A Correlational Study of the Relationship of DIBELS

Oral Reading Fluency and WASL Reading Scores of 4th

Grade Students at Roosevelt Elementary School

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A Special Project

Presented to

Jack McPherson, Ph.D.

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_____

Kelly Lynn Johnson

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FACULTY APPROVAL

A Correlational Study of the Relationship of DIBELS

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Grade Students at Roosevelt Elementary School

Approved for the Faculty

_____, Faculty Advisor

ABSTRACT

The purpose of this quantitative research study was to determine the relationship between DIBELS test results and reading WASL test results for fourth grade students at Roosevelt Elementary School. To accomplish this purpose, a review of selected literature was conducted, essential baseline data and information was obtained and analyzed, and related conclusions and recommendations were formulated. Data analyzed generally supported the hypothesis that there was a positive relationship between spring, 2007 DIBLES oral reading fluency (ORF) scores and spring, 2007 WASL reading scores of 4th grade Roosevelt Elementary School students.

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CHAPTER 1

Introduction

<u>Background for the Project</u>

"The ability to read is highly correlated to

social and economic advancement, and thus failure to

develop fundamental reading skills is detrimental to a

child's likelihood of future success in life" (Ax,

2004, p.1). In January 2001, President George W. Bush

entered office and expressed concern that too many of

our neediest children were being left behind.

President Bush then implemented the No Child Left

Behind (NCLB) Act, forcing public schools to

restructure and improve the education system.

With the implementation of the NCLB Act in 2003,

America's schools entered the most significant period

of accountability assessment to date (U.S. Department

of Education, 2003). According to NCLB, statewide

testing was mandatory to assess whether or not the

state's public schoolchildren were meeting adequate

yearly progress (AYP). In Washington State, the

Washington Assessment of Student Learning (WASL)

assessed student performance in the areas of reading, writing, math, and science for third through tenth grade students described as follows:

> In the spring of 2007, 76.6% of all fourth grade students in Washington State passed the reading portion of the WASL, while 61.3% of fourth grade students at Roosevelt Elementary school passed the reading portion of the WASL (OSPI Website, 2007, n.p.).

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) created by Dr. Ronald Good and Dr. Ruth Kaminski of the Dynamic Measurement Group was one form of Curriculum-Based Measurement Reading (R-CBM) administered to Roosevelt Elementary School's fourth grade students in the spring of 2007. As explained by these authorities:

> DIBELS are a set of standardized, individually administered measures of early literacy development. They are designed to be short (one minute) fluency measures used to regularly monitor the development of pre-reading and early

reading skills (dibels.uoregon.edu).

Seventy 4th grade students were tested on oral reading fluency (ORF) and retell fluency. Of those 70 students tested, 61% passed the DIBELS at the benchmark level with no intervention needed, 24% were strategic, in which they needed additional intervention, and 14% were intensive, in which they needed substantial intervention.

Statement of the Problem

When beginning the study, the researcher (Kelly Johnson) did not know if there was a relationship between the reading portion of the WASL and DIBELS test results. Accordingly, the researcher sought to determine a relationship existed between the reading portion of the WASL and DIBELS test results. If there was a relationship, Roosevelt Elementary School (RES) staff would be better able to develop intervention groups to improve WASL results.

Phrased as a question, the problem which represented the focus of the present study may be

stated as follows: To what extent does a relationship exist between the DIBELS Oral reading fluency (ORF) test and the reading portion of the WASL test?

Purpose of the Study

The purpose of this quantitative research study was to determine the relationship between DIBELS test results and reading WASL test results for fourth grade students at RES. To accomplish this purpose, a review of selected literature was conducted, essential baseline data and information was obtained and analyzed, and related conclusions and recommendations were formulated.

Phrased as a question, the problem which represented the focus of the present study may be stated as follows: To what extent does a relationship exist between the reading portion of the WASL and DIBELS oral reading fluency (ORF) test.

Delimitations

This study included 4th grade students at RES. Of 70 students who completed the 4th grade WASL exam, 70 also completed the 4th grade DIBELS test in the spring

of 2007.

Special education students who were receiving reading instruction in the resource room or self contained classrooms were allowed to take the Washington Assessment of Student Learning, Modified (WASL MO), consistent with their individualized education plans (IEPs). This allowed those students to receive a passing level of two on the reading portion of the WASL, whereas every other 4th grade student was required to pass the reading portion with a level three or four. There were no accommodations made for students when taking the DIBELS.

Teachers proctoring the WASL were very familiar with the 4th grade student participants, while the DIBELS proctors came into RES only for the week of testing, which may have caused some testing anxiety. The DIBELS proctors came to RES and tested one student at a time in a vacant location at RES, which generally involved hallways, corners of classrooms, work rooms, etc. The WASL test was administered to larger groups of students in their general education classroom.

Special education students completed the WASL in the resource room or self-contained classroom in a small group setting, which was the least restrictive environment for those students.

Assumptions

Teachers who proctored the DIBELS and WASL tests were certified to teach elementary education. Washington Assessment of Student Learning proctors had previously completed the WASL proctor training session. The researcher assumed all students tried their best, based on their ability level. Students taking the WASL were tested in an appropriate environment, with little or no distractions.

Hypothesis

There was a positive relationship between spring, 2007 DIBELS oral reading fluency (ORF) scores and spring, 2007 WASL reading scores of 4th grade RES students.

Null Hypothesis

There was no significant relationship between spring, 2007 DIBELS ORF test scores and spring, 2007

WASL reading test scores. Significance was determined for $p \geq$ at .05, .01, and .001 levels.

Significance of the Project

Due to the strong emphasis the Yakima School District (YSD) places on WASL and DIBELS test results, the researcher conducted the project to determine whether a relationship existed between DIBELS and reading WASL test results. If the study concluded there was a relationship between WASL and DIBELS test results, interested educators at RES could then identify which students needed additional intervention to prepare them for the WASL.

Procedure

The present study was conducted at RES during spring quarter 2007. All 4th grade students at RES were administered the DIBELS ORF in the spring of 2007. A team of five or six test proctors came to RES and assembled 4th grade students one at a time to be tested. Each test proctor then took his/her student to a specified location and tested the student on oral reading fluency and retell fluency. The student was

given one minute to complete the ORF and one minute to complete the retell fluency. When both tests were completed, the student returned to his/her classroom and the test proctor began the process once more with a different 4th grade student.

Testing procedure for proctoring the WASL was much different than the procedure for proctoring the DIBELS. In the spring of 2007, the window for completing the WASL was two weeks. Students began the reading portion of the WASL on the first day of testing. The WASL proctor read all the directions and sample questions aloud to the students and students were then allowed to begin the test and work until that test section was completed. There was no time limit for students when taking the WASL. Students were given a break after one hour of testing. They were given a snack and allowed to visit with their friends for ten minutes. Once the break was over, students returned to the section of the WASL they were currently working on. When all students had completed that test section, proctors picked up the test

booklets and these were returned to a locked room in the office.

Definition of Terms

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

adequate yearly progress. The amount of academic progress made by a school or district measured by the State of Washington.

benchmark. No reading intervention was needed according to the DIBELS Test.

correct words per minute. The correct number of words a student read in a one-minute timing.

dynamic indicators of basic early literacy skills. One minute fluency measures used to regularly monitor the development of reading.

essential academic learning requirements. A set of academic standards put into place in Washington State.

intensive. Substantial reading intervention was needed according to the DIBELS Test.

graphophonics. A process of making relationships

between letters and sounds.

least restrictive environment. For the purpose of this study, least restrictive environment referred to a place where special education students were given the opportunity to test in their most comfortable setting, with no distractions.

pearson r. A measure of correlation appropriate when the data represent either interval or ratio scales; it takes into account each and every score and produces a coefficient between .00 and $\pm$ 1.00.

quantitative research. The collection of numerical data to explain, predict, and/or control phenomena of interest.

strategic. Additional reading intervention was needed according to the DIBELS Test.

washington assessment of student learning. High-stakes statewide achievement test in Washington State.

Acronyms

AIMS. Arizona Instrument to Measure Standards

AYP. Adequate Yearly Progress

CSAP. Colorado State Assessment Program

CWPM. Correct Words Per Minute

DIBELS. Dynamic Indicators of Basic Early

     Literacy Skills

EALRs. Essential Academic Learning Requirements

ELL. English Language Learners

IEP. Individualized Education Plan

NCLB. No Child Left Behind

NIFL. National Institute for Literacy

OPT. Ohio Proficiency Test

ORF. Oral Reading Fluency

R-CBM. Curriculum-Based Measurement Reading

RES. Roosevelt Elementary School

WASL. Washington Assessment of Student Learning

WASL-MO. Washington Assessment of Student

     Learning- Modified

CHAPTER 2

Review of Selected Literature

Introduction

The review of literature and research summarized in Chapter 2 was organized to address:

- The Importance of Reading and No Child Left Behind

- Curriculum-Based Measurement and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS)

- DIBELS and Statewide Tests of Achievement

- Summary

Data current primarily within the last five years were identified through an on-line computerized literature search of the Educational Resources Information Center (ERIC), the internet, and ProQuest. A hand-search of selected research materials was also conducted.

The Importance of Reading and No Child Left Behind

Reading has always been a survival skill necessary for success in today's society and yet, many

children have difficulty acquiring this essential

skill. Reading has never been an innate skill; reading

should be taught and learned, as it required both

direct instruction and practice. Learning to read

required a lengthy and complex process that fused the

exposure to written materials and reading practice

through connections. Large numbers of children from

all social classes have always had difficulty learning

to read. As many as one in five children experience

reading difficulties (Lyon as cited in Ax, 2004).

According to the National Institute for Literacy

(NIFL) many adults in the United States lacked a

sufficient foundation of basic reading skills to

function successfully in society. Between 46% and 51%

of adults had low literacy skills and lacked the

foundation they needed to find and keep decent jobs,

and actively participate in civic life (National

Institute for Literacy, 2004).

Over the past two decades, there has been a

discrepancy between what was expected and what was

taught in our schools, legislators implemented

assessment programs to ensure results. Standards-based reform, accountability, and high-stakes assessment entered the vocabulary of America's educators passed down from their governors. (Linn et al., as cited in Ax, 2004).

The No Child Left Behind (NCLB) Act enacted into law in 2001 by President Bush constituted the most sweeping reauthorization of the Elementary and Secondary Education Act of 1965, defining the federal government's role in education. The hallmark of NCLB focused on accountability. Under the law, each state was responsible for creating their own standards for what a child should know and learn for every grade. Washington State created the Essential Academic Learning Requirements (EALRs). Each state, school district, and school was expected to make AYP toward meeting state standards. Yearly progress was measured for all students regardless of socioeconomic status, race, and language factors. Locally and nationally, school and district performance was publicly reported and, if a district or a school failed to make

progress, they would be held accountable (U.S. Department of Education, 2003). As stated by Sunderman & Orfield (2007):

> NCLB was built on the assumption that state education agencies have the capacity to implement all of the requirements called for in law. It also assumes that states have the capacity to provide the support and technical assistance necessary to help low-performing schools and districts bring all students to the proficient level on state tests (p.137).

Curriculum-Based Measurement and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS)

As a result of passage of NCLB and Reading First, public school teachers in the United States have been forced to spend an increasing amount of time and effort on drilling and testing graphophonics. The Washington Assessment of Student Learning has been adopted as part of Washington State's plan to increase student achievement by implementing higher standards

for public school students (Goodman as cited in Kato &
Manning, 2007).

Although the WASL has provided a valid and
reliable criterion for reading comprehension, a need
still existed for additional measures sensitive to the
curriculum or instructional outcomes and useful for
ongoing monitoring to measure students' progress over
time (Ax, 2004).

Curriculum-Based Measurement Reading met the
above criterion and involved standardized procedures
to directly monitor students' progress over time. Many
teachers and professionals have used R-CBM to document
students' oral reading fluency rate to inform
educational decisions, including reading fluency
scores to predict students' scores on statewide tests
(Crawford et al., as cited in Ax, 2004).

A reading fluency test such as the DIBELS has
allowed for remedial interventions prior to students
failing accountability tests. According to authorities
cited in O'Connor et al. (2007), reading teachers
should be aware of student reading fluency, because

students who recognize words effortlessly should be able to devote more attention to reading comprehension. As explained by these authorities:

In theories regarding information processing and verbal efficiency, improving lower level processes (speed and accuracy of reading words) frees students to devote their attention to understanding the meaning of text. Therefore, the motivation for improving reading rate is the possibility that increased rate might enable improved reading comprehension (p.31).

According to Rasinski (2003), reading fluency was generally thought of as simply reading a passage aloud to another person, while being timed on that passage. The fluency model provided a focused practice quickly, easily, and with positive results. Rasinski further addressed reading fluency as follows: many of the instructional activities that promote fluency in reading were already being done in many classrooms across America. Some of these activities included rereading favorite poems and songs, participating in

reader's theater and echo reading, and choral reading practices during literacy instruction. These activities provided students the opportunity to be successful and confident readers. Students who felt confident in themselves could perform higher on oral reading fluency tests, such as the DIBELS.

Chard et al., as cited in Dugan & Marr (2007), described oral fluency model as follows:

> We found that there are specific features that
> need to be a part of instruction to improve
> performance. Our fluency model incorporates these
> elements of successful practice and effective
> instruction, including (a) modeling fluent
> reading for the student, (b) providing support or
> feedback with difficult words, (c) providing
> opportunities for students to read a text more
> than once to gain comfort and control over the
> reading, (d) charting student progress, and (e)
> identifying a benchmark or target the student
> needs to achieve with each reading (p.52).

DIBELS and Statewide Tests of Achievement

Ax (2007) alluded to growing concerns among school psychologists and educators regarding the nature of high-stakes statewide tests which have examined the relationship between oral reading fluency and statewide tests of achievement. This authority examined four studies conducted in four different states. Each of these studies addressed the DIBELS oral reading fluency exam and a high stakes achievement test, but differed as to the grade level of the participants, number of participants, geographic region, and demographic make-up.

For example, Wilson (2005) studied the relationship of DIBELS oral reading fluency to performance on Arizona Instrument to measure standards (AIMS). The study included 241 students in grade three from three schools that received a Reading First grant from the U.S. Department of Education. Students were required to have both AIMS and ORF scores available. Demographic identifiers for ethnicity included,

gender, eligibility for free/reduced lunch, and English Language Learner (ELL) status. Said Wilson:

> The correlation between AIMS and ORF for the overall group was positive and moderately large (r = .741). Students with higher levels of fluency tended to score higher on AIMS and students with lower levels of fluency tended to score lower on AIMS (p.2).

Wilson's findings illustrated that ORF can identify those students who were more likely to meet the proficiency standard on AIMS with good accuracy. Accordingly, ORF identified those who are quite unlikely to reach proficiency (those in the at- risk category). Oral reading fluency was found to be effective when identifying students who were not on track to meet the AIMS standard.

A second study conducted by Vander Meer (2005) was entitled "The Relationship Between Oral Reading Fluency and Ohio Proficiency Testing (OPT) in Reading" Explained by this authority:

The DIBELS and OPT data were collected from three elementary schools in southwest Ohio. The schools were three of five elementary schools in a suburban school district of approximately 8,800 students. The schools house first through fourth grade students. These schools were chosen because of the availability of data for grades 3 and 4. A total of 364 students who were in third grade during 2001-02 and fourth in 2002-03 participated in the study. All students with the exception of those identified with significant cognitive disabilities were included in the study. Students with an Individualized Education program (IEP) were provided allowable accommodations during the test (p.3).

Vander Meer used a Pearson *r* analysis to determine significance among ORF and OPT scores and to determine any correlation between 3rd and 4th grade ORF scores. This study also recorded highest student scores when given three opportunities to take the OPT.

Correlation coefficients demonstrated a significant relationship between ORF and OPT for reading.

Shaw & Shaw (2002) conducted a third study entitled "DIBELS Oral Reading Fluency-Based Indicators of Third Grade Reading Skills for Colorado State Assessment Program (CSAP)." These researchers stated:

Fall, winter, and spring 2001-2002 DIBELS ORF scores and spring 2002 CSAP (English) reading scores were obtained for third-grade students in a Colorado elementary school. Fifty-eight students took the DIBELS in the fall, 57 took the DIBELS in the winter, and 58 took the DIBELS and the CSAP in the spring. Due to turnover, only 52 students took all three administrations of the DIBELS. Reading Center staff and teachers at the elementary school were trained in the administration of the DIBELS ORF and its use for screening and progress monitoring in the fall of 2001. Third-grade students were assessed using the DIBELS ORF in September, January, and April of the 2001-02 academic year. The third-grade

CSAP reading assessment was administered in April 2002 (p.2).

Shaw & Shaw concluded that for this group of third-grade students, 39 of 43 (91%) who scored 90 or above on the DIBELS ORF in the spring scored "proficient or advanced" on the CSAP; and, 11 of 15 (73%) who scored below 90 on the DIBELS ORF scored "unsatisfactory or partially proficient." Using 90 on the spring DIBELS ORF to predict CSAP score categories resulted in correctly classifying 50 of 58 (86%) of the students on the CSAP with regard to "scoring proficient/advanced or unsatisfactory/partially proficient."

Twenty-seven of 30 (90%) of students who scored 110 or above on the spring DIBELS ORF scored "proficient or advanced" on the CSAP; and, 12 of 28 (43%) who scored below 110 on the DIBELS ORF scored "unsatisfactory or partially proficient." Using a score of 110 on the spring DIBELS ORF to predict scoring categories resulted in correctly classifying 43 of 58 (74%) on the CSAP with regard to scoring

"proficient/advanced or unsatisfactory/partially proficient."

The final study, conducted by Barger (2003), as reported in a North Carolina Teacher Academy Technical Report, compared the DIBELS ORF Indicator and the North Carolina End of Grade Reading Assessment. Said Barger:

> The purpose of this study was to determine the connection between performance on the ORF spring benchmark and reading achievement as measured by the North Carolina End of Grade Test. Because of the short time between these two measures, it may be more accurate to characterize this comparison as correlation rather than prediction (p.1).

Thirty-eight 3rd grade students from one school in Buncombe County were administered the DIBELS spring ORF in the first week of May, 2003. The measure consisted of three different passages. Students read each passage orally for one minute. The number of words read correctly was then calculated. The ORF score was taken from the student's median score for

the three passages. The same 38 students were administered the North Carolina End of Grade Reading Assessment one week later. This test consisted of 56 questions, and students had a total of 115 minutes to complete the test. There were two, three-minute stretch breaks during the test. Students read each passage and answered a series of multiple choice questions before moving on to the next passage. The North Carolina End of Grade Reading Assessment used a four-level grading scale, very similar to the WASL. Level I was the lowest level and represented "insufficient mastery" of the subject. Level II represented "inconsistent mastery." Level III was "consistent mastery." Level IV was the highest level and was considered "superior mastery." Students must have achieved at least a Level III to be considered at grade level (Barger, 2003).

Barger also found a correlation existed between ORF spring scores and NC End of Grade reading scores. Of the 38 students tested, 24 reached the spring goal of 110 correct words per minute (cwpm) or better on

the DIBELS ORF. Twenty-two of the 24 students also achieved Level IV on the North Carolina End of Grade reading test. Two students who did not reach Level IV scored a Level III respectively, with 120 and 110 cwpm on the DIBELS assessment.

Summary

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

1. The importance of reading as a necessary societal survival skill was evidenced in the enactment of the 2001 NCLB Act.

2. Curriculum-Based Measurement, such as the DIBELS, proved to help predict student performance on high-stakes tests and allowed for intervention prior to students' failing accountability tests.

3. Findings produced from four major research studies which focused on DIBELS and State Tests of Achievement found a significant correlation between DIBELS oral reading fluency and statewide achievement tests.

CHAPTER 3

Methodology and Treatment of Data

<u>Introduction</u>

The purpose of this quantitative research study was to determine the relationship between DIBELS test results and reading WASL test results for 4th grade students at RES. To accomplish this purpose, a review of selected literature was conducted, essential baseline data and information was obtained and analyzed, and related conclusions and recommendations were formulated.

Chapter 3 contains a description of the methodology used in the study. Additionally, the researcher included details concerning participants, instruments, design, procedure, treatment of the data and summary.

<u>Methodology</u>

The researcher used a quantitative research methodology involving the Pearson r correlation coefficient.

Participants

This study included 4th grade students at RES. Of 70 students who completed the 4th grade WASL exam, 70 also completed the 4th grade DIBELS test in the spring of 2007. The students represented a cross-section of varying abilities and ethnic backgrounds characteristic of the Yakima School District.

Instruments

Essential instruments used in the study included the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) reading assessment, in context with the Washington Assessment of Student Learning (WASL).

Design

Essential baseline data included DIBELS ORF reading assessment student scores as correlated with the WASL reading examination scores. The Pearson r data analysis was conducted to formulate related inferences, conclusions, and recommendations.

Procedure

Procedures employed in the present study evolved in several stages, as follows:

1. In October 2007, the investigator sought and
   obtained permission to undertake the study from
   Mr. Dan Williams, RES principal.

2. During spring 2007, all 4th grade students at RES
   were tested using the DIBELS oral reading fluency
   test. A team of six RES test proctors and
   assembled students one at a time to be tested.

3. Each test proctor then took his/her student
   to a specified location in the school and tested
   the student on ORF and retell fluency.

4. The student was given one minute to complete the
   ORF and one minute to complete the retell
   fluency.

5. When both tests were complete, the test proctor
   continued the process with a different 4th grade
   student.

The testing procedure for proctoring the WASL was
much different than procedures used for proctoring the
DIBELS.

1. Students were tested in large

group/general education classrooms, unless

they were on an IEP or were ELL students

who needed language support.

2. Students began the reading portion of the

WASL on the first day of the two-week

testing period.

3. The WASL proctor read all the directions

and sample questions aloud to students who

were then allowed to begin the test and

work until that test section was

completed. No time limit was required for

students when taking the WASL.

4. Students were given a break one hour into

WASL testing and were given a snack and

some time with their friends.

5. Once the break was over, students returned

to the reading section of the WASL they

had previously been working on.

6. When all students had completed that test

section, proctors picked up test booklets

and the booklets were returned to a locked

room in the office.

Treatment of the Data

A Pearson-*r correlation coefficient* was used in conjunction with the Windows STATPAK statistical software program that accompanied the Educational Research: Competencies for Analysis and Application text (Airasian & Gay, 2003). This allowed the researcher to determine a possible relationship between spring, 2007 DIBELS ORF test scores and spring, 2007 WASL reading scores of 4th grade students at RES. The following formula was used to test for significance.

Summary

Chapter three provided a description of the research methodology employed in the study, participants, instruments used, research design, and procedure utilized. Details concerning treatment of the data obtained were also presented

CHAPTER 4

Analysis of the Data

Introduction

The present research study sought to determine a possible relationship between spring, 2007 DIBELS ORF scores and spring, 2007 WASL reading scores of 4th grade students at RES.

Chapter four has provided information detailing a description of the environment, hypothesis, null hypothesis, results of the study, major findings, and a summary.

Description of the Environment

The present study included 70 4th grade students who completed the DIBELS ORF and WASL reading exams at RES during spring, 2007. The students represented a cross-section of varying abilities and ethnic backgrounds characteristic of the Yakima School District.

Hypothesis

There was a positive relationship between spring, 2007 DIBELS oral reading fluency (ORF) scores and

spring, 2007 WASL reading scores of 4th grade RES
students.

Null Hypothesis

There was no significant relationship between
spring, 2007 DIBELS ORF test scores and spring, 2007
WASL reading test scores. Significance was determined
for $p \geq$ at .05, .01, and .001 levels.

Results of the Study

Table 1 has detailed DIBELS ORF and WASL reading
scores for spring, 2007 4th graders at RES.

Table 1

Comparison of 4th Grade spring 2007 WASL Reading Scores
and spring 2007 DIBELS ORF Scores.

_____

Student Number	DIBELS ORF Scores	Reading WASL Scores
1	223	424
2	167	405
3	174	425
4	120	433
5	181	419
6	161	403

Table 1 Continued

Comparison of 4th Grade spring 2007 WASL Reading Scores
and spring 2007 DIBELS ORF Scores.

Student Number	DIBELS ORF Scores	Reading WASL Scores
7	160	409
8	107	396
9	167	429
10	131	429
11	97	385
12	93	385
13	107	394
14	130	419
15	123	392
16	49	347
17	88	372
18	100	394
19	142	403
20	109	414
21	145	380
22	123	401
23	188	425

Table 1 Continued

Comparison of 4th Grade spring 2007 WASL Reading Scores and spring 2007 DIBELS ORF Scores.

Student Number	DIBELS ORF Scores	Reading WASL Scores
24	167	417
25	134	401
26	125	424
27	147	429
28	65	388
29	114	396
30	130	403
31	101	409
32	172	405
33	116	425
34	116	383

35	63	375
36	147	390
37	128	424
38	114	390
39	70	405
40	181	114

Table 1 Continued

Comparison of 4th Grade spring 2007 WASL Reading Scores

and spring 2007 DIBELS ORF Scores.

Student Number	DIBELS ORF Scores	Reading WASL Scores
41	124	390
42	147	424
43	95	383
44	159	409
45	128	433
46	168	403
47	127	396
48	130	392
49	161	394
50	205	444
51	125	394
52	93	390
53	96	380
54	106	414
55	125	390
56	112	385
57	77	385

Table 1 Continued

Comparison of 4th Grade spring 2007 WASL Reading Scores

and spring 2007 DIBELS ORF Scores.

Student Number	DIBELS ORF Scores	Reading WASL Scores
58	184	401
59	116	417
60	164	405
61	103	385
62	119	417
63	120	385
64	85	394
65	109	409
66	164	424
67	141	433
68	115	407
69	182	401
70	128	433

Note: ORF refers to the Oral Reading Fluency portion of the DIBLES reading Assessement.

Table 2 displayed data collected from 70 participants' raw scores for spring, 2007 DIBLES ORF scores and spring, 2007 WASL reading scores. The Pearson r Moment Correlation on the Windows STATPAK to accompany Educational Research: Competencies for Analysis and Application, Seventh Edition (Airasian & Gay, 2003) was used to calculate data statistics and values. The Sum of X was 9083; the Sum of Y was 28278; the Sum of Squared X was 1262507; and the Sum of Squared Y was 11446606. The Sum of 'X' Scores was 129.76; the Sum of 'Y' Scores was 403.97; and the Sum

of XY was 3694401. The Pearson's *r* was 0.57 and

Degrees of Freedom were 68.

Table 2

Pearson *r* Product Moment Correlation

Statistic	Value		
Number of Items	70		
Sum of X	9083		
Sum of Y	28278		
Sum of Squared X	1262507		
Sum of Squared Y	11446606		
Mean of 'X' Scores	129.76		
Mean of 'Y' Scores	403.97		
Sum of XY	3694401		
Pearson's r	0.57		
Degrees of Freedom	68		
df 0.05		0.01	0.001
68 .2500		.324	.4078

Findings

Significance was determined by the researcher for p $>$ at.05, .01, and .001. An analysis of data indicated the null hypothesis was rejected at .05, .01, and .001 levels. In contrast, the hypothesis was supported at .05, .01, and .001 levels. These findings indicated there was definite correlation between DIBELS oral reading fluency scores and WASL reading scores. In general, students who passed the spring, 2007 DIBELS ORF at the benchmark level, also passed the spring, 2007 WASL reading test with a level three or four.

Discussion

The researcher predicted there would be a correlation between spring, 2007 DIBELS ORF scores and spring, 2007 WASL reading scores. This was based on the four studies which were conducted in four different states as reported earlier in chapter two. Each of these studies addressed the DIBELS oral

reading fluency exam in the context of high stakes, state achievement tests. The four studies concluded there was a correlation between the DIBELS ORF and a state achievement test. This related research lead the researcher to predict there would be a correlation between the spring, 2007 DIBELS ORF exam and the spring, 2007 WASL reading exam.

Summary

The researcher's goal for this quantitative study was to determine if there was a relationship between spring, 2007 DIBELS ORF scores and spring, 2007 WASL reading scores. Results of the study provided convincing evidence of a correlational relationship between DIBELS ORF scores and WASL reading scores.

Accordingly, as the hypothesis was supported at all three levels, a definite correlation between DIBELS ORF scores and WASL reading scores was found. For example, students who reached benchmark level on the DIBELS ORF also achieved a passing score of level three or four on the reading section of the WASL. The null hypothesis was rejected at all three levels.

CHAPTER 5

Summary, Conclusions, and Recommendations

Summary

The purpose of this quantitative research study was to determine the relationship between DIBELS test results and reading WASL test results for fourth grade students at RES. To accomplish this purpose, a review of selected literature was conducted, essential baseline data and information was obtained and analyzed, and related conclusions and recommendations were formulated.

Phrased as a question, the problem which represented the focus of the present study may be stated as follows: To what extent does a relationship exist between the reading portion of the WASL and DIBELS oral reading fluency (ORF) test.

Conclusions

Based on the review of selected literature and major findings produced from the present study, the following conclusions were reached:

1. The importance of reading as a necessary societal survival skill was evidenced in the enactment of the 2001 NCLB Act.

2. Curriculum-Based Measurement, such as the DIBELS, proved to help predict student performance on high-stakes tests and allowed for intervention prior to students' failing accountability tests.

3. Findings produced from four major research studies which focused on DIBELS and State Tests of Achievement found a significant correlation between DIBELS oral reading fluency and statewide achievement tests.

4. Data analyzed supported the hypothesis that there was a positive relationship between spring, 2007 DIBELS oral reading fluency (ORF) scores and spring, 2007 WASL reading scores of 4th grade RES students.

Recommendations

As a result of the conclusions cited above, the following recommendations have been suggested:

1. To lend credence to the importance of reading as a necessary societal skill, educators should lend full support to the intent of the NCLB Act.

2. To help predict student performance on high-stakes tests and to allow for intervention prior to students' failing accountability tests, educators should encourage curriculum-based measurement, such as the DIBELS ORF test.

3. To determine the existence of possible correlations between oral reading fluency and statewide achievement tests, educators may wish to become familiar with the DIBELS ORF test in context with their respective state high-stakes achievement test.

4. School/school districts interested in comparing selected, commercial reading curricula with state high-stakes reading exams, may wish to utilize information contained in the present study, or they may wish to undertake research more suited to their unique needs.

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