and summative assessments
	1%	PE does several mini-research projects as well as band. They utilize technology in both research as well as publication
	13%	Don't know what they do
	28%	Reading non-fiction textbook
	20%	Either through textbook or supplemental sources

In comparing and contrasting the results in Table 26 for question 2, non-core respondents talked about the many teaching activities revolving literacy that have worked well in their classroom. A small percent was unaware non-core teachers assigned literacy lessons for students and 24% responded that literacy lessons were on formative and summative assessments only.

For question 3, 45.24 % of the survey respondents answered the question. Table 28 shows each of the statements and the percentage of similar responses.

Table 28.

Survey Question 3

What was the most helpful training and support you received in using basic literacy skills within your curriculum?	Percent of responses		Coded Theme for Written Responses
	Core	Non-Core	
	20%	9%	Collaborating with other teachers
	8%	0%	PD with our reading specialist about pre/during/post reading strategies to ensure comprehension
	12%	2%	Our PD days are devoted to vocabulary and social studies even has four special PD days this year devoted to reading in our content area
	12%	10%	Marzano strategies
	9%	0%	Very limited training, knew more than was presented
	2%	5%	Write to Learn workshops, graduate classes in teaching reading, but not much training within the district
	10%	1%	Non-fiction and cooperative learning training within the district

To analyze question 3, the researcher classified each of the statements into percentages of similar responses. The majority of the teachers, core and non-core, cited that collaborating with other teachers and using Marzano strategies was the most helpful training teachers received in using basic literacy skills in their suburban middle school district curriculum. In contrast, non-core respondents cited literacy training and support

as non-existence in the district or was provided in the form of training from outside the district.

For question 4, 51.22 % of the survey respondents answered the question. Table 29 shows each of the statements and the percentage of similar responses.

Table 29.

Survey Question 4

How much instructional time do you devote to teaching basic literacy skills?	Percent of Responses		Coded Theme for Written Responses
	Core	Non- Core	
	9%	9%	At least once a week
	2%	6%	Maybe 1/3 of the time
	0%	6%	Very little, subject does not involve reading as much as others
	0%	15%	Small percent reading the majority of time hands on activities
	20%	0%	Many times
	25%	8%	50% of the time

In examining responses to question 4 the researcher found a wide range of responses from core teachers concerning perceptions of instructional time devoted to teaching basic literacy skills. Core teachers devoted 50% of the time to teaching literacy skills with non-core teachers devoting very little time to literacy skill lessons.

For question 5, 35 % of the survey respondents answered the written question. Table 30 shows each of the statement and the percentage of similar responses.

Table 30.

Survey Question 5

How do basic literacy skills contained in the initiative Reading and Writing Across the Curriculum relate to the Common Core State Standards required for schools?	Percent of Responses		Coded Theme for Written Responses
	Core	Non-Core	
	30 %	15%	Common Core seems to be all reading based
	28%	7%	To be successful in the Common Core, students must be able to analyze/comprehend text draw conclusions, find and explain reasoning
	18%	1%	All activities are cross-curricular and stress reading understanding by writing constructed response questions
	1%	0%	Our current social studies curriculum, content, textbook, student assignments and teaching strategies support Common Core

The researcher found in question 5 responses, 45% of the core teacher respondents found that the Reading and Writing Across the Curriculum strategy relates to the Common Core State Standards initiative. Many core teachers felt that literacy strategies support literacy requirements for the Common Core State Standards.

For question 6, 48.78 % of the survey respondents answered the written question.

Table 31 shows each of the statement and the percentage of similar responses.

Table 31.

Survey Question 6

How has the principal/assistant principal supported inclusion of basic literacy skills into the curriculum?	Percent of Responses		Coded Theme for Written Responses
	Core	Non- Core	
	5%	1%	Middle school is requiring students below reading level to take special reading classes
	4%	4%	Constant reminders in e-mail and meetings
	16%	15%	Common vocabulary has been taught and is expected to be used throughout the building
	17%	0%	Have included literacy into our SIP for the upcoming school year and our PD focus will be on Common Core and literacy training
	28%	10%	Principal observation of teachers
	18%	11%	District conducting professional development days

For question 6, the majority of core teacher respondents cited various ways the principal/assistant principal supported inclusion of basic literacy skills into the curriculum. The teachers cited examples ranging from the teaching of common vocabulary to students in core and non-core classes to the district devoting time on professional development days and focusing on training in literacy strategies for both core and non-core teachers.

For question 7, 37.50 % of the survey respondents answered the written question.

Table 32 shows each of the statement and the percentage of similar responses.

Table 32.

Survey Question 7

How is this significant?	Percent of Responses Core Non-Core		Coded Theme for Written Responses
15%	9%	It has given us many teaching activities that has been proven to work best with students	
20%	9%	This is preparing us for the Common Core implementation	
13%	0%	Its impact is significant because of Reading and Writing Across the Curriculum, its significant because of the increase in standard mastery that Common Core expects	
18%	16%	Common Core practices have not been put into place	

In answering question 7, 29% perceived the impact from the use of Common Core State Standards in their school curriculum was significant because of the school's involvement in the program, Reading and Writing Across the Curriculum, was very significant, 34% of the core and non-core teachers responded by suggesting that Common Core practices had not been put into place in the study district.

Data Part 3

In gathering the third type of data, the researcher completed an inquiry from three of the nine principals representing the study-site middle schools. Data analysis on this portion consisted of an examination of principals' statements and analyzing perceptions

of how teachers included reading and writing in their curriculum, the types of training provided to teachers in basic literacy skills, the support they received, and beliefs as to how Reading and Writing Across the Curriculum benefited the school's involvement with the Common Core State Standards movement. The author interviewed each principal by e-mail for answers to the questions. Table 33 represents a comparison of the principal's responses to the questions.

In analyzing the data from Table 33 the researcher wanted to know the types of similarities that existed among the principals' views regarding literacy training and support. The researcher found the principals cited evidence that core teachers included reading and writing as part of their curriculum. Pertaining to the non-core teachers, principals perceived that teachers used non-fiction reading and writing assignments in their curricula. The principals supported inclusion of basic literacy skills, participated in walk-through observations, and embedded both policies into the Schools' Improvement Plans (SIP). The difference in the principals' responses became apparent with regard to the benefits provided by the Reading and Writing Across the Curriculum program and involvement with the Common Core State Standards. Two of the principals agreed that the Reading and Writing Across the Curriculum program benefited the school's involvement with the implementation of CCSS. One principal was considering practices from other areas of the country to identify strategies on how to incorporate a uniform literacy focus for the study school.

Table 33.

Principals' Responses

Interview Questions for Principals	School A	School B	School C
How do teachers in your school include reading and writing in their core class curriculum?	Naturally integrated from teachers, teachers, examples, Communication Arts read novels, social studies uses document-based questions, referencing specific historical documents, science teachers similar as social studies and Math students read a problem and provide written explanation of their solution explaining their work.	All teams have a reading day. Students read four times a month. Teachers use media resources to engage technology and writing.	Teachers include reading and writing in each core class. Marzano strategy training has been provided to the staff, and cooperated learning strategies have been used.
How do teachers in your school include reading and writing in their non-core class curriculum?	Non-core doing similar things as core teachers.	Non-fiction reading requires students to write a response to an article assigned, other teachers make a connection from their electric class back to the core content areas, and writing is incorporated in all classes.	Teachers use non-fiction textbooks and collectively have targeted key areas for improvement of literacy.
What was the most helpful training and support received in using basic literacy skills within their curriculum?	Teachers are given Professional Development days to collaborate with other teachers and content leaders	Professional Development time and mini Professional Learning Communities	Professional Development days which focus on reading and writing strategies.
How do your support inclusion of basic literacy skills in curriculum?	Through walk-through observations, review of goals and artifacts, building SIP goals, teacher evaluation process.	It is embedded into our School Improvement Plan. An additional plan is in place to have all content areas increase reading and writing throughout the year.	Encouraging teacher leaders to lead the Professional Development time and provide walk-through feedback.

How can Reading and Writing Across the Curriculum program benefit the school's involvement with the coming of the Common Core State Standards?	Any program or strategy that promotes literacy will align with the Common Core State Standards. Professional learning communities focus on all students and sharing responsibility for reading and writing.	I look to other areas of the country to incorporate a uniform literacy focus for our school.	Common Core will increase the goals the teachers have been working towards in their curriculum to increase student's reading and writing skills.
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Data Part 4

For the fourth type of data, the researcher designed a portion of the survey to collect demographic data from the sample population, which included whether or not the respondent was a core teacher or a non-core teacher. The results of this data showed that 50 core teachers responded while 32 non-core teachers responded to the researcher's survey.

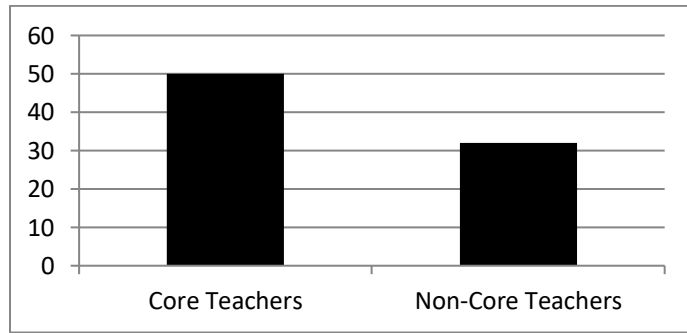


Figure 1. Category of Teacher Respondents

Conclusion

Results of data analysis determined the null hypotheses were rejected based on the results of the z-tests for difference in proportion, and data supported all four alternate hypotheses: H₁: Middle school teachers assigned to core academic classrooms will perceive effects of the Reading and Writing Across the Curriculum program differently

than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey; H₂: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them to increase student literacy as part of the requirements associated with the Common Core State Standards, as measured by the results of a teacher survey (core agreement compared to core disagreement; non-core agreement compared to non-core disagreement); H₃: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards, as measured by satisfaction results on a teacher survey (core agreement compared to core disagreement; non-core agreement compared to non-core disagreement); H₄: Middle school teachers assigned to core academic classrooms will perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey.

In Chapter Five the implications of the results found in each of the data analyzed as part of the study are discussed. General patterns that arose from the data are summarized and recommendations for how schools can prepare for the curriculum requirements associated with the Common Core State Standards and benefit from additional research studies on literacy programs are provided.

Chapter 5: Discussion and Reflection

The purpose of this study was to determine the perceptions of classroom teachers and building principals as to the effectiveness of required Reading and Writing Across the Curriculum in both core and non-core subject areas. Both core and non-core classes within the study school district were required to incorporate reading and writing strategies in their content areas. The researcher wanted to study the process to provide recommendations on the preparation of administrators and teachers to allow successful work on implementation of Common Core State Standards for curriculum development.

The researcher focused on two research questions in this study: How do middle school teachers and administrators perceive the effects of the Reading and Writing Across the Curriculum program on student reading comprehension in core and non-core classes, and how do middle school teachers and principals perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards?

The researcher used teachers' surveys and teachers' written responses to follow-up survey questions, along with principals' interviews. The teachers who responded completed the surveys in the spring of the 2012-2013 school year. At the end of the semester the researcher interviewed the principals. Analysis in this mixed-methods study used a combination of different types of data to reach conclusions to the research questions.

Analysis of Results

This study used both qualitative, teacher survey, and quantitative, teachers' and principals' responses to a Likert-scale instrument. With data gathered from this study,

the researcher attempted to answer two main questions. First the researcher wanted to determine if teachers in three suburban middle schools assigned to core classrooms would perceive effects of the Reading and Writing Across the Curriculum program differently than those assigned to non-core classrooms. Second, the researcher wanted to find out if teachers and principals in one district's three suburban middle schools perceived that the Reading and Writing Across the Curriculum program was preparing them for curriculum requirements associated with the Common Core State Standards.

The researcher analyzed responses from the teachers' Likert-scale survey related to the topics of effectiveness of a required Reading and Writing Across the Curriculum program, perceptions of the impact on student literacy, content curriculum, and preparation for use of the CCSS. Topics covered by the survey were: inclusions of reading and writing skills in core class lessons; inclusion of reading and writing skills in non-core class lessons; delivery of training and support in initiation and implementation of reading and writing skills into curricula; impact on student literacy, impact on school curriculum, administrator support of basic literacy skills; and impact on use of Common Core State Standards. A z -test for difference in proportion to the percentage of agreement was applied to resulting data. The measure of agreement was represented by the proportion of 'Agree' and 'Strongly Agree' combined.

The first hypothesis was: H_1 : Middle school teachers assigned to core academic classrooms will perceive effects of the Reading and Writing Across the Curriculum program differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey. In comparing proportion of agreement with survey prompts for core teachers to proportion of agreement for non-core teachers, the

researcher rejected the null hypothesis and data supported H_1 . Therefore, core teachers did perceive effects of the Reading and Writing Across the Curriculum program differently than those assigned to non-core classrooms. The non-core teachers' agreement with the survey prompts was significantly higher than core teachers' agreement. Results were significant on all topics except administrator support of basic literacy skills and impact on use of Common Core State Standards, in which non-core teacher agreement was observably higher than core teacher agreement.

The second hypothesis was: H_2 : Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them to increase student literacy as part of the requirements associated with the Common Core State Standards, as measured by the results of a teacher survey (core agreement compared to core disagreement; non-core agreement to non-core disagreement). The researcher analyzed the responses from the teachers' survey through application of a z -test for difference in proportion to the percentage of agreement compared to percentage of disagreement. The measure of agreement was represented by the proportion of 'Strongly Agree' and 'Agree' combined. The measure of disagreement was represented by the proportion of 'Strongly Disagree' and 'Disagree' combined.

In comparing proportion of agreement with survey prompts for core teachers to proportion of disagreement, the researcher rejected the null hypothesis and data supported H_2 . Therefore, core teachers did agree that the Reading and Writing Across the Curriculum program prepared them to contribute to an increase in student literacy. In addition, the non-core teachers did agree that the program was preparing them to contribute to the increase in student literacy, as well. As with Hypothesis # 1, results

were significant on all topics except perception of administrator support of literacy skills and impact on use of Common Core State Standards. However, data these two topics supported observable agreement, when compared to disagreement with survey prompts, for both core teachers and non-core teachers.

The third hypothesis was: H₃: Middle school teachers will verify that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards, as measured by satisfaction results on a teacher survey (core agreement compared to core disagreement; non-core agreement to non-core disagreement). Repeating the process followed for H₂ the researcher analyzed the responses from the teachers' survey through application of a z-test for difference in proportion to the percentage of agreement compared to percentage of disagreement. The measure of agreement was represented by the proportion of 'Strongly Agree' and 'Agree' combined. The measure of disagreement was represented by the proportion of 'Strongly Disagree' and 'Disagree' combined. For this hypothesis, survey prompts 2, 3, 4, 5, and 7 were examined.

In comparing proportion of agreement with survey prompts for core teachers to proportion of disagreement, the researcher rejected the null hypothesis and data supported H₃. Therefore, core teachers did agree that the Reading and Writing Across the Curriculum program prepared them to contribute to support of curriculum requirements. In addition, the non-core teachers did agree that the program was preparing them to support curriculum requirements, as well. Results were significant on all topics except perception of impact on use of Common Core State Standards. However, data for this

topic supported observable agreement, when compared to disagreement with survey prompts, for both core teachers and non-core teachers.

The fourth hypothesis was: H₄: Middle school teachers assigned to core academic classrooms will not perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards differently than those assigned to non-core academic classrooms, as measured by satisfaction results on a teacher survey. A *z*-test for difference in proportion was applied to survey responses of core teachers and non-core teachers. Survey prompts 3, 4, 5, and 7 were examined for this hypothesis analysis.

In comparing proportion of agreement with survey prompts for core teachers to proportion of agreement for non-core teachers, the researcher rejected the null hypothesis and data supported H₄. Therefore, with regard to preparation for implementation of the Common Core State Standards, core teachers did perceive effects of the Reading and Writing Across the Curriculum program differently than those assigned to non-core classrooms. The non-core teachers' agreement with the survey prompts was significantly higher than core teachers' agreement. Results were significant for perception of the inclusion of literacy to support curriculum; however results were observably different for support of and preparation for Common Core State Standards. For all topics the non-core teacher agreement with survey prompts was higher than the core teacher agreement with prompts.

For the qualitative portion of the study the teachers' responses to the second part of each survey question were coded. The results of the answers given by the respondents in the follow-up survey questions enabled the researcher to answer the research question

1: How do middle school teachers and administrators perceive the effects of the Reading and Writing Across the Curriculum program on student reading comprehension in core and non-core classes?

Based on the responses, the researcher concluded the following: In survey question 1, the majority of respondents, core teachers, felt comfortable and could name examples of including reading and writing skills in their core classes. A small percentage of core teachers responded that most teachers were not comfortable with reading/writing instruction in their content area. In question 2 of the survey, non-core teachers, 13% of respondents, were unsure of which literacy measures were used in non-core classes, while others used only formative and summative assessments. In survey question 3, teachers indicated collaborating with other teachers was the most helpful training in literacy, and 9% felt they were given very little training and support from the Midwest suburban school district. In survey question 4, 33% of the teachers responded they devoted less than 50% of class time teaching literacy lessons. The researcher concluded that teachers were divided on perceived use of the literacy strategy of Reading and Writing Across the Curriculum in their classrooms.

In answering research question 2: How do middle school teachers and administrators perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards? In question 6 of the follow-up survey, 45% of teachers agreed that reading and writing related to the Common Core State Standards. In survey question 7, the majority of respondents concluded that the principal or assistant principal supported the inclusion of basic literacy skills into the curriculum. Therefore the researcher concluded

the answer to research question 2 was not easily generalizable, since the support of a relationship between the two variables was weak.

In part 3, the researcher analyzed the principals' responses, and wanted to know the similarities that existed among the principals regarding literacy training and support. In answering research question 1, how do middle school teachers and administrators perceive the effects of the Reading and Writing Across the Curriculum program on student reading comprehension in core and non-core classes, the researcher made the following observations based on the principal interviews. In questions 1 and 2 of the interview, the principals agreed that all teachers included reading and writing strategies in their core and non-core curriculums. For interview question 3, principals responded that there was significant literacy support in their district for all teachers; and in answering interview question 5, principals agreed they supported the inclusion of basic literacy skills in the curriculum of both core and non-core classes by including in the buildings' School Improvement Plans goals to increase reading and writing strategies.

In answering research question 2, how do middle school teachers and administrators perceive that the Reading and Writing Across the Curriculum program is preparing them for curriculum requirements associated with the Common Core State Standards, the principals responded with the following: Based on responses, two out of three principals agreed that the Reading and Writing Across the Curriculum program benefited the school's involvement with the coming of the Common Core State Standards. One principal was looking to other areas of the country for strategies to incorporate a uniform literacy focus for his school.

On part 4, the researcher collected demographic information about the sample population using responses to demographic follow-up questions in the teachers' survey. Statistics showed that more core teachers responded to the survey than non-core teachers.

Personal Reflections

The results from part 1 of the teacher survey led the researcher to two issues that could be addressed in future studies. First, it would be valuable to survey the same teachers a year after the Common Core State Standards are put into place. During the school year 2013-2014, the standards were introduced to all core and non-core teachers. The researcher could ask the questions on the same topics as this study, the following school year. For deeper understanding, it would be helpful for the teachers to be more familiar with the CCSS and the relation to literacy before answering the survey questions. In the three Midwest suburban middle schools which provided the focus of this study, the district conducted a seminar for all middle school teachers, which was designed to provide an overview of the CCSS. Participants were asked to share questions or comments they had regarding CCSS. Results from questions provided on participant exit cards revealed some teachers responded with additional questions or comments asking for more information about CCSS. The researcher categorized some of the questions and comments into the categories of core teachers and non-core teachers in the following table.

Table 34 summarizes comments from both core and non-core teachers with regard to Common Core State Standards.

Table 34.

Comments from Teachers Regarding Common Core State Standards

Core Teachers	Non-Core Teachers
Will all students in every state have the same Common Core State Standards?	As an elective teacher, I am very interested in how to apply the Common Core State Standards to my classroom curriculum.
I am just anxious to know what it will look like exactly for my grade levels and content. I worry about kids having to "jump" levels that have not been "trained" that way. From my understanding, there will be a couple of groups like that.	How will our students be able to practice on-line assessments? Does the common core have a multiple choice component as well as the performance events? If so, do we have any models available to see those types of questions?
Will core areas receive specific information on the changes to their areas? How are electives affected by the move?	This "discovery" or student led style of investigation is exactly what elective teachers do. I also loved Marzano for the same reason. This all fits so naturally for art teachers, music teachers, drama...etc. Will the district ever openly verbalize this fact?

The second issue that could be addressed is to compare and contrast answers to the same survey topics with a set of middle schools in a different district. The CCSS are going to be used in many states; therefore it would be interesting to determine the relationship between the educators' perceptions of the effectiveness of required Reading and Writing Across the Curriculum strategies in improving student reading comprehension and preparing teachers for a curriculum based on CCSS. This study could lead to more studies about whether it is possible to have the CCSS communicate what is expected of students at each grade level throughout the country.

Limitations of This Study

The findings of this study may be subject to the following limitations, which can affect its validity. The study is restricted to specific grade levels and three middle

schools in one district and, therefore, the population is limited. The sample is purposive and convenient. The administrators and teaching staff within each of the three schools involved in the study may not have shared the same philosophy and teaching styles concerning Reading and Writing Across the Curriculum in both core and non-core subject areas. Professional development training activities concerning Reading and Writing Across the Curriculum may have differed from school to school. The study did not account for the individual reading and writing skills of students which could have influenced the amount of progress in reading and writing perceived by teachers in the survey. Teacher experience with the independent variable, Reading and Writing Across the Curriculum strategies, may have varied; therefore, the period of time each student was exposed to the treatment may have varied, along with the existence of competing initiatives in the study schools. The study schools implemented a Positive Behavior Interventions System (PBIS) during the 2010-2011 and 2011-2012 school years. Data recently collected by the Missouri Department of Elementary and Secondary Education (2011a) indicated a possible correlation between PBIS implementation and student achievement. This may have affected the anticipated results on student achievement from implementation of Reading and Writing Across the Curriculum strategies.

Recommendations

It is clear to this researcher that further study is needed to understand how initiation of Common Core State Standards can be assisted by an existing program of Reading and Writing Across the Curriculum to improve students' reading and writing proficiency.

Strategies used in the study will help gather information to inform the preparation of administrators and teachers who adopt the CCSS. It is clear to the researcher that further study is needed to understand how initiation of CCSS can be assisted by an existing program of Reading and Writing Across the Curriculum to improve students' reading and writing proficiency.

More research is needed on how teams of teachers can develop and implement a coherent school-wide program for teaching communication skills across the curriculum (Bintz, 2011). This type and context of literacy support has not often been studied. Both core and non-core classes make a difference, but further research could show one curriculum does a better job than the other or if all curricula, whether core or non-core, have equal contribution to a middle school student's reading and writing proficiency. In conclusion, it is clear to the researcher that further study is needed to understand how initiation of Common Core State Standards can be assisted by an existing program of Reading and Writing Across the Curriculum to improve students' reading and writing proficiency.

We are beginning to understand that our students need more ways of looking at their worlds and more ways of showing us what they see and understand than mere words. Engagement in literacy allows students vital and varied ways of making meaning. How we define or describe recipes for success makes students value all of these multiple ways of knowing. They are as enriching to the Communication Arts' experiences of our students as well as to the learning experiences of our pupils in all classes, toward academic standards. According to researcher Bintz (2011), more research is needed on how teams of

teachers can develop and implement a coherent school-wide program for teaching reading and writing skills across curriculums.

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Appendix A

Consent Form for Principals

As a principal I consent for *Paula Wuebbels* to allow the administrators and teachers in my building to voluntarily participate as a subject in research entitled: *Educators Perceptions of the Effectiveness of Required Reading and Writing Across the Curriculum Strategies in Improving Student Reading Comprehension and Preparing Teachers for Common Core Curriculum in Three Suburban Middle Schools.*

I understand the known risks are: none.

I understand also that it is not possible to identify all potential risks in an experimental procedure, and I believe the reasonable safeguards have been taken to minimize both the known and potentially unknown risks.

Signed: _____ Principal

Name of School: _____

Date: _____

To be retained by the principal investigator

Appendix B

Chart for written responses from teachers survey comparing core to non-core teacher responses

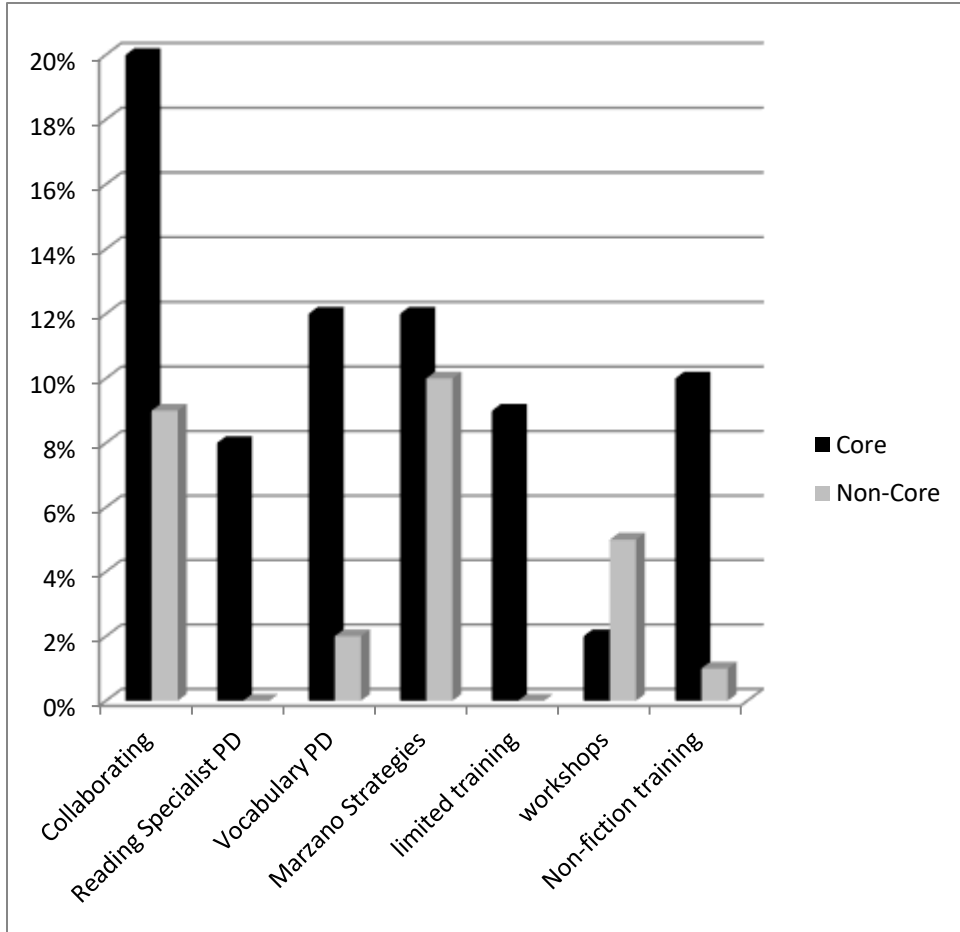


Figure B1. What was the most helpful training and support you received in using basic literacy skills within your curriculum?

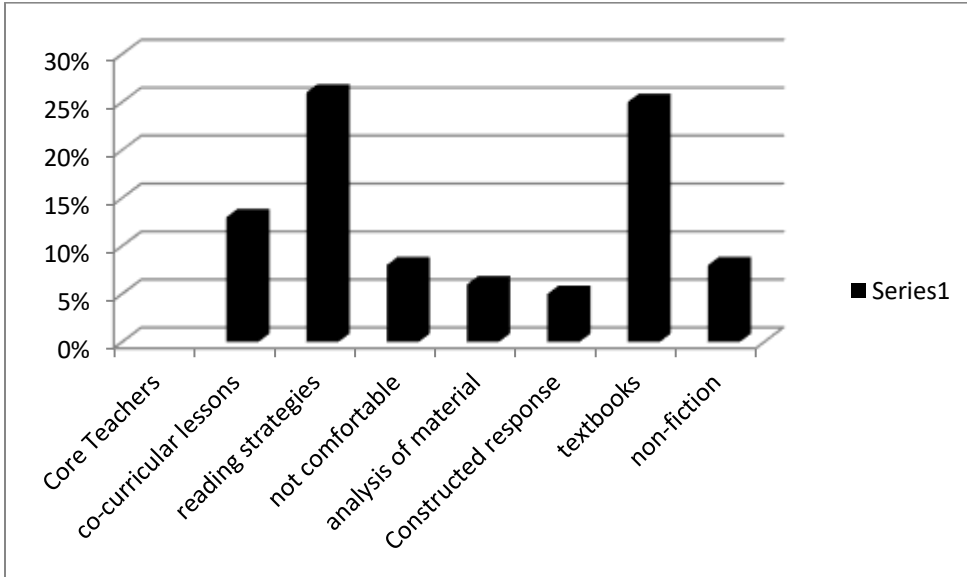


Figure B2. Can you provide an example of how teachers include reading and writing skills in their core classes?

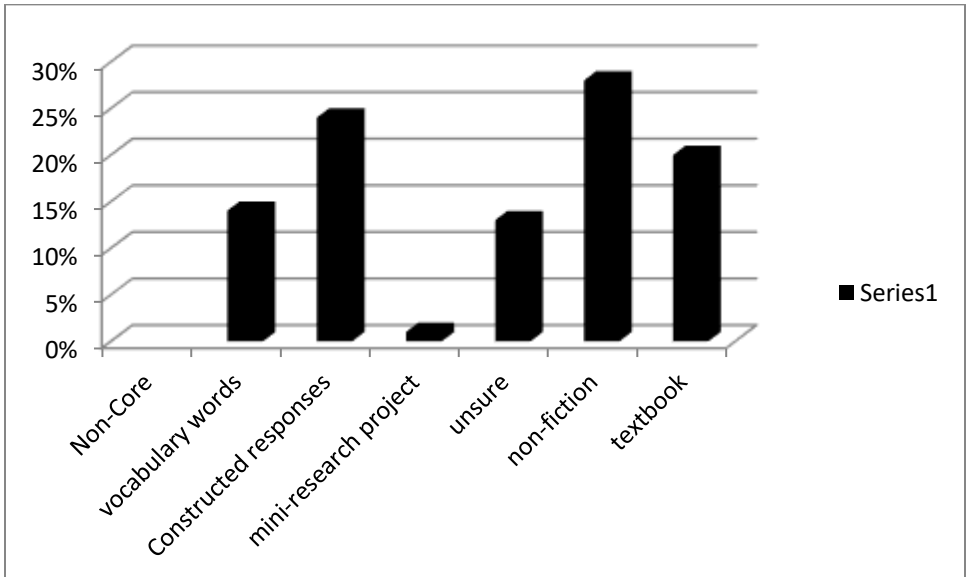


Figure B2. Can you provide an example of how teachers include reading and writing skills in their core classes?

Vitae

Paula J. Wuebbels
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 St. Charles, MO 63303
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Academic Degrees

Ed.D	Lindenwood University Doctorate in Instructional Leadership	2014
MA	Lindenwood University Master of Arts in Education	2008
BA	Lindenwood University Business Administration/Education	2005

Professional Experience Education

Francis Howell School District	Technology and Information Literacy Teacher Family and Consumer Science Teacher Saeger Middle School	2008-Present
City of St Charles School District	Substitute Teacher	2004-2008
Ladue Horton Watkins High School	Business Education Teacher (summer school)	2006

Professional Experience Business

Blattel and Associates	Office Manager	2006-2008
Decisions and Advanced Technology	Staff Accountant	2000-2003
McBride and Sons Management Company	Contract Administrator	2002-2003
Quality Medical Publishing	Staff Accountant/Human Resource Coordinator	1989-1998

Faculty, Administration and Supervisory Responsibilities

Human Resources Strategic Committee, Middle School Representative
 Middle School PLC, curriculum review for Technology and Information Literacy and
 Family and Consumer Science

Professional and Academic Association Memberships

Missouri Association for Career and Technical Education
Missouri Educators of Family and Consumer Science
National Association Teachers of Family and Consumer Science

Certifications

Missouri Public School Business Education 9-12
Missouri Public School Family and Consumer Science 0-12
Missouri Public School Marketing 9-12

QUALIFICATIONS

- Encourages learning environments that meet the physical, emotional, intellectual, social and creative needs of students.
- Works with students on an individual basis, in order for students to receive appropriate instructions.
- Successfully works with students in developing skills at all levels of achievement.
- Utilize resourceful skills to design and implement well-received lesson plans that use cross-curriculum activities.
- Introduce hands on tools (e.g. computer technology, outside activities) to improve classroom curiosity and retention.
- Evaluate student abilities and assess performance.
- Member of Alpha Sigma Tau, Lindenwood University academic honorary society.