

A Comparison of Eighth Grade STAR Reading Scores
With Mathematics WASL Scores,
West Valley Junior High School

A Special Project
Presented to
Dr. Jack McPherson

In Partial Fulfillment
of the Requirements for the Degree of
Master of Education

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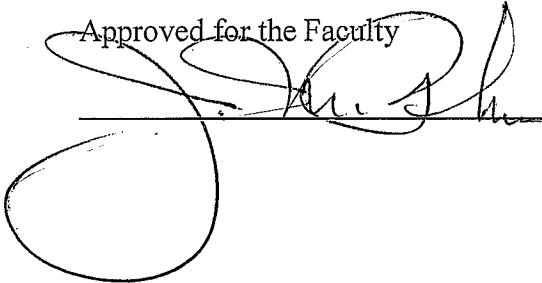
FACULTY APPROVAL

A Comparison of Eighth Grade STAR Reading Scores

With Mathematics WASL Scores,

West Valley Junior High School

Approved for the Faculty

 _____, Faculty Advisor

ABSTRACT

The purpose of this correlational research study was to determine the extent to which eighth grade student STAR Reading scores correlated with WASL mathematics scores at West Valley Junior High School, Yakima, Washington. To accomplish this purpose, a review of selected literature was conducted, essential baseline data were obtained, and related conclusions and recommendations were formulated. Results of the study indicated there was a high correlation between eighth grade student STAR Reading scores and ninth grade WASL mathematics scores.

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CHAPTER ONE

Introduction

Background for the Project

To participate fully in society, literacy is essential. Illiteracy cannot help but have a direct, negative effect on quality of life, usually in the form of lost opportunities and lower wages. Access to fundamental information regarding nutrition, health, safety, and general well-being and to information that expands and enriches understanding , such as culture, history, literature, science, and mathematics, is limited. Literacy is the key to staying in step with the daily discoveries and insights of the information age, both for the common good and for personal growth (Honig et al., 2000, p.13).

As emphasized in the above statement, literacy has been identified as a fundamental skill, essential for success in all academic subjects and for quality of life. Gow (2006) agreed with Honig et al.. that literacy has been considered the cornerstone for learning. As emphasized by this authority, reading has become the most important academic skill school children must acquire.

Statement Of The Problem

Although, reading has always been held close to the hearts of educators' the correlation of reading to other academic subjects has posed an unanswered question. This research project will attempt to answer that question. The study will examine 16 students in the writer's (Eric R. Lunden) advisory class at West Valley Junior High School (WVJHS) where students typically engaged in reading activities twenty minutes each day. Student Washington Assessment of Student Learning (WASL) scores in mathematics had not been compared to STAR Reading test results. With this study the writer also intended to provide WVJHS and school district authorities with information indicating whether reading instruction could also help students mathematics scores.

Phrased as a question, the problem which represented the focus of the present study may be stated as follows: To what extent did 7th grade student WASL mathematics scores correlate with 8th grade student STAR Reading scores at WVJHS.

Purpose Of The Project

The purpose of this correlational research study was to determine the extent to which eighth grade student STAR Reading scores correlated with WASL mathematics scores at WVJHS. To accomplish this purpose, a review of

selected literature was conducted, essential baseline data were obtained, and related conclusions and recommendations were formulated.

Delimitations

The study was limited to 16 participating students enrolled in the writers advisory class at WVJHS, Yakima, Washington. Conducted over a two year period from 2006-2007, the study compared 7th grade WASL mathematics scores with 8th grade STAR Reading scores for the same group of students. Baseline data obtained for purposes of analysis and comparison included 7th grade WASL mathematics scores and 8th grade STAR reading scores.

Assumptions

The assumption was made there would be a high correlation between 7th grade student WASL mathematics scores and 8th grade STAR reading scores. A further assumption made was that participating students gave their best effort when completing WASL and STAR tests. Certificated staff responsible for administering each exam were assumed to have been properly trained regarding test procedures.

Hypothesis

There will be high correlation between 7th grade student WASL mathematics scores and 8th grade STAR reading scores at WVJHS.

Significance Of The Project

The investigator (Eric R. Lunden) sought to determine the existence of a possible correlation between student reading and mathematic scores. In the event a strong correlation did exist between reading and mathematics scores, this research project could provide strong justification for augmenting and further developing West Valley School District (WVSD) reading programs. Accordingly, school and district administrators responsible for initiating and or modifying instructional development could utilize this information.

Procedure

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

1. During November 2005, the researcher (Eric R. Lunden) requested and obtained permission to undertake the present study from West Valley Junior High Principa\Mr. Steve Smith.
2. Throughout the 2005-2006 school year, the researcher obtained WASL mathematics scores of participating 7th grade students.
3. During the 2006-2007 school year, the researcher obtained STAR Reading scores for participating 8th students.
4. During the spring of 2007, WASL mathematics and STAR reading scores of participating students were compared to determine the extent to which a possible correlation existed.

5. During the summer of 2007, data analysis utilizing Pearson r correlation coefficient was completed and related conclusions and recommendations were formulated.

Definition Of Terms

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

adequate yearly progress. The academic progress that each school makes on an annual basis to fulfill Washington Assessment of Student Learning (WASL) standards.

correlational research. Research that involves collecting data to determine whether, and to what degree, a relationship exists between two or more quantifiable variables.

mathematics. The branch of science concerned with number, quantity, and space.

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 ± 1.00 .

reading. The academic skill of reading essential for understanding the meaning of written or printed material by interpreting its characters or symbols.

skyward. The online program used by the West Valley School District to track and grade students.

Star Reading. Refers to the STAR Reading designed to tailor instruction, monitor reading growth, and improve student reading performance.

Washington Assessment Of Student Learning. A high stakes assessment test administered to all Washington State 4th, 7th, and 10th grade students to determine academic proficiencies in reading, mathematics, and science.

West Valley Junior High School. Located in Yakima Washington, WVJHS provided the location for the present study.

Acronyms

<u>AYP.</u>	Adequate Yearly Progress
<u>NCLB.</u>	No Child Left Behind
<u>OSPI.</u>	Office of Superintendent of Public Instruction
<u>STAR.</u>	STAR reading program
<u>TAC.</u>	National Technical Advisory Committee
<u>WASL.</u>	Washington Assessment of Student Learning
<u>WVJHS.</u>	West Valley Junior High School
<u>WVSD.</u>	West Valley School District

CHAPTER 2

Review of Selected Literature

Introduction

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

1. History of Reading
2. Importance of Reading
3. No Child Left Behind
4. How Teens Learn
5. STAR Reading Test
6. Washington Assessment of Student Learning
7. Summary

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

History of Reading

When did the human species first learn to read? The better question may be when did the human race learn to draw? As cited on the Encyclopedia Americana web site (2005) from (<http://ea.grolier.com/cgi-bin/article?assetid=0103160-00>) humans learned to read approximately 30,000 years ago. The argument of what was more important has been left open to debate. A major step in the evolution of reading was the development of real written language. As far as is known, the people of Sumer, who inhabited Mesopotamia about 3000 B.C., first bridged the gap between sign writing and sound writing, although not without the help of their Indian, Egyptian, and Semite neighbors. This was done with a tool called a cuneiform which was used to stamp letter symbols into soft clay. The soft clay tablets were then baked so that they could be saved and read by others. In the sixth century B.C., Mediterranean cultures used a left to right method of writing that became standard. Hieroglyphs were later adopted as an Egyptian form of written communication. Called "sacred carving," hieroglyphs soon evolved into two forms of communication. The first was the Ideogram, a drawing of one object having special meaning. The second type of hieroglyph, called a Phonogram, intended to convey sounds related to the object drawn. Egyptians also developed a cursive script that was used for the bulk of written communicating. Hieroglyphics were printed on papyrus with blunt reed pens. The ability to read Egyptian hieroglyphist can be traced to the

Rosetta Stone which was found by one of Napoleon's soldiers on a campaign to Egypt in the early 1800's. The stone, engraved in Greek, hieroglyphics, and demotic Egyptian, has allowed scholars to decipher the early writing languages (<http://ea.grolier.com/cgi-bin/article?assetid=0103160-00>).

According to more recent authorities, modern day full writing systems have been defined as capable of expressing any concept that can be formulated in language, including words, syllables or phonemes (smallest units of speech). The final step in the journey of the written text produced development of the alphabet. The alphabet system allowed for signs to be used to totally express ideas and thoughts. Most writing systems in use are combinations of all the systems that have been developed through the years (encantra.msn.com, 2005).

The Importance of Reading

According to Gow (2006) reading has become the most important skill schoolchildren must acquire. Reading has been and for the foreseeable future will be the cornerstone for learning. People that learn to read are able to improve their lives, increase their knowledge, and are able to become useful citizens.

According to Rebora (2006) reading instruction should not stop in the early years but should be worked on as students continue the journey through middle and high school years. A Rand Corporation study concluded that many children are not moving beyond basic decoding skills to fluency and comprehension. Fifty three percent of college students must take remedial

courses in reading. The National Endowment for the Arts found young adults (ages 18-34) have gone from being the group most likely to read literature to the least likely. Reber described how the Carnegie Corporation and a group of educational researchers identified 15 key recommendations to help adolescents move beyond word recognition to more purposeful reading. Recommendations included: Teach comprehension strategies; reading material that offered a wide range of topics; organizing students by reading levels; and, small-group student discussion of texts and sustained silent reading periods.

In an article entitled "Studies Connect Behavior, Reading," Miles (2006) asserted that students who have higher reading levels are less likely to demonstrate aggressive behavior. Miles emphasized that social development and academic development were inextricably connected.

Are teachers getting the proper training from colleges? In a research publication entitled "Teacher Education Faulted on Reading Preparation," Denney (2006) reported that almost all of 73 institutions in the sample earned a 'failing' grade" because that most new teachers are not given the tools they need to be successful teachers of reading. Although, this was troubling the good news was that many of the schools were working to correct this weakness. The new classes were covering five key areas of reading instruction that the National Council on Teacher Education believed were necessary. These areas are:

1. phonemic awareness
2. phonics
3. vocabulary
4. fluency
5. comprehension.

(Manzo, Kathleen Kennedy (June 7, 2007) . Teacher Ed, Faulted on Reading Preparation/ Edweek, Vol. 25, Issue 39. Retrieved 7, 2006, (<http://www.edweek.org/ew/articles/2006/06/0739read.h25.html?qs=reading+importance>).

No Child Left Behind

More recent events have impacted the history of reading. For example the passage of the No Child Left Behind act (NCLB) passed by the US Congress in 2001 mandated higher reading standards for all American youth. This new education Act has added more stress to those in the education field. Some of the concerns raised involved funding needed to meet expectations of NCLB. Another concern has focused on differing levels of student ability. For example, schools with higher numbers of students with disabilities can cause the entire school to fall below NCLB standards.

According to Long (2004), in an article entitled "Moving Forward with No Child Left Behind," 38 states reported they were in significant financial trouble. Since the education budget in most states has become one of the largest budget areas, education budgets may need to be cut. This will hurt some NCLB target programs such as the Read First program.

What can be done with subgroups? As mentioned earlier, if one subgroup (e.g. , English as a Second Language students, special education students, etc.)

failed a required state test, the entire school would fail to meet adequate yearly progress (AYP) as required by NCLB. According to Young (2003) Montgomery School in New Jersey failed to meet AYP because two of 29 special education students did not attend class up to take the 11th grade test.

Another subject to be addressed affected instruction. Rebora (2006) in an article entitled "NCLB's, Effect" reported that 71 percent of schools have cut back on some subject to target math and reading. Although this may benefit math and reading, all other subject areas could be negatively impacted. The one good thing that NCLB has done was to spotlight the issue of education at a higher national level. In the long run, this may be good as long as educators strive to help students improve academic standards. Will this happen? Only time will tell.

How Teens Learn

Several researchers have investigated how people learn. Benjamin Bloom developed a taxonomy of learning theory in the late 1950's. The theory stated that learners go through six stages of development, including the following:

1. Knowledge: Remembering or recognizing something without necessarily understanding, using, or changing it.
2. Comprehension: Understanding the material being communicated without necessarily relating it to anything else.
3. Application: Using a general concept to solve a particular problem.
4. Analysis: Breaking something down into its parts.

5. Synthesis: Creating something new by combining different ideas.
6. Evaluation: Judging the value of materials or methods as they might be applied in a particular situation (Woolfolk, Anita. Educational Psychology. 1998).

Blooms Taxonomy explained the hierarchy that an individual progresses through while learning, and provided a classification system that all students progress through.. However, not all students progress through the taxonomy at the same rate. With correct teaching methods in place, a student can be helped to move from one level to the next.

Learning research conducted by Erikson, as cited in Woolfolk, focused on the psychosocial development of teenage growth, including areas of identity versus role confusion. The teenager must achieve identity in occupation, gender roles, politics, and religion. Teenagers will also progress through a psychosocial stage of intimacy versus isolation. During this stage, the young adult must develop intimate relationships or suffer feelings of isolation. These two stages make the teenage years a challenging period in life.

Another learning theory mentioned was Howard Gardner's theory of multiple intelligences. This authority organized learning styles into seven areas as follows:

1. Logical-mathematical: Sensitivity to, and capacity to discern logical or numerical patterns; ability to handle long chains of reasoning.

2. Linguistic: Sensitivity to the sounds, rhythms, and meanings of words; sensitivity to the different functions of language.
3. Musical: Ability to produce and appreciate rhythm, pitch, and timbre; appreciation of the forms of musical expressiveness.
4. Spatial: Capacity to perceive the visual-spatial world accurately and to perform transformations on one's initial perceptions.
5. Body-kinesthetic: Ability to control one's body movements and to handle objects skillfully.
6. Interpersonal: Capacity to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people.
7. Intrapersonal.: Access to one's own feeling and the ability to discriminate among them and draw on them to guide behavior; knowledge of one's own strengths, weakness, desires, and intelligence. (Woolfolk)

Although students may be stronger in one or more areas of intelligence, the more learning styles a student is exposed to while learning about a new subject, the greater chance he/she will have of achieving success. (Woolfolk)

STAR Reading Test

The STAR Reading Test was produced by Renaissance Learning to measure a student's ability to read. A computer-based test, the STAR exam automatically adjusts to the students' reading grade level. The test has been used to help both student and teacher select reading material the student will be able to

read successfully. The test has provided two types of scores: Criterion-referenced and norm-referenced. The criterion-referenced test can be adapted to standards set by the school district or curriculum. The norm-referenced scores compare students' scores with other students that have taken the test. The test consisted of twenty-five multiple-choice questions. Questions are in two formats, vocabulary-in-context, or authentic text passage. The test can also be used several times over the course of a school year to measure a student's progress. (Renaissance Learning, 2002).

STAR Reading has six scores that are printed each time a student takes the test, including: Scaled Scores, Grade Equivalent, Instructional Reading Level, Percentile Rank, Normal Curve Equivalent Scores, and Zone of Proximal Development. Scaled Scores are used to compare the student over grade levels. Grade Equivalent Scores show how each student compares with other students nationally. Instructional Reading Level results let student and teacher know the grade level they can read at with at least 80 percent accuracy. Percentile Rank Scores compare each student from 1 to 99 with other students throughout the country. Normal Curve Equivalent Scores are used predominantly for research. The last of the scores is the Zone of Proximal Development which provide student and teacher an idea of the readability range of the student. This zone should not be too easy but also not too difficult for the student (Understanding Star Assessment, 2002).

The National Center on Student Progress Monitoring (compared computer-based programs to determine if they do what was advertised. STAR Reading met the standard in the following areas: Reliability, Validity, Alternate Forms, sensitive to Student Improvement. The two areas that the STAR Test did not meet the standard were Average Yearly Progress Benchmarks and Improving Student Learning or Teacher Planning.

(<http://www.studentprogress.org/chart/chart.asp>.2006)

In an article titled, "Computerized Testing At Its Best," in Media & Methods (2005), Hamm reinforced a claim that STAR Reading made by suggesting that, computerized reading tests adjust the difficulty of test questions to each student's achievement level while the student is taking the test. Hamm explained how teachers can use this information almost instantly to help make instructional decisions in a very timely manner.

Washington Assessment of Student Learning (WASL)

The WASL, a high stakes assessment test administered to all Washington State 4th, 7th, and 10th grade students has been adapted by the State Legislature to determine academic proficiencies in reading, writing, math and science.

With the year 2008 quickly approaching, everyone involved with the WASL has become concerned. Will students be able to graduate from high school? If not, what will be done with them? These are just two questions that are going to have to be answered in the next few years. The debate about the

WASL will continue during this time. Results for 2006 for this high stakes state wide examination did show progress. Reading and Writing scores both showed significant improvement. Mathematics showed a slight gain statewide but needs much work for the students to meet standard (Office of Superintendent of Public Instruction (OSPI, 2006).

Scores reported on the OSPI web page indicated the following results for Washington students who completed the tenth grade WASL tests. In Reading, 60,873 of 71,136 students met or exceeded standards; 43,758 scored a level 4, the highest score. The 2006 test results also showed a two-thirds reduction in students scoring at the lowest level.

Writing showed improvement also; 59,196 of 70,812 met or surpassed the standard. Approximately 10,000 more students passed the writing test than did so in 2005. There was also a two-third reduction in students scoring at the lowest level (OSPI).

Mathematics testing results showed only 37,866 of 70,255 passed. There was improvement in the lowest level with a one-third reduction in this area. As strongly indicated, student preparation for the math exam needs major improvement (OSPI).

Why is this important? Students will need to pass all three sections of the WASL reading, writing, and mathematics to earn a Certificate of Academic Achievement to graduate from high school. Students will also need to have a fifth

year plan describing post graduation intentions and will have to complete a Senior Project. Students will have several other options to indicate they have made sufficient progress toward graduation.

Summary

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

1. The history of reading, dating back 30,000 years, has been influenced by ancient Indian, Egyptian, Sumer, Greek, and Roman cultures, as well as by present day NCLB legislation in America.
2. Literacy has been identified as a fundamental skill essential for success in all academic subjects and for quality of life.
3. The NCLB Act has mandated higher academic standards for all American students.
4. With the understanding that students learn in a variety of ways, teachers should be encouraged to use a numerous instructional methods and approaches.
5. The STAR Reading test, produced by Renaissance Learning has been used to help teachers select material needed to help students read successfully.

6. The WASL high stakes test has required that students earn a Certificate of Academic Achievement to graduate from Washington High Schools.

CHAPTER 3

Methodology and Treatment of Data

Introduction

The purpose of this correlational research study was to determine the extent to which eighth grade student STAR Reading scores correlated with WASL mathematics scores at WVJHS. To accomplish this purpose, a review of selected literature was conducted, essential baseline data were obtained, and related conclusions and recommendations were formulated.

Methodology

The study utilized a Person r statistical analysis to calculate correlation involving two sets of scores (i.e., 7th grade WASL Mathematics scores and 8th grade Star Reading scores.

Treatment of Data

The researcher gathered statistical data for use in conducting the study in April, 2006 and again in September, 2007. Data were then analyzed using the STATAPAK statistical software, a data analysis program which accompanied Educational Research: Competencies for Analysis and Application (Gay & Airasian, 2003). The researcher utilized a Pearson r statistical analysis to assess the hypothesis. The following formula was used to test for significance:

$$r = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sqrt{\left(\sum X^2 - \frac{(\sum X)^2}{N} \right) \left(\sum Y^2 - \frac{(\sum Y)^2}{N} \right)}}$$

Participants

Participants involved in the study included 16 7th and 8th grade students enrolled in the writers advisory class at WVJHS. Seventh grade student WASL Mathematics scores were compared with 8th grade STAR Reading scores over a two-year period, covering 2006 – 2007.

Instruments

The present study involved two instruments. The WASL Mathematics test was administered to 7th grade students during April, 2006. The STAR Reading test was administered to 8th grade students during September, 2007.

Design

Essential baseline data obtained for use in the present study included individual 7th grade WASL Mathematics scores from April, 2006 and STAR Reading scores for 8th grade students from September, 2007. The Pearson r product movement correlation coefficient was used to measure the relationship

between the two variables. The Pearson r took into account each student's score for both WASL Mathematics and STAR Reading instruments.

Procedure

Procedures employed in the present study evolved in several stages. During November 2005, the researcher (Eric R. Lunden) requested and obtained permission to undertake the present study from West Valley Junior High Principle, Mr. Steve Smith. Throughout the 2005-2006 school year, the researcher obtained WASL mathematics scores of participating 7th grade students. During the 2006-2007 school year, the researcher obtained STAR Reading scores for participating 8th students. During the spring of 2007, WASL mathematics and STAR reading scores of participating students were compared to determine the extent to which a possible correlation existed. During the summer of 2007, data analysis utilizing Pearson r correlation coefficient was completed and related conclusions and recommendations were formulated.

Summary

Chapter 3 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 and analyzed were also presented.

CHAPTER 4

Analysis of the Data

Introduction

The present study sought to determine the extent to which 7th grade WASL Mathematics scores correlated with 8th grade student STAR Reading scores at West Valley Junior High School.

Description of the Environment

Conducted at WVJHS in Yakima Washington during the 2006-2007 school year, the study included 16 7th and 8th grade male and female students. A Pearson r correlation coefficient statistical analysis was utilized to compare student WASL Mathematics and STAR Reading scores.

Hypothesis/Research Question

The assumption was made there would be a high correlation between eighth grade student STAR reading scores and seventh grade student WASL mathematics scores.

Results of the Study

Table 1 has provided a summary of statistics and values derived from the Pearson Product Movement Correlation anylisis. As shown in Table 1, the Pearson r's score was 0.71, and Degrees of Freedom was 14. Additionally, analysis of the sixteen students WASL Mathematics scores (Y) and STAR Reading scores (X) revealed a mean of Y scores at 389.75 and a mean of X scores

at 8.62. Table 2 has provided a comparison of Mathematics and Reading scores for the 16 participating students.

Table 1

Pearson Product Movement Correlation Findings

<u>Statistics</u>	Values
Number of items	16
Sum of X	138.0000
Sum of Y	6236.0000
Sum of Squared X	1378.68
Sum of Squared Y	2457892.00
Mean of "X" Scores	8.62
Mean of "Y" Scores	389.75
Sum of Sum of XY	55394.80
Person's r	0.71
Degrees of Freedom	14

Table 2

STAR Reading and WASL Mathematics Scores for 7th and 8th Grade Students

Student Identification Number(*)	STAR Reading Scores, 8 th Grade Students	WASL Mathematics Scores, 7 th Grade Students
1	12.9	407
2	12.9	436
3	12.9	440
4	11.6	400
5	11.2	329
6	10.6	444
7	9.6	433
8	9.6	382
9	9.3	407
10	8.2	404
11	7.0	371
12	6.7	394
13	5.9	366
14	5.7	397
15	2.3	329
16	1.6	297

*As shown in Table 2 student participants were identified by number for purposes of confidentiality. The next two columns list STAR Reading scores and WASL mathematics scores for each student.

Findings

At 14 degrees of freedom, the values of the correlation coefficient indicated levels of significance at 0.05 and 0.01 (i.e. $\pm .4975$ and $.7420$ respectively). The Pearson r correlation coefficient produced a value of + 0.71. Accordingly the hypothesis was accepted.. One may conclude from these findings

that a high correlation existed between 7th grade mathematics and 8th grade reading scores.

Discussion

The researcher considered how student STAR Reading test scores could be used to predict how a well student might perform on the WASL mathematics exam. In the present study a strong relationship was found to exist between the two variables.

Summary

Chapter 4 included discussion of the environment, ^{synthesis} hypostasis, results of the study, finding and discussion. Data analyzed supported the hypothesis that there was a high correlation between WASL mathematics scores and Star Reading scores.

CHAPTER 5

Summary, Conclusions and Recommendations

Summary

The purpose of this correlational research study was to determine the extent to which eighth grade student STAR Reading scores correlated with WASL mathematics scores at WVJHS. To accomplish this purpose, a review of selected literature was conducted, essential baseline data were obtained, and related conclusions and recommendations were formulated.

Conclusions

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

1. The history of reading, dating back 30,000 years, has been influenced by ancient Indian, Egyptian, Sumer, Greek, and Roman cultures, as well as by present day NCLB legislation in America.
2. Literacy has been identified as a fundamental skill essential for success in all academic subjects and for quality of life.
3. The NCLB Act has mandated higher academic standards for all American students.
4. With the understanding that students learn in a variety of ways, teachers should be encouraged to use a numerous of instructional methods and approaches.

5. The STAR Reading test, produced by Renaissance Learning has been used to help teachers select materials needed to help students read successfully.
6. The WASL high stakes test has required that students earn a Certificate of Academic Achievement to graduate from Washington High Schools.
7. A Person r correlation coefficient analysis concluded there was a high correlation between 7th grade WASL Mathematics and 8th grade STAR Reading scores at WVJHS.

Recommendations

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

1. To understand the history of reading educators should be aware of the influence of earlier cultures as well as present day NCLB legislation.
2. To achieve success in all academic subjects and for quality of life, educators should embrace literacy as a fundamental skill.
3. To encourage higher academic standards for all American students, educators should support implementation of the NCLB Act.
4. Understand that students learn in numerous ways, teachers should use a variety of instructional approaches.
5. To help students read successfully, schools/school districts are encouraged to adopt the Star Reading /Renaissance Learning curriculum.

6. To earn a Certificate of Academic Achievement from a Washington high school, educators must hold students responsible for mastering basic components of the WASL exam.
7. Schools and school districts interested in the correlation of student mathematics and reading scores 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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