

Increase WASL Reading Scores by  
Adopting Harcourt-Brace Reading Curriculum

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A Special Project  
Presented to  
Dr. Jack McPherson  
Heritage University

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In Partial Fulfillment  
of the Requirement for the Degree of  
Masters of Education

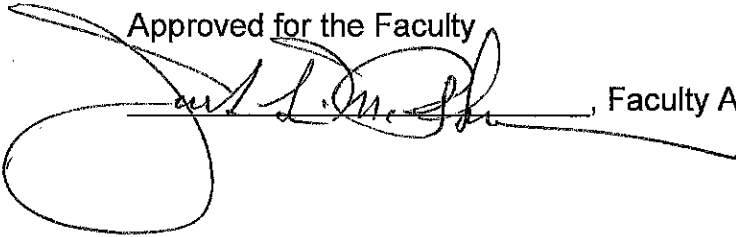
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Janet Parmentier  
Spring 2006

FACULTY APPROVAL

Increase WASL Reading Scores by  
Adopting Harcourt-Brace Reading Curriculum

Approved for the Faculty

 Faculty Advisor

## ABSTRACT

The purpose of this experimental research project was to determine whether integration of the Harcourt-Brace Reading Series into the curriculum improved WASL reading scores of participating 4<sup>th</sup> grade students who received instruction from the series over a period of three years. To accomplish this purpose, a review of selected literature was conducted, related baseline data were obtained and analyzed, and conclusions and recommendations were formulated.

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## TABLE OF CONTENTS

	Page
FACULTY APPROVAL.....	ii
ABSTRACT .....	iii
PERMISSION TO STORE.....	iv
TABLE OF CONTENTS .....	v
LIST OF TABLE.....	viii
LIST OF FIGURES .....	ix
CHAPTER 1 .....	1
Introduction.....	1
Background for the Project.....	1
Statement of the Problem .....	3
Purpose of the Project.....	4
Delimitations .....	5
Assumptions .....	5
Hypothesis .....	6
Null Hypothesis .....	6
Significance of the Project.....	6
Procedure .....	7
Definition of Terms.....	7
Acronyms.....	8

	Page
CHAPTER 2.....	9
Review of Selected Literature .....	9
Introduction .....	9
High-Stakes Testing.....	9
No Child Left Behind Act.....	12
Professional Development .....	17
Summary.....	20
CHAPTER 3.....	21
Methodology and Treatment of Data .....	20
Introduction .....	20
Methodology .....	20
Participants .....	22
Instruments .....	22
Design.....	23
Procedure .....	23
Treatment of Data.....	24
Summary.....	25
CHAPTER 4.....	26
Analysis of the Data .....	26
Introduction .....	26
Description of the Environment.....	26
Hypothesis .....	26

	Page
Null Hypothesis .....	27
Findings .....	29
Summary.....	29
CHAPTER 5.....	30
Summary, Conclusions and Recommendations .....	30
Summary.....	30
Conclusions .....	30
Recommendations .....	31
REFERENCES.....	33
APPENDIXES	
A WASL Scores for Experimental Group X.....	35-36
B WASL Scores for Control Group Y.....	37-38

## LIST OF TABLES

	Page
Table 1, t-Test for Independent Samples .....	28
Table 2, Distribution of $t$ With 108 Degrees of Freedom.....	29



## CHAPTER 1

### Introduction

#### Background for the Project

Implementation of state level assessment tests mandated that teachers have the tools which ensured students meet minimum standards. Once, minimum standards were vague, but not any longer. The expectations for student learning were well defined, set high, and came attached to graduation requirements at the high school level.

There have been a variety of tests taken in schools throughout the United States. These included the norm-referenced Iowa Tests of Basic Skills (ITBS) at grades three and six, and the Iowa Test of Educational Development (ITED) at grade nine. However, in the State of Washington, the test that has concerned most was the Washington Assessment of Student Learning (WASL) because of the consequences attached to those who do not pass, and the need for schools to show Adequate Yearly Progress (AYP).

Annually, information about student achievement had been collected by the Washington State Assessment Program. The two assessments used to measure student performance were the ITBS and ITED. Third and sixth-grade students were tested and skills were measured to show demonstrated, foundational skills in reading, mathematics, and language arts. Scores were reported as percentile points, which were compared students to other students nationwide. Reading, quantitative reasoning, and expression have been

measured by the ITBS. Demonstrated skills were measured through a series of multiple-choice questions in each content area.

The graduating class of 2008 is destined to the most challenging test of Washington's high stakes testing practice. High school diplomas will be administered to those who successfully pass the reading, writing, and math portions of the WASL. Opponents of the WASL as a high-stakes test to secure a high school diploma contended the WASL alone was not a fair measurement of twelve years of education. Their belief was that it is an unsound educational practice and they have spoken out against the state's mandate. Even as Washington state schools have continually improved, the state, statistics revealed that Washington has attached the highest level of college graduate imports in the country. When restrictions are placed on high school diplomas based on one testing device, fewer students will be accepted into colleges and universities which, as opponents have voiced, is adding insult to injury.

Washington Assessments of Student Learning demands were paired with the nations' No Child Left Behind Act (NCLBA) which was signed into law on January 8, 2002. No Child Left Behind (NCLB) was designed to change the culture of America's schools by closing the achievement gap, offering more flexibility, giving parents more options, and teaching students based on what works (Ed.gov). With the signing of the act, ensuring students are reading by third grade was not only a demand placed on educators, it was the law. The added responsibility, as implemented by NCLB, with consequences attached to

student performance, educators have been forced to explore strategies which improve student reading and assessments of reading performance.

It was not enough to have simply added a new reading series to effect significant change in reading scores. Educators must buy into the change, and support the program implemented. One effective tool in encouraging support among educators is through professional development. Publishers offer training to educators when reading series are purchased. It was crucial for administrators to acknowledge the need for buy in among educators, and purchase the training along with the reading series. Frequently, tools and strategies are offered to educators without proper training. The oversight has led to program failures and, as a result, affected the anticipated success of the reading program. It is also true that learning is a lifelong process. As new and better ways of instruction were being developed, and assessments of and for learning were improved, educators must be exposed to and taught how to best put these into action. Many venues have been made available to educators for professional development. From state and district provided workshops and conferences to the many, privately run educational organizations, everything from new concepts in instruction to brain development and its effect on education are offered to educators. These opportunities must be provided to teachers to ensure educators are getting the best information for instructional purposes.

### Statement of the Problem

High-stakes testing continued to mandate school performance and student accountability, it was necessary for administrators and instructors to explore

different stratagems to make certain students are successful in meeting required set minimum standards. Higher level thinking was required for students to pass the WASL tests in the State of Washington. Students' reading comprehension has been measured by their ability to draw conclusions, make inferences, and make generalizations among other high level thinking skills. The WASL test questions are ranked for scoring based on the Essential Academic Learning Requirements (EALRs) applied to each question by a panel of educators assembled by the state. Student responses to selected readings have been scored based on the students' written responses. The problem had become that, without a written curriculum focused on WASL tests preparation and meeting EALRs in reading, teachers had modified their reading curriculum in hopes of meeting WASL goals. Teachers in grades two through six used a blend of dated reading series and teacher created reading instructional tools. This study was conducted to determine whether student performance on reading WASL would improve by adopting a new reading series for students in grades two through six. The adopted series was selected based on its' alignment with the EALRs in the State of Washington, which are used to score the results of student performance.

Phrased as a question, the problem which represented the focus of the study may be stated as follows: Did the implementation of the Harcourt-Brace Reading Series improve WASL reading scores in participating 4<sup>th</sup> grade student who received instruction from the series?

### Purpose of the Project

The purpose of this experimental research project was to determine whether integration of the Harcourt-Brace Reading Series into the curriculum improved WASL reading scores of participating 4<sup>th</sup> grade students who received instruction from the series over a period of three years. To accomplish this purpose, a review of selected literature was conducted, related baseline data were obtained and analyzed, and conclusions and recommendations were formulated.

### Delimitations

The present study was undertaken at Christ the King Elementary school in Richland, Washington. The majority of students were from moderate to moderate-high level socio-economic backgrounds as defined by the Institute of Assets and Social Policy. The students were primarily white, Catholic students from two parent families. Two groups of students that participated in the study Included: Fourth graders who took the WASL reading test in April, 2000 and fourth graders who took the WASL reading test in April, 2005. The fourth grade class of 2000 consisted of 55 students. The 2005 class of fourth grade students also had 55 students tested.

### Assumptions

The following assumptions were made by the researcher (Janet M. Parmentier) of this study on adopting an EALRs aligned reading series: Students used in concluding the results of this study were of equal ability, had shared motivational plans, and were consistent with regard to background.

### Hypothesis

Students who used the Harcourt-Brace Collections reading series consecutively from grades two through four would score higher on the WASL reading test than student who did not receive instruction with the adopted series.

### Null Hypothesis

Students who used the Harcourt-Brace Collections reading series consecutively from grades two through four would not score higher on the WASL reading test than students who did not receive instruction with the adopted series. Significance was determined at the  $p \geq .05$ ,  $.01$ , and  $.001$  levels.

### Significance of the Project

Because of the requirements placed on schools, educators, and students to perform at high levels as defined by the State of Washington, the researcher believed it would be imperative to study the results of implementing a new reading series which was written to help students perform better on WASL reading test. The adoption of the Harcourt-Brace Collections reading series was costly, but administrators believed it was worth the expense based on the publishers' claim of Washington EALR alignment. The success or failure of reading series adoptions cannot be gauged unless and until an experimental study is conducted, and significance was determined. Administrators and educators were interested in the results because of the demands placed on them to demonstrate student performance and AYP in the reading content area. If the study showed significant improvement, educators would focus their attention on presenting the reading series was described by the publisher to ensure student

success in reading. If the hypothesis of the research is not supported, new strategies would need to be examined to help improve reading scores. There was a necessity to determine whether the adoption of the Harcourt-Brace Collections reading series was a sound decision.

### Procedure

The researcher identified the most recent fourth grade class in the school where the adopted the Harcourt-Brace Collections reading series was implemented which did not use the series. Next, the researcher used the most recent fourth grade class that used the adopted series consecutively for three years. With the permission of the school administrator, the researcher accessed the WASL results of both fourth grade classes identified by the researcher. Data were compiled, analyzed, and measured by the researcher. Scores were then compared to determine whether the adopted reading series had a significant impact on student reading skills. A *t*-test for independent samples was utilized for data and analysis to determine significance between the control and experimental groups.

### Definition of Terms

Significant terms used in the context of the present study have been defined as follows:

high-stakes testing. The assessment of individual performance and the use of the results to make decisions about promotion, graduation, instructor effectiveness, program performance, and the approval of educational programs and institutions.

t-test for Independent Samples A parametric test of significance used to determine whether there is a significant difference between the means of two independent samples at a selected probability level.

Experimental Research Research in which at least one independent variable is manipulated, other relevant variables are controlled, and the effect on one or more dependent variables is observed.

Convenience Sampling The process of using as the sample whoever happens to be available, e.g., volunteers. Also referred to as *accidental* sampling and *haphazard* sampling.

#### Acronyms

AYP – Adequate Yearly Progress

EALRs – Essential Academic Learning Requirements for Students

ITBS – Iowa Tests of Basic Skills

ITED – Iowa Test of Educational Development

NCLB – No Child Left Behind

NCLBA – No Child Left Behind Act

WASL – Washington Assessment of Student Learning



## CHAPTER 2

### Review of Selected Literature

#### Introduction

The Review of selected literature presented in Chapter has been organized to address:

- High-Stakes Testing
- No Child Left Behind Act
- Professional Development
- Summary

Research current, primarily within the past five (5) years, was identified through an Educational Resources Information Center (ERIC) computer search, and by means of an internet search. A hand-search of additional selected sources was also conducted.

#### High-Stakes Testing

Peters (2005) observed how in recent years, the demands placed on schools to perform on standardized tests have accelerated. Out of the apparent need to improve student learning came the inception of high-stakes testing such as Washington's WASL test. Said Peters: The high-stakes exams in Washington and Idaho grew out of ideas about educational reform planted in the political landscape during the Reagan administration. Partly in response to frustration with public schools that gave social promotions to failing students, some people came to feel a sense of urgency about school reform by the end of the 1980s.

Regardless of the multi-million dollar price tag and the toll taken on administrators, educators, and students, many state reformers concluded that testing was a significant and positive tool in which educational improvements can be based. According to Williams (n.d.):

The WASL is criterion-referenced, and its content is based on what the students are expected to learn. The reading portion of the WASL is taken in fourth, seventh, and tenth grades. The tests scores are not compared to other students' but rather, scored against predetermined criteria. In theory, if students have been instructed using the Washington state benchmarks, that is, the Essential Academic Learning Requirements (EALRs) they should all pass the WASL (p. 4).

The American Psychological Association (APA) (2005), described how measuring what and how well students learn is an important building block in the process of strengthening and improving our nation's schools. The authority contended that tests, along with student grades and teacher evaluations, can provide critical measures of students' skills, knowledge, and abilities. When used properly, tests have proven to be a sound way to measure student performance. Another advantage of high-stakes testing was the value in diagnosed gaps in learning.

Carpenter (2001) explained how President Bush's recent No Child Left Behind mandate has placed even greater reliance on education tests for high stakes decisions. Lawmakers made sure that high-stakes testing were deployed

properly and administered fairly and appropriately. Said Carpenter, if states use scientifically valid tools in designing and implementing trustworthy tests...it is possible to systematically improve the quality of education in this country.

Statewide testing has shown gains in student learning. Recent WASL scores indicated strong gains in nearly every grade and subject. Reading scores showed the most improvement. Fourth graders' scores rose to nearly 80 percent passing, and seventh grader's scores increased from 61 percent to 69 percent last year (Shaw, 2005).

Consequently, the use of high-stakes testing has not been accepted by all as a gauge by which to measure student achievement or to drive educational reform. In a (2005) article, Bergeson addressed skeptics as follows:

There's so much controversy about the WASL that people have forgotten why it exists – to provide an objective measure of how well students are learning foundational skills that we know are critical to succeeding in life, and to hold schools and districts accountable for teaching those skills. If students don't pass the reading or math portions of the test, for example, it means they can't understand what they read or do basic math calculations . . . Students who want to fully prepare to achieve their career goals must do far more than pass the WASL (p. 2).

Reaction has been widespread to the Washington State requirement that students must pass the WASL to graduate from any public high school, beginning in 2008. Opponents of the high-stakes Washington test noted, it is not

the measurement of basic skill they oppose, but the lack of fairness in attaching the results of a standardized test to student graduation requirements. The most recent scores, from spring 2005, indicate 58 percent of students did not pass the WASL (Washington, 2005). Carpenter (2001) also discussed how psychologists and educators have both agreed and disagreed as to the fairness in, and accuracy of large-scale educational testing. This authority suggested that states ensure that high-stakes decisions are based on on the results of only one test.

Challengers of high-stakes testing in the State of Washington have voiced their opposition to graduation requirements which are based on a pass/fail. Although gains have been made in testing scores across the state, they were not nearly enough to guarantee students will meet graduation requirements in 2008.

As stated by the APA (2005):

Because the stakes are so high for so many students, additional research should begin immediately to learn more about the intended and unintended consequences of testing in educational decision making. If tests are going to be used to determine which students will pass. . . it is imperative that we understand how best to measure student learning and how the use of high-stakes testing will affect student drop-out rates, graduation rates, course contend, levels of student anxiety, and teaching practices (p. 2).

### No Child Left Behind Act

In a commentary by Martin (2004), the No Child Left Behind Act, signed into law on January 8, 2002 was the result of President George W. Bush's

education reform policies. The NCLB Act was designed to ensure all students across the country had equal opportunity to learn and that the responsibility fall directly on schools and educators. Many of the social equity issues behind NCLB are very important to consider.

According to a report submitted by the Washington Office of Superintendent of Public Instruction (OSPI) (2005):

Between 2002 and 2004: Fourth-grade reading proficiency increased by nine percentage points; fourth-grade mathematics proficiency increased by eight percentage points; the black-white achievement gap in fourth-grade reading narrowed by four percentage points; and, the Hispanic-white achievement gap in fourth grade reading narrowed by three percentage points.

([www.k12.wa.us/assessment](http://www.k12.wa.us/assessment))

Ed.gov (2005) addressed the challenge regarding America's education system's lack of accountability with regard to students having been locked into underachieving schools and left behind. The authority explained how No Child Left Behind was designed to test every child in grades three through eight and generate a report card for every school. The upside of the report card is for schools which succeeded, however, it also spotlighted the failure of others. If a school takes a challenging population and achieves great results, testing will show that. If a school is allowing certain groups to fall behind year after year, testing will expose that, too. ([www.ed.gov/print/nclb/accountability](http://www.ed.gov/print/nclb/accountability))

The Northwest Evaluation Association (2005), researchers released a study which indicated student achievement has improved since the NCLB Act was passed. However the results of the study indicated: If change in achievement of the magnitude seen so far continues, it won't bring schools close to the requirement of 100 percent proficiency by 2014. ([www.nwea.org/research/nclbstudy](http://www.nwea.org/research/nclbstudy))

The NCLBA (2002) mandated that all students be proficient in reading, writing, and math by 2014. Schools must also meet Adequate Yearly Progress (AYP) in order to escape sanction being placed on them. According to OSPI (2005), of the 2060 schools in Washington large enough to be evaluated, 1656 met or exceeded the 2005 achievement targets in reading and mathematics. The accomplished schools earned the distinction of making AYP ([www.k12.wa.us/assessment](http://www.k12.wa.us/assessment)).

Also noted were sanctions placed on schools and districts include being publicly identified as needing improvement. For each subsequent year they miss making AYP, the schools or districts may move one step further into the improvement process, and if they receive Title I dollars, face additional consequence ([www.k12.wa.us/assessment](http://www.k12.wa.us/assessment))

Other drawbacks to schools failing to meet AYP, as documented in the Tri-City Herald, included the option given parents to transfer their children out of those schools identified as in need of improvement. The list doesn't end there, either; failing schools could face the firing of teachers and administrators.

Members of the Council for Exceptional Children (CEC 2006) were

outraged by the NCLBA. CEC members disagreed that scores for students, including students with disabilities, low-income students, racial minorities, and those learning English, should also be examined and expected to improve. The CEC believed there should be exceptions made for students who fall under disadvantaged categories and kept from fall under federal sanctions. No Child Left Behind's testing mandates have unleashed a maelstrom of passion, and nowhere was it more evident than in special education. While some educators were prideful of students with disabilities who scored proficient on assessments, others found it inappropriate to test students whose skill level ensured failure. Testing students with disabilities should be done in a manner which would test progress based on skill level and sanctions would be evaded by the associated school.

School sanctions were not the only complaints voiced about NCLB. According to the CEC:

Educators accuse NCLB of being an unfunded mandate, of giving federal law priority over state law, and of imposing redundant and costly testing on states. Some schools have actually considered defying the law by foregoing federal dollars to escape NCLB's stipulations. Lawsuits have also been filed against the Department of Education over NCLB. Districts believed the NCLB expectations were unattainable and therefore schools should not be penalized when AYP hasn't been met" (p. 2).

The Council for Exceptional Students also stated: The Department of Education, in response to the growing movement against NCLB, have pledged a more common sense approach to testing, offering a two percent flexibility option to states which allows them to give alternate tests to an additional two percent of their student population. Only states that show they are already working to improve student achievement under NCLB are eligible for this option.

Another significant component of NCLB addressed in the NCLBA included the visual and performing arts. Loschert (2004) said, "No Child Left Behind actually includes the arts in its definition of core academic subjects, but the law doesn't mandate testing in those areas, so unlike reading and math, they don't count toward a school's performance outcomes." (p. 4) Loschert alluded to the irony involved with the Department of Education's decision not to mandate testing in the arts. Said Loschert: "The students who NCLB is most aimed at helping – those who are low-income, minority, and academically vulnerable – are the ones who consistently show stand the most to gain from regular arts instruction." (p. 6)

As observed by Loschert, when subjects were not included in NCLB as a performance outcome subject, whether defined as a core academic subjects or not, they were more likely to feel the first funding cuts. Unfortunately, that is what has happened with the arts. Budgeted dollars were directed to improve areas where accountability was placed in an effort to reduce the risk of financial sanctions which come with failing to meet AYP. It was highly unlikely that the



arts will become a measured content area, and will therefore suffer systematic cuts throughout the country.

Since the NCLB Act was signed into law, many schools have made notable progress and have met AYP. However, there are still many more that have yet met AYP and have gone into improvement status. Making allowances for special needs students and English learners are two concessions made by the Department of Education that have made NCLB easier to tolerate for some disgruntled educators.

### Professional Development

According to Grant (n.d.) the true meaning of “professional development” in the technological age has been broadly defined and included the use of technology to foster teacher growth. Said Grant:

Professional development. . . goes beyond the term ‘training’ with its implications of learning skills, and encompasses a definition that includes formal and informal means of helping teachers not only learn new skills but also develop new insights into pedagogy and their own practice, and explore new or advanced understandings of content and resources. [This] definition of professional development includes support for teachers as they encounter the challenges that come with putting into practice their evolving understandings about the use of technology to support inquiry-based learning. . . .Current technologies offer resources to meet these challenges and provide teachers with a cluster of support that help them continue to grow in

their professional skills, understandings, and interest.

([ra.terc.edu/publications\\_pubs/tech-infusion/prof\\_dev\\_frame](http://ra.terc.edu/publications_pubs/tech-infusion/prof_dev_frame))

Darling-Hammond (n.d.) observed that a growing consensus about the importance of teachers in the United States has led to reforms of teacher education, the development of professional teaching standards, and the No Child Left Behind requirements that schools employ only highly qualified teachers. In a recent article the authorities stated:

Many states have restructured the certification requirements to meet the new challenges of NCLB. Providing certified educators with continuous education through professional development was a way administrators reacted to the NCLB demand having highly qualified educators in their schools. Providing time for professional development, however, revealed an even more difficult challenge. Administrators had to be rewired to believe letting go of instruction time to afford educators more professional development time would result in better instruction and student learning. In Japan and China, teachers routinely work with their colleagues on designing curriculum, polishing lessons, observing one another's teaching, participating in study groups, and conducting research on teaching. (p. 237)

Darling-Hammond further observed that almost no in-school time for professional development or collegial work has been offered in U.S. schools.

Typically, professional development occurred in workshops and conferences held after school hours. As stated by Darling Hammond:

When professional development is redefined as a central part of teaching, most decisions and plans related to embedding professional development in the daily work life of teachers will be made at the local school level. Some reformers have recommended that at least 20 percent of teachers' work should be given to professional study and collaborative work (p. 238)

Darling-Hammond believed schools which have restructured in the U.S. offered more opportunities for teachers to plan and learn together. There has been a reallocation of staff and other resources more directly to the classrooms. Making these opportunities available, teacher expertise and commitment grow, as does student achievement.

The North Central Regional Educational Laboratory (NCREL n.d.) found contrasting viewpoints on professional development. Research compiled by the NCREL confirmed that not all teachers, administrators, parents, or community members agreed with idea that teachers need time for professional development. Many people have argued that teachers should hone their skills before entering the profession and on their own time. Their argument is that school districts are in the business of educating students, not teachers. Furthermore, educators who have resisted the changes being made in schools claim they see little value in investing more time in professional development. Others have resented being taken away from their students. Even when teacher buy in is in place, the

disruption caused when classrooms were left to a substitute teacher left many teachers uncomfortable.

([www.ncrel.org/sdrs/areas/issues/educatrs/profdevl/pd300.htm](http://www.ncrel.org/sdrs/areas/issues/educatrs/profdevl/pd300.htm))

Lopez (2005) contended that politicians have been slow to buy into the need for professional development for educators. Said Lopez:

The governor vetoed a bill that would have continued professional development for teachers. During his campaign for governor Arnold Schwarzenegger promised to guarantee equal education for all children. It was this type of legislation that has put NCLB mandates at risk. Without adequate funding the challenge to leave no child behind has been jeopardized (<http://ktla.trb.com/news/la-me-lopez0nov09,0,2039634,print.column?coll=ktla-news-1>)

### Summary

The review of selected literature presented in Chapter 2 supported the following themes:

1. High-stakes testing which measures what and how well students learn has become an important tool in the process of strengthening and improving our nation's schools.
2. Reading was a targeted subject of the No Child Left Behind Act which requires all students in the United States be able to demonstrate proficiency by 2014.

3. The requirement of schools to provide certified educators has increased the need for continuous education through professional development in schools across the nation.

## Chapter 3

### Methodology and Treatment of the Data

#### Introduction

The purpose of this experimental research project was to determine whether integration of the Harcourt-Brace Reading Series into the curriculum improved WASL reading scores of participating 4<sup>th</sup> grade students who received instruction from the series over a period of three years. To accomplish this purpose, a review of selected literature was conducted, related baseline data were obtained and analyzed, and conclusions and recommendations were formulated.

Contained in Chapter 3 are the following areas of discussion: methodology, participants, instruments, design, procedure, treatment of data, and summary.

#### Methodology

The 110 students who participated in the presented study were an example of convenience sampling. The study was conducted using two independent groups identified as follows:

Control Group: All fourth grade students attending Christ the King Elementary School during the school year 1999-2000, who had taken the WASL reading test in the spring of 2000. The control group received reading instruction from a variety of reading programs through the fourth grade. (Appendix A).

Experimental Group: All fourth grade students attending Christ the King Elementary School during the year 2004-2005 who had taken the WASL reading test in spring 2005. The experimental group received three consecutive years of the adopted Harcourt-Brace reading program. (Appendix B)

### Participants

All fourth grade students enrolled at Christ the King School during the 1999-2000 and 2004-2005 academic school year were included in the study. A large majority of the participants in both the control and experimental groups were Catholic from middle class socio-economic backgrounds. As a result of using all fourth grade students, a variety of learners, including those with special needs, were included in the study.

### Instruments

The Harcourt-Brace Collections series reading curriculum was designed by the publisher to provide students with a combination of both whole language and phonics approaches to learning which allowed students with a variety of learning styles to achieve their reading goals. The reading series also integrated reading and language arts which increased understanding. Each of the reading selections included in the series contained vocabulary and spelling words along with an audio tape reading.

Harcourt-Brace's Collections series aligned the reading curriculum to GLE's and EALR's. The reading series was developed and marketed as a

teaching tool which provided students with a solid reading curriculum that included instructional materials designed to increase WASL test success.

### Design

This experimental study was designed to measure WASL test score improvement through the use of a two-group post-test. Students' WASL scores from the 1999-2000 control group were compared with 2004-2005 scores of the experimental group. The control group was administered the WASL without benefit of the Harcourt-Brace Collections Reading Series. The experimental group was administered the WASL after having receiving three consecutive years of instruction using the HBCLS.

### Procedure

After review of the 1999-2000 WASL scores by administrators and educators at Christ the King School, it was believed that students, although all passed the reading section of the WASL test, could achieve higher reading scores. A Reading Adoption Committee (RAC) was established to review the school's curriculum, research various reading series, and to make a final recommendation for reading curriculum adoption. Classroom teachers were given numerous samples of reading series to review and in turn made their recommendations back to the committee.

The RAC's efforts were reported to the faculty, Home and School, and School Commission in June, 2000. A recommendation to adopt the Harcourt-Brace Collections reading series for grades two through six was unanimously endorsed. Additionally, the committee received approval to purchase grammar



and spelling workbooks to supplement the basal reader and accompanying workbook. The new reading series was purchased and implementation of the new curriculum began in August 2000.

A teacher's inservice was provided for all teachers using the new reading series. Teachers were instructed on how to use the new series to best benefit student learning. Weekly planning was provided for, utilization of the materials was practiced, and assessment methods were demonstrated. As a result, teachers had a greater sense of familiarity with the new reading series, and successful instruction was performed.

From 2000 to 2005, students were taught using the Harcourt-Brace Collection series exclusively. The program afforded students a reading curriculum that was constructed to provide a building block approach to learning reading skills. Testing materials were used consistently year to year; and, familiarity led to higher assessment scores. Although the adopted reading series appeared to benefit student learning, the researcher studied WASL test scores to see if the reading series had a positive impact on student WASL scores.

#### Treatment of Data

STATPAK statistical software, in conjunction with the Gay and Airasian (2003), Educational Research: Competencies for Analysis and Application text, research was used by the researcher to complete statistical and analytical procedures. The researcher tested the null hypothesis using a *t*-test to determine significant differences between the means of the control and

experimental groups. Significance was determined for  $p \geq 0.05, 0.01, 0.001$ .

The following formula was used to test the significance of the *t*-test.

$$t = \frac{\bar{X} - \bar{X}}{\frac{\sqrt{\frac{SS + SS}{n + n - 2}}}{\sqrt{\frac{1}{n} + \frac{1}{n}}}}$$

### Summary

Chapter 3 provided a description of the research, methodology, participants, instrument used, research design, and procedure utilized. Details concerning treatment of data obtained and analyzed were also provided.

## Chapter 4

### Analysis of Data

#### Introduction

The following topics have been included in Chapter 4: Description of environment; hypothesis; null hypothesis; result of the study; findings; and, summary.

#### Description of Environment

The study addressed the relationship between WASL scores between two groups of fourth grade students at Christ the King Elementary School. WASL reading test scores from students in the 1999-2000 academic school year were compared with WASL reading test scores from students in the 2004-2005 academic school year. All registered CKS fourth grade students were included in the study. The study was conducted to determine whether the adoption of a new reading series would significantly affect WASL scores in students who were subjected to the series over a three year period.

#### Hypothesis

Students who used the Harcourt-Brace Collections reading series consecutively from grades two through four would score higher on the WASL reading test than student who did not receive instruction with the adopted series.

#### Null Hypothesis

Students who used the Harcourt-Brace Collections reading series consecutively from grades two through four would not score higher on the WASL

reading test than students who did not receive instruction with the adopted series. Significance was determined at the  $p \geq .05$ ,  $.01$ , and  $.001$  levels.

Results A *t*-test was calculated to determine the level of significance between control and experimental groups. Table 1 disclosed the results of the *t*-test while Table 2 represented the distribution of *t* with 108 degrees of freedom.

Table 1.

Summary of *t*-Test for Independent samples

**t-TEST FOR INDEPENDENT SAMPLES**

<b>Statistic</b>	<b>Values</b>
No. of Scores in Group X	50
Sum of Scores in Group X	23641
Mean of Group X	429.84
Sum of Squared Scores in Group X	10184723
SS of Group X	22961.53
No. of Scores in Group Y	50
Sum of Scores in Group Y	23347
Mean of Group Y	424.49
Sum of Squared Scores in Group Y	9919957
SS of Group Y	9367.75
t-Value	1.62
Degrees of Freedom	108

Table 1 showed 55 scores for both Group X (experimental group) and Group Y (control group). The sum of scores for X was 23641 and Y was 23347. The mean of Group X was 429.64 and Group Y was 424.49. The sum of squared scores in group X was 10184723 and the sum of scores squared for Y was 9919957. The degrees of freedom was at 108 and the  $t$  value was 1.62. The values used to determine significance were published in the textbook Educational Research: Competencies for Analysis and Application (Gay and Airasian, 2003, page 561). Table 2 represented the  $t$  value with 108 degrees of freedom used in the study.

Table 2.

Distribution of  $t$  with 108 Degrees of Freedom

**Distribution of  $t$  with 108 Degrees of Freedom**

<i>df</i>	<i>p</i>		
	0.05	0.01	0.001
108	1.98	2.617	3.373

The  $t$ -test was used to compare experimental and control groups. The  $t$ -value was at 108, as noted in Table 1, and the degrees of freedom at the 0.05, 0.01, and 0.001, as noted in Table 2. Significance was not determined at any tested level. Accordingly, the null hypothesis was accepted. The hypothesis was not supported at any level.

## Findings

The WASL reading score of fourth graders in the 1999-2000 and 2004-2005 school years were compared and analyzed. As a result of the statistical analysis, a significant difference was not determined to exist between the (experimental group) y and the (control group) x at any tested level. The null hypothesis has been unconditionally accepted.

## Summary

Chapter 4 reviewed and detailed the description of the environment, hypothesis, results of the study, and major findings. Data analysis indicated:

1. Although WASL scores for students who used the Harcourt-Brace Collections Reading Series from grades two through four showed improvement, improvement was not significant at the  $p \geq .05$ ,  $.01$ , and  $.001$  levels.
2. The null hypothesis was accepted. Students who used the Harcourt-Brace Collections reading series consecutively from grades two through four did not score significantly higher on the WASL reading test than students who did not receive instruction with the adopted series, as determined at the  $p \geq .05$ ,  $.01$ , and  $.001$  levels.
3. The fundamental research question on which the study was focused was answered in the negative. Implementation of the Harcourt-Brace Collections reading series into the curriculum did not significantly improve WASL reading scores of participating 4<sup>th</sup> grade students.

## Chapter 5

### Summary, Conclusions, and Recommendations

#### Summary

The purpose of this experimental research project was to determine whether integration of the Harcourt-Brace Reading Series into the curriculum improved WASL reading scores of participating 4<sup>th</sup> grade students who received instruction from the series over a period of three years. To accomplish this purpose, a review of selected literature was conducted, related baseline data were obtained and analyzed, and conclusions and recommendations were formulated.

#### Conclusions

From research findings and an analysis of the data produced by this experimental study the following conclusions were reached:

1. High-stakes testing which measures what and how well students learn is an important tool in the process of strengthening and improving our nation's schools.
2. Reading is a targeted subject of the No Child Left Behind Act which requires all students in the United States be able to demonstrate proficiency by 2014.
3. The requirement of schools to provide certified educators has increased the need for continuous education through professional development in schools across the nation.

4. Although WASL scores for students who used the Harcourt-Brace Collections Reading Series from grades two through four showed improvement, improvement was not significant at the  $p \geq .05$ ,  $.01$ , and  $.001$  levels.
5. The null hypothesis was accepted. Students who used the Harcourt-Brace Collections reading series consecutively from grades two through four did not score significantly higher on the WASL reading test than students who did not receive instruction with the adopted series, as determined at the  $p \geq .05$ ,  $.01$ , and  $.001$  levels.
6. The fundamental research question on which the study was focused was answered in the negative. Implementation of the Harcourt-Brace Collections reading series into the curriculum did not significantly improve WASL reading scores of participating 4<sup>th</sup> grade students.

### Recommendations

Based on the conclusions above, the following recommendations have been suggested:

1. To satisfy the requirements placed on schools with regard to high-stakes tests such as the WASL, school must align their curriculum in content areas.
2. To facilitate student proficiency in reading; appropriate, school-wide reading curriculums should be adopted.
3. To assure certificated educators with continuous training, professional development should be mandated.



4. To improve fourth grade WASL reading scores, schools/school districts should adopt Harcourt-Brace Collections Reading Series.
5. Schools/school districts seeking to improve WASL reading scores at the fourth grade level may wish to utilize information in this study or, undertake related research more suited to their unique needs.

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