The Effectiveness of Dual Language on Student

Achievement on the 4th grade

Washington Assessment of Student Learning

A Special Project

Presented to

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FACULTY APPROVAL

The Effectiveness of Dual Language on Student

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Approved for the Faculty

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ABSTRACT

The purpose of this experimental research study was to determine whether a Dual Language program would contribute significantly to the success of student achievement on the Washington Assessment of Student Learning Reading component compared to a non Dual Language traditional program. To accomplish this purpose a review of literature was conducted, vital baseline data was obtained and analyzed, from which related inferences, conclusions and recommendations were formulated. An analysis of the data indicated that students participating in a 4th grade Dual Language program generally performed better on the Washington Assessment of Student Learning Reading component than students participating in a 4th grade non Dual Language traditional program. In addition, students participating in a Dual Language program have significantly higher attitudes and beliefs on learning and future career opportunities than students participating in a non Dual Language traditional program.

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CHAPTER 1

Introduction

Background for the Project

In the researcher's school district, there were three elementary schools, and one was designated as a Dual Language building. The elementary school adopted a 50-50 Dual Language Model in the 2004 – 2005 academic school year. Each grade level at the school consisted of four teachers, two of which at each grade level were designated as a Dual Language team. One member of each team was fluent in reading, writing and speaking in academic and social Spanish and taught the Spanish portion of the Dual Language program. The other member of the Dual Language team was fluent in reading, writing and speaking academic and social English. The original program was slated to be a kindergarten through sixth grade program; however, in the spring of 2009, the school district decided to move the sixth grade into the middle school during the 2010 school year. This decision resulted in a minor alteration to the program which then focused on kindergarten through fifth grade.

Dual Language has been perceived or thought of as an English Language Learner program, and some school districts have used the program as such. In the researcher's school district, the title of Dual Language was used in place of the title Two-Way Immersion. In addition, the partner or native language was Spanish.

The researcher discovered three forms of Dual Language that have been taught: (a) Full Immersion, (b) Partial Immersion and (c) Differentiated Immersion. Full Immersion was a ninety percent/ten percent immersion program in which the partner language was used most or all of the day in the primary grades (eighty to ninety percent), and in which all students learned to read in the partner (native) language first. The amount of English instruction was gradually increased until English and the partner language were used for fifty percent of the instructional time throughout the school day. This change was usually initiated by third grade.

Partial Immersion was a fifty-fifty immersion program in which the partner (native) language and English language were used equally throughout the program. Partial Immersion differs from full immersion in that half of the academic school day is spent in the native language and the other half of the academic school day is spent in the acquiring language. In Partial Immersion students learned to read in both English and the partner (native) language. Dual Language is a form of partial immersion. The student learns to read first in the native language and as the student master's the native language the student was then introduced to the acquiring language which is usually initiated by third grade. The student then continued to participate in both languages for reading instruction.

Differentiated Dual Language programs included separating students from each language group for a portion of the day for formal literacy instruction. The students were taught to read in the primary language. The researcher also discovered variations of Dual Language programs.

Variations included whether students had one teacher instructing in English only and another teaching in the partner (native) language. An additional dissimilarity was that one teacher taught in both languages during different times, such as not in a block schedule. Also, in question was whether the program was implemented for whole school involvement, or designed for a particular strand within a school. A final consideration was in regards to a third language being taught for part of the school day, such as French, Japanese or Korean.

A large percentage of students in the researcher's district participated in the Dual Language Program that was used as a replacement for English Language Learners. This was not the original intent of the program, thus overall student outcomes were adversely impacted. All English Learners were given the opportunity to take the Washington Assessment of Student Learning and the Measure of Student Progress in Spanish, which may have impacted the student's scores.

Statement of the Problem

The 50/50 Dual Language program contributed significantly to the success of student achievement for the Reading portion of the Washington Assessment of

Student Learning. The Dual Language program was an effective and affective method of instruction that built on the student's prior knowledge in both native and acquiring languages. This methodology of instruction contributed to positive student gains in outcomes on the reading portion of the Washington Assessment of Student Learning. Students not participating in the Dual Language Program showed only minimal gains.

Purpose of the Project

The objective of the project was to prove that Dual Language Programs effectively and affectively helped students pass the Washington Assessment of Student Learning Reading component at a greater degree of success than students enrolled in an English only curriculum. Therefore, students that participated in the Dual Language Program were more successful than non participating students on the Washington Assessment of Student Learning Reading component. Students participating in the Dual Language Program made significant effective and affective personal gains in student learning.

Delimitations

Students enrolled in the entirety of the Dual Language program through the entirety of Dual Language and had taken the Washington Assessment of Student Learning Reading component in the fourth grade and were compared to students enrolled in the non Dual Language program and had taken the Washington Assessment of Student Learning Reading component. The scores for the fourth

grade Washington Assessment of Student Learning Reading component were compared to verify that students that participated in the Dual Language program had greater achievement levels than students that had not participate in the program.

The demographics in May of 2009 of the school district researched included a student body count of 3,574. Of the 3, 574 students, 1,811 were male students and 1, 714 were female students. Hispanic students consisted of 80.9% of the student population, Caucasian 17.4%, Asian 0.5%, Black 0.4%, American Indian/Native American 0.3%, and Pacific Islander was 0.1%. Seventy-seven percent of the student body was qualified for Free or Reduced lunch, while 9.7% were designated to be served by Special Education programs, 35.6% qualified for Bilingual Programs and 15.1% were Migrant students (OSPI website).

Assumptions

All students were assessed using the following test: the Washington Assessment of Student Learning Reading component. All students in the Dual Language Program and regular curriculum based classrooms used the Open Court reading curriculum from the second grade to sixth grade, either in Spanish and or the English format. All students were surveyed to gather affective measures on personal learning experiences in the fourth grade. All students that participated in the Dual Language Program volunteered for the program and were not slotted into Dual Language as an alternative for English Language Learning instruction. All

teachers in the Dual Language Program had been trained in the implementation of the Dual Language Program.

Hypothesis or Research Question

Fourth grade students participated in the 50/50 Dual Language program will make greater than expected gains on the Washington Assessment of Student Learning Reading component achievements compared to fourth grade students that did not participate in the 50/50 Dual Language program on the Reading portion of the state assessment. Students participating in the 50/50 Dual Language program will have a more effective and affective learning experience than students who did not participate in the Dual Language program. Students participating in the Dual Language Program will have better personal reflections about student learning than students not participating in the program.

Null Hypothesis

Fourth grade students that participated in the 50/50 Dual Language program will not make greater than expected gains on the Washington Assessment of Student Learning Reading component achievements compared to fourth grade students that did not participate in the 50/50 Dual Language program on the Reading portion of the state assessment. Students participating in the 50/50 Dual Language program will not have a more effective and affective learning experience than students who did not participate in the Dual Language program.

Students participating in the Dual Language Program will not have better personal reflections about student learning than students not participating in the program.

Significance of the Project

In the researcher's district, the study was initiated to show the significance of using Dual Language to help students to have significant gains on the Washington Assessment of Student Learning Reading component. The findings of this project could possibly offer alternative practices to other students not participating in the Dual Language Program and not meeting the state's assessment requirements. The district could implement Dual Language in the other two elementary schools as part of the normal curriculum and programs. The success of the project would give support to the concept of Dual Language Instructional Programs for all students in the district. If the assessment results how significant gains then the study will have provided essential data for the school district to consider for the support of the program. Should the project not support the concept that students have more success on the fourth grade state assessments, the district might look at other options, such as discontinuing the Dual Language Program or using a different program method altogether.

Procedure

Washington Assessment of Student Learning Reading component scores were collected for the year of 2008-2009, and the data have been examined and analyzed to determine whether the 50/50 Dual Language program was effective

and affective to student learning and achievement. Analysis of data included the fourth grade Washington Assessment of Student Learning scores for the Reading component of the state test. Former 4th grade students completed a survey dealing with student input on the affective and effective benefits of the Dual Language Program.

Definition of Terms

Dual Language. According to the Center for Applied Linguistics, Dual Language is a general term that covers foreign language immersion for native English speakers and is a developmental bilingual program for native speakers of the partner language. Dual Language is also known as two-way immersion programs that combined these two populations, as well as heritage language programs.

t-test. An inferential statistics technique used to determine whether the means of two groups are significantly different at a given probability level.

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

Two Way Immersion. Programs in which students learn in the native language as well as an acquiring language. Often this term is used in conjunction with Dual Language Programs.

THE EFFECTIVENESS OF DUAL LANGUAGE

Acronyms

CAL. Center for Applied Linguistics.

ELL. English Language Learner.

L1. Primary language.

L2. Second language or acquiring language.

NABE. National Association of Bilingual Education.

NCLB. The No Child Left Behind Act of 2001 enacted by Congress to hold

states responsible to have a state assessment in order for students to graduate

high school.

OSPI. The Office of the Superintendent of Public Instruction, located in

Olympia Washington.

WASL. The Washington Assessment of Student Learning from 1997 through

the summer of 2009, was used as a means of measurement for meeting the No

Child Left Behind Act of 2001 as well as the Washington Education Reform

Law of 1993.

CHAPTER 2

Review of Selected Literature

Introduction

The review of literature and research summarized in chapter 2 was organized

to address:

- Definitions of Dual Language

- Different Models of Dual Language

- Purpose and Effectiveness of Dual Language Programs

- Affective Characteristics of Dual Language

- Summary

Data current primarily within the last 10 years were identified through online

searches through the Center for Applied Linguistics, Educational Journals,

and the internet. A hand search of selected materials was also conducted.

Some of the fact sheets did not have dates or authors, but were acquired from

reputable sources.

Definitions of Dual Language

Lindholm-Leary states, two-way immersion programs, also known as Dual

Language programs, instruct English Language Learners (ELL) and native

English speakers in academic content areas in both languages in an incorporated

environment (Lindholm-Leary (2004/ 2005). Dual Language is also known as or

referred to as: two way immersion (TWI), bilingual immersion (BI), two-way bilingual (TWI), or Dual Language immersion (DLI). The U.S. Department of Education refers to this type of program as Developmental Bilingual Education (Fortune, & Tedick, 2009).

Two-way immersion is an instructional method that approaches integrating native English speakers with native speakers of another language, which is usually Spanish. The students are instructed in both languages. Two-way programs "integrate native English speaking students (including Hispanic students) and English Language Learning students for all content instruction in two languages" (Lindholm-Leary. (2003, July/August). The goals of two-way immersion programs include promoting high levels of bilingual proficiency, academic achievement and positive attitudes toward school, self and others. According to Lindholm-Leary (2003), two-way immersion programs, also known as Dual Language programs, instruct English Language Learner's (ELL's) and native English speakers in academic content areas in both languages in an incorporated environment.

Two-way bilingual immersion programs generally include four crucial areas, a) instruction and class work take place in both languages, with the non-English language used for at least 50% of the students' instructional time, b) The students' academic day includes periods in which only one language is used in the

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classroom with no interpretation, c) both English Language learners and native English speakers do work in both languages in a balanced quantity, and d) English language learners and native English speakers are together for a large portion of content instruction (Lindholm-Leary, (2004/ 2005).

<u>Different Models of Dual Language</u>

Two-way immersion programs are not considered traditional bilingual programs as the model teaches both native English and non native English speakers. A benefit of two way immersion programs includes students learning to have an appreciation of people from different cultures. Two-way immersion also shows an increase in parent involvement of the student's education. There are several different models of Dual Language that are used successfully, such as the 90/10 model, the 80/20 model and the 50/50 model. According to the Center for Applied Linguistics (CAL), there were three primary types of Dual Language programs, including: Full Immersion, Partial Immersion, and Differentiated Immersion. Full Immersion Dual Language Programs was a ninety percent/ten percent immersion program in which the partner language was used most or all of the day in the primary grades (eighty to ninety percent), and in which all students learned to read in the partner (native) language first. In the 90/10 model and the 80/20 model programs, the minority language is used for academic instruction for eighty to ninety percent of the academic school day. The amount of English

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instruction was gradually increased until English and the partner language were used for fifty percent of the instructional time throughout the school day. This change was usually initiated by third grade.

Partial Immersion was a fifty-fifty immersion program in which the partner (native) language and English language were used equally throughout the program. In Partial Immersion programs the amount of academic instructional time is equal in use of the two languages for all grade levels. Partial Immersion differs from full immersion in that half of the academic school day is spent in the native language and the other half of the academic school day is spent in the acquiring language. In Partial Immersion students learned to read in both English and the partner (native) language. Dual Language is a form of partial immersion. The student first learns to read in the native language and as mastery is gained the individual is introduced to the acquiring language which is usually initiated by third grade. The student then continued to participate in both languages for reading instruction.

Differentiated Dual Language programs included separating students from each language group for a portion of the day for formal literacy instruction. The student's were taught to read in the primary language first for formal literacy instruction. Variations of Differentiated Dual Language included whether students had one teacher instructing in English only and another teaching in the

partner (native) language or one teacher instructing in both languages. An

additional dissimilarity was that one teacher taught in both languages during

different times, such as not in a block schedule. Also, in question was whether

the program was implemented for whole school involvement, or designed for a

particular strand within a school. A final consideration was in regards to a third

language being taught for part of the school day, such as French, Japanese or

Korean and when in the academic school day it was taught.

Purpose and Effectiveness of Dual Language Programs

According to Lindholm-Leary, one major purpose of Two-way Bilingual

immersion, or Dual Language Education programs, was to provide a high quality

educational experience for language minority students and to promote higher

levels of academic achievement. Two-way programs "integrate native English

speaking students (including Hispanic students) and English Language Learning

(ELL) students for all content instruction in two languages" (Lindholm-Leary,

(2003, July/August). The goals of two-way immersion programs included

promoting high levels of bilingual proficiency, academic achievement and

positive attitudes toward school, self and others. Lindholm-Leary conducted a

study to examine the influences that participation in a two-way bilingual

elementary program had on graduates' attitudes toward proficiency and use of

Spanish. Another major reasons for helping students to become bilingual is that

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the demographics of the United States are changing and with those changes so are the job and career opportunities. The Latino population in the United States is expected to reach 24% of the general population by the year 2050 (2004/2005). Lastly, another reason to encourage students to become bilingual is that Bilingual Education can lead to higher academic achievement.

Two way immersion programs must have demonstrated a shared belief that all children can learn, and was the paramount principle that empowered students, especially English language learners (Howard, Sugarman, & Christian. (2003). Studies indicate that both English and Spanish native speaking students progressed to high levels of reading and writing in both languages (Howard, Christian, & Genesee, 2003) and both native English language learners and native English speakers in dual language immersion programs demonstrated large gains in their reading test scores over time. "Studies indicate that Bilingual education leads to academic achievement and students can develop academic skills equal to or greater than the skills of their peers educated in English only classrooms" (Lindholm-Leary (2004/2005).

According to Lindholm-Leary, there were six factors that influenced success for students participating in Bilingual or Dual language immersion programs: School Environment, Curriculum and Instruction, Program Planning, Assessment and Accountability, Teacher quality and familiarity with bilingual education and

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Family Involvement. Administrators of school's with Bilingual or Dual Language Immersion programs must institute a clearly defined vision for student achievement with goals that will enhance student outcomes. A cohesive and collaborative environment should be established with faculty, parents, students and the community.

Any and all curriculum must be directly aligned with state standards and assessments. Instruction and curriculum should be meaningful as well as academically challenging for all students. "The curriculum needs to reflect and value the cultures of all students involved, and it must provide structured and unstructured opportunities for students to speak both languages" (Lindholm-Leary (2004/ 2005). An environment conducive to learning requires equity among all groups, which means that the treatment of all students participating within the program includes justice, fairness and lack of prejudice- must be incorporated at the district, school and classroom level. Equity was essential and crucial in the two-way immersion program with an emphasis on integrating students of different ethnic, language and social backgrounds.

Scope, sequence and alignment of curriculum with state standards were essential for program planning. Planning should be developmentally appropriate and include practices and language proficiencies in both languages that are being taught. Planning should include both Bilingual or Dual Language program

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teachers and non Bilingual or Dual Language teachers in order to assure students are being held to the same expectations and standards.

Dual Language programs should include multiple measures of assessment and accountability in both languages in order to show progress toward bilingual and biliteracy goals. Students participated in Dual Language programs should also be assessed in content related areas as well as in language development.

In order to have a highly effective Dual Language program, high quality teachers need to be familiar with bilingual education. Teachers should be well versed in the immersion model that is being implemented and have appropriate instructional strategies to meet the needs of diverse students. Teachers need to have knowledge of bilingual education theories, second language development, cooperative learning, assessment and education equity (Lindholm-Leary, 2004/2005).

Lastly, family involvement is essential in order to create an environment where parents from all cultural backgrounds feel valued and welcome to contribute. When parents are involved, they often "develop a sense of efficacy that is communicated to children with positive academic consequences-especially in the case of language minority children" (Howard, Sugarman, Christian, Lindholm-Leary, & Rogers, 2007). Effective programs tend to incorporate a variety of home school connection activities that encourage parent involvement.

Affective Characteristics of Dual Language

"Two-way bilingual immersion programs go beyond language proficiency to give students academic confidence and broader cultural awareness" (Lindholm-Leary, 2004/2005). In a study conducted on secondary students who studied in a bilingual immersion program, the students expressed very positive attitudes toward school and bilingual immersion programs. A majority of students "believed that learning through two languages trained them to think better and helped them do better in school" (Lindholm-Leary, 2004/2005). The study indicated that students gave particularly positive responses, with most feeling valued in the immersion program and pleased that they participated in it. Most of the students responded they would recommend a bilingual immersion program to other students. A greater part of the students believed that by participating in a bilingual immersion program, they were academically challenged, the program gave them more confidence and a better education than the standard education programs could offer. Students who participate in Dual Language Immersion programs often feel their culture, ethnicity and language are a valued part of the community.

Another study conducted by Lindholm-Leary and Borsato (2001) examined bilingual immersion program students attitudes toward the program. The majority of students agreed that learning two languages made them smarter as well as

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enhanced their ability to learn. Participating in a bilingual immersion program also helped students do better in school. Students expressed that learning two languages gave them a feeling of accomplishment and confidence to excel in school. Bilingual immersion programs left many students feeling challenged to do better in school than they might have done otherwise. Many students in the survey determined that learning through two languages made it possible for them to get a superior education and that their bilingualism would improve their prospects of getting a better job (Lindholm-Leary & Borsato, 2001, p. 17-19).

<u>Summary</u>

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

1. Dual Language was also known as or referred to as: two way immersion (TWI), bilingual immersion (BI), two-way bilingual (TWI), or Dual Language immersion (DLI). The U.S. Department of Education refers to this type of program as Developmental Bilingual Education. Dual language has been used in the United States for over 30 years and has been a proven method for students to reach higher success in learning.

2. There were several different models of Dual Language that were used successfully, such as the 90/10 model, the 80/20 model and the 50/50 model. There were three primary types of Dual Language programs,

including: Full Immersion, Partial Immersion, and Differentiated Immersion. Variations included whether students had one teacher instructing in English only and another teaching in the partner (native) language. An additional dissimilarity was that one teacher taught in both languages during different times, such as not in a block schedule. Also, in question was whether the program was implemented for whole school involvement, or designed for a particular strand within a school. A final consideration was in regards to a third language being taught for part of the school day, such as French, Japanese or Korean.

3. The major purposes of Dual Language Education was to provide a high quality educational experience for language minority students and to promote higher levels of academic achievement for participants compared to their peers who did not participate in a dual language program, to help students to become bilingual and biliterate because of the changes in the demographics in the United States and with those changes were job and career opportunities.

4. Most students who participated in Dual Language immersion programs gained a sense of confidence in their abilities to succeed, pride in their culture and a sense of achievement in school. A majority of students "believed that learning through two languages trained them to think better

and helped them do better in school" (Lindholm-Leary, December 2004/January 2005). Many students felt that Dual Language offered them an advantage over non bilinguals in the job markets of today.

CHAPTER 3

Methodology and Treatment of Data

Introduction

The purpose of this experimental research study was to determine the extent to which 4th grade students who received instruction in a Dual Language program exceeded the scores of 4th grade students who did not receive instruction in a Dual Language program on the Washington Assessment of Student Learning on the Reading component portion. To accomplish this purpose, a review of literature was conducted. Additionally, essential baseline data were obtained and analyzed, from which related inferences, 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.

Methodology

The researcher utilized a t-test for independent samples to assess the effectiveness of a Dual Language program to improve 4th grade Reading component scores on the Washington Assessment of Student Learning compared to the effectiveness of a non Dual Language traditional program for students that participated in the research study. The Reading component portion of the

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Washington Assessment of Student Learning scores provided essential baseline data needed to formulate inferences, conclusions and recommendations. The t-test determined whether the means of the two independent samples were significantly different. Significance was determined for $p \geq$ at 0.05. The researcher also conducted a qualitative survey on affective characteristics that students completed in regards to experiences and beliefs about learning.

Participants

Participating students in this research study included 43 fourth grade students participating in a Dual Language program and 44 fourth grade students participating in a non Dual Language program. The students were from a low income school district in the center of the Columbia Basin in Eastern Washington, where 80.9 % of students are Hispanic and 77.2% qualify for Free or Reduced Meals.

Instruments

For the purpose of this research study Washington Assessment of Student Learning Reading component scores for 2008-2009 were gathered for 4th grade Dual Language students and for 4th grade Non Dual Language students. The scores were obtained from the instructional coach at the participating elementary school. Hard copies of the qualitative affective survey were acquired and tallied from participating students in both the Dual Language program and the non Dual

Language traditional program. The collected data was then used with STATPAK and Excel to determine the outcomes.

Design

This experimental research design utilized a t-test for independent samples to determine whether the means of the Dual Language and non Dual Language participating groups were significantly different on the Reading component portion of the Washington Assessment of Student Learning. A pie chart was used to depict the affective effect on student's views and attitudes, using the tallied results from the qualitative survey.

Procedure

Procedures employed in the current study evolved in several stages including:

1. The researcher collected 2008-2009 Washington Assessment of Student Leaning Reading component scores, The Dynamic Indicators of Basic Early Literacy Skills benchmark scores, and the North West Evaluation Association scores for 4th grade Dual Language and Non Dual Language classrooms from the instructional coach of the participating school. It was then discussed and decided with the instructional coach that The Dynamic Indicators of Basic Early Literacy Skills and North West Evaluation Association scores would not be necessary to the research design.

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2. The researcher met with the instructional coach of the participating school to align the scores and discussed the importance of the affective portion of Dual Language. The instructional coach suggested that the researcher create a qualitative survey to measure the effect of affective issues on learning.

3. Following the meeting with the instructional coach, the researcher created a survey to measure the affective effects of Dual Language on student beliefs. The survey was then translated into Spanish to meet the needs of Spanish readers within both the Dual Language program and the non Dual Language tradition program. The researcher gave the instructional coach the survey to review. The instructional coach then had students fill out the surveys and returned them to the researcher.

4. After receiving the surveys, the researcher tallied student responses to the qualitative survey and created a pie chart to depict the results of both Dual Language students and non Dual Language students participating within the scope of this research.

5. The researcher conducted a t-test to determine if there was a significant difference in the scores of students who received instruction with a Dual Language program compared to students who did not receive instruction with a Dual Language program.

Treatment of the Data

The researcher gathered 2008-2009 Washington Assessment of Student Learning Reading component data for the study, using a t-test which was included in the STATPAK software. This software was presented in the course of this study. A t-test was for administered for independent samples to assess scores of Dual Language participants and Non Dual Language participant's scores for the Washington Assessment of Student Learning Reading component. The following formula was used to test for significance:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{SS_1 + SS_2}{n_1 + n_2 - 2}\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

The researcher gathered qualitative data in the form of a survey from 87 fourth graders to calculate the affective qualities of a Dual Language program on student beliefs and confidences in learning.

Summary

Chapter 3 provided a description of the research methodology in effect in the study, participants, instruments used, research design, and procedures utilized. Details concerning treatment of the data obtained and analyzed were also present.

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The participants of the research study included 43 fourth grade students in a Dual Language program and 44 fourth grade students in a non Dual Language traditional program. Student names were omitted to ensure privacy and confidentiality. The Washington Assessment of Student Learning Reading component scores were tested five times to assure the included results, using the STATPAK statistical program. The Excel program was also used to depict tables and graphs with the included data.

CHAPTER 4

Analysis of the Data

Introduction

The objective of the project was to prove that Dual Language Programs effectively and affectively helped students pass the Washington Assessment of Student Learning Reading component at a greater degree of success than students enrolled in an English only curriculum. Therefore, students that participated in the Dual Language Program were more successful than non participating students on the Washington Assessment of Student Learning Reading component. Students participating in the Dual Language Program made significant effective and affective personal gains in student learning.

Description of the Environment

Students enrolled in the entirety of the Dual Language program through the entirety of Dual Language and had taken the Washington Assessment of Student Learning Reading component in the fourth grade and were compared to students enrolled in the non Dual Language program and had taken the Washington Assessment of Student Learning Reading component. The scores for the fourth grade Washington Assessment of Student Learning Reading component were compared to verify that students that participated in the Dual Language program

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had greater achievement levels than students that had not participate in the program.

Hypothesis/Research Question

Fourth grade students participated in the 50/50 Dual Language program will make greater than expected gains on the Washington Assessment of Student Learning Reading component achievements compared to fourth grade students that did not participate in the 50/50 Dual Language program on the Reading portion of the state assessment. Students participating in the 50/50 Dual Language program will have a more effective and affective learning experience than students who did not participate in the Dual Language program. Students participating in the Dual Language Program will have better personal reflections about student learning than students not participating in the program.

Null Hypothesis

Fourth grade students that participated in the 50/50 Dual Language program will not make greater than expected gains on the Washington Assessment of Student Reading component achievements compared to fourth grade students that did not participate in the 50/50 Dual Language program on the Reading portion of the state assessment. Students participating in the 50/50 Dual Language program will not have a more effective and affective learning experience than students who did not participate in the Dual Language program. Students participating in the

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Dual Language Program will not have better personal reflections about student learning than students not participating in the program.

<u>Results of the Study</u>

Table 1 disclosed the results from the 2008-2009 4th grade Washington Assessment of Student Learning Reading component scores. The table indicated student numbers, student scores, and whether the student passed the Washington Assessment of Student Learning. The table also indicated whether the student was instructed in a Dual Language program or a Non Dual Language traditional program. The table indicated that 27 out of 43 students that participated in the Dual Language Program met or exceeded the state required passing score of 400. One Dual Language program student was a late entry into the district being researched and the student did not take the Washington Assessment of Student Learning Reading component. Comparatively, students in a Non Dual Language traditional program had only 19 students out of 44 that met or exceeded the state required passing score of 400. Three non Dual Language student scores were not used as the student did not take the Washington Assessment of Student Learning Reading component; instead the student submitted a portfolio.

Table 1
4th grade Washington Assessment of Student Learning Reading component scores for Dual Language and Non Dual Language students, Spring 2009.

Dual Language Student	WASL Score	Pass	Non Dual Language Student	WASL Score	Pass
1	363	No	1	418	Yes
2	375	No	2	390	No
3	395	No	3	403	Yes
4	405	Yes	4	369	No
5	415	Yes	5	395	No
6	418	Yes	6	424	Yes
7	397	No	7	380	No
8	411	Yes	8	424	Yes
9	403	Yes	9	377	No
10	400	Yes	10	400	Yes
11	418	Yes	11	403	Yes
12	438	Yes	12	392	No
13	382	No	13	375	No
14	418	Yes	14	390	No
15	405	Yes	15	395	No
16	405	Yes	16	356	No
17	377	No	17	366	No
18	403	Yes	18	372	No
19	426	Yes	19	385	No
20	426	Yes	20	426	Yes
21	380	No	21	447	Yes
22	387	No	22	403	Yes
23	390	No	23	387	No
24	400	Yes	24	403	Yes
25	397	No	25	366	No
26	411	Yes	26	424	Yes
27	408	Yes	27	387	No
28	426	Yes	28	405	Yes
29	415	Yes	29	415	Yes
30	418	Yes	30	408	Yes
31	385	No	31	426	Yes
32	395	No	32	385	No
33	390	No	33	390	No
34	408	Yes	34	368	No
35	411	Yes	35	403	Yes
36	415	Yes	36	403	Yes
37	366	No	37	382	No

38	405	Yes	38	392	No
38	405	Yes	38	415	Yes
40	426	Yes	40	426	Yes
41	369	No	41	385	No
42	397	No	42	369	No
43	408	Yes	43	372	No
			44	375	No

*Note: Three student scores in the Non Dual Language program were not used as the students took the portfolio option and not the Washington Assessment of Student Learning Reading component. One Dual Language student score was omitted as the student was a late entry into the district and did not take the Washington Assessment of Student Learning Reading component.

Table 2 displays the results from the test for independent samples, for groups X and Y. As shown in table 2, the sum of scores for Group X was 17,377.00 and the mean score of Group X was 394.93. The sum of scores for Group Y was 17,292.00 and the mean score of Group Y was 402.14. The t value was -1.76 and the degree of freedom was 85. This data was taken from using the STATPAK statistical program that was offered during the course of this research. The standard preselected probability level used by this researcher was 5 out of 100, or 0.05. According to Educational Research Competencies for Analysis and Application, "If a difference of the size we found is likely to occur only five (or fewer) times out of every 100 possible samples from our population, we can reject the null hypothesis and conclude that the difference we found is (most likely) a meaningful one" (p. 329).

Table 2 Statistical Table of t-test for independent samples

Statistics	Values
Sum of scores for Group X Non Dual Language	17377.00
Mean of Group X	394.93
Sum of scores for Group Y Dual Language	17292.00
Mean of Group Y	402.14
t- value	-1.76
Degrees of Freedom	85

Table 3 demonstrates the passing and non passing percentages of students who participated in a Dual Language program and those students who participated in a Non Dual Language traditional program. The data indicated that 62.79 % of students who participated in the Dual Language program met or exceeded the required score on the Washington Assessment of Student Learning Reading component, and only 37.21% of students did not meet or exceed the required score. Table 2 also indicated that only 56.82% of Non Dual language program students met or exceeded the required score and 43.18% did not meet or exceed the required score on the Washington Assessment of Student Learning Reading component.

Table 3
Pie Chart depicting percentage of students in Dual Language and Non Dual
Language that passed or did not pass the Washington Assessment of Student
Learning.

Percentage of Students who passed the WASL

- Dual Language Students who passed the WASLtr
- Dual Langauge Students who did not pass the WASL
- Traditional program students who passed the WASL
- Traditional program students who did not pass the WASL
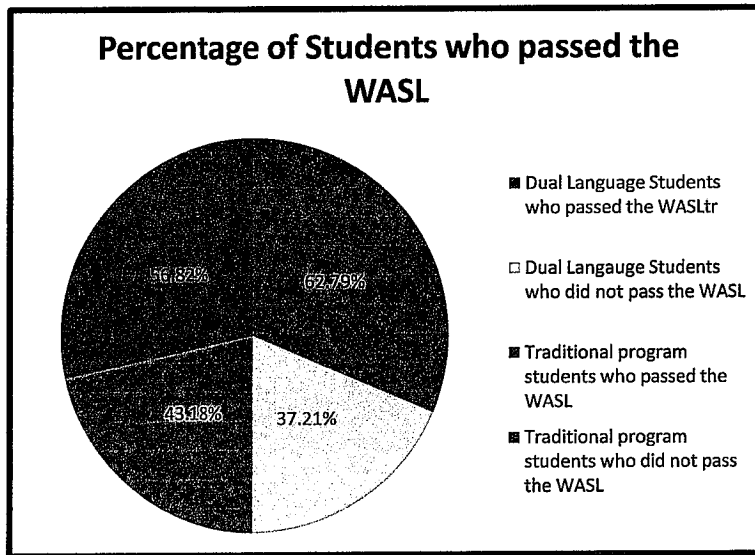
56.82%   62.79%

43.18%   37.21%

Table 4 includes the results from the qualitative affective survey taken by the

Dual Language program students and the Non Dual Language traditional

programs students. The survey was given to determine whether students who

participated in the Dual Language program felt significantly more confident in

their ability to learn. Participants included 43 Dual Language students and 44 non

Dual Language students. Each group was given the exact survey which was

offered in English and Spanish for student reading languages.

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Table 4
Qualitative Affective Survey Results, Spring 2008.

Affective Survey Results
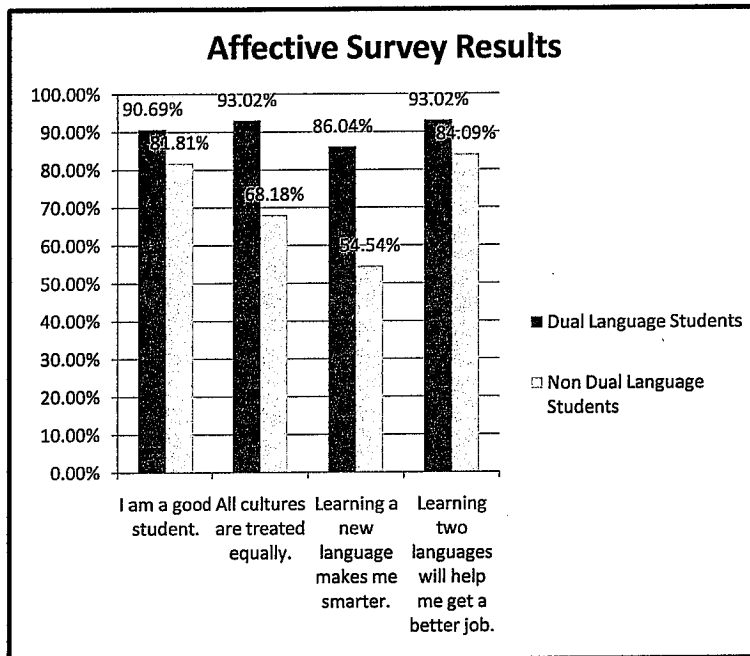
Findings

Data given in Table 1 were used to compare Washington Assessment of

Student Learning Reading component scores of 4th grade Dual Language program

students to those of 4th grade Non Dual Language traditional students.   The mean

score of students in the Non Dual Language program (Group X) was 394.93

compared to the mean score of students in a Dual Language program (Group Y)

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compared to the mean score of students in a Dual Language program (Group Y) was 412.14. From this comparison and from data presented in Table 2 detailing the distribution of t with 85 Degrees of Freedom, it was determined there was a significant difference at the level of 0.05 in the Washington Assessment of Student Learning Reading component scores for students that participated in a Dual Language program compared to students who participated in a Non Dual Language traditional program. The null hypothesis was rejected and the hypothesis was supported. Table 4 indicated that students participating in a Dual Language program had a significantly higher level of confidence in the ability to learn.

Discussion

As discussed in Chapter 1 under delimitations, the school district studied had more than 77% students on free and reduced lunch. Hispanic students compose 80% of the student body population and approximately 280 students participate in the Dual Language Program.

Summary

In Chapter 4 the researcher organized the data collected from the elementary school participating in a Dual Language program. The data compared 4th grade Washington Assessment of Student Learning Reading component scores of students enrolled in a Dual Language program and students in a Non Dual

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Language traditional program. The researcher used a t-test independent samples test found in the STATPAK and compared Washington Assessment of Student Learning Reading component scores of students in a Dual Language program to students participating in a Non Dual Language traditional program. The researcher also created and distributed a qualitative affective survey to determine if students participating in a Dual Language program had significantly higher attitudes concerning learning than students participating in a Non Dual Language traditional program. Students participating in a Dual Language program had significantly superior attitudes toward learning and the positive effects of Dual Language on student perceptions of better career opportunities.

CHAPTER 5

Summary, Conclusions and Recommendations

Summary

The 50/50 Dual Language program contributed significantly to the success of student achievement for the Reading portion of the Washington Assessment of Student Learning. The Dual Language program was an effective and affective method of instruction that built on the student's prior knowledge in both native and acquiring languages. This methodology of instruction contributed to positive student gains in outcomes on the reading portion of the Washington Assessment of Student Learning. Students not participating in the Dual Language Program showed only minimal gains.

The objective of the project was to prove that Dual Language Programs effectively and affectively helped students pass the Washington Assessment of Student Learning at a greater degree of success than students enrolled in an English only curriculum. Therefore, students that participated in the Dual Language Program were more successful than non participating students on the Washington Assessment of Student Learning and the Measurement of Student Progress. Students participating in the Dual Language Program made significant effective and affective personal gains in student learning.

Conclusions

From research findings, collected data and the Review of Literature cited in Chapter 2 the following conclusions were reached:

1. Language programs, often labeled under various other titles, have statistically proven to improve test scores on the Washington Assessment of Student Learning Reading component. As cited in Chapter 2, one major purpose Dual Language programs was to

provide high quality educational experiences for English Language Learners. The overall goals of Dual Language programs included promoting high levels of bilingual proficiency, academic achievement and positive attitudes toward school, self and others. As the t-test indicated in this research study, 62.79% of students participating in the Dual Language program met or exceeded the minimum score to pass the Washington Assessment of Student Learning Reading component.

2. Students enrolled in a Non Dual Language traditional program do not statistically improve test scores on the Washington Assessment of Student Learning Reading component. As the t-test indicated, students participating in a non Dual Language traditional program had only 43.18% of students meeting or exceeding the minimum score to pass the Washington Assessment of Student Learning Reading component.

3. Students participating in a Dual Language program have significantly higher attitudes and beliefs on learning and future career opportunities. According to a study by Lindholm-Leary and Borsato (2001), and cited in Chapter 2, the majority of students agreed that learning two languages made them smarter as well as enhanced their ability to learn. According to Table 4 in Chapter 4, Dual Language students had better attitudes and beliefs than students participating in a non Dual Language traditional program.

Recommendations

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

1. Dual Language programs should be implemented in all three of the elementary schools Kindergarten through 5th grade within this researcher's school district.

2. Dual Language programs should continue to be implemented from 5th grade through 12th grade in order for students to reach a higher level of biliteracy and bilingualism.

3. After analyzing the data cited above, there is significant difference in the 4th grade Washington Assessment of Student Learning Reading component of students that were enrolled in a Dual Language program compared to students enrolled in a Non Dual Language program.

4. The affective effect of Dual Language programs is clear on students' beliefs and possible future outcomes for the students.

5. The ability to be bilingual, biliterate and find better career opportunities is evident with the use of Dual Language programs.

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Supplemental References

STATPAK

Appendices

Qualitative Affective Survey in English and Spanish

Grade:_____   Age:_____   Circle: **Boy**   or   **Girl**

Circle the language spoken at home: **English**   **Spanish**   **Mixteco**

Circle the type of class: **Dual Language**   **Non-Dual Language**

Directions: Read each statement. Write an X in the box that best matches your answer.

Statement	Yes	No
I am a good student.		
All cultures are treated equally.		
Learning a new language makes me smarter.		
Learning two languages will help me get a better job.		

Grado:_____   Edad:_____   circule: **nino o nina**
Circule la lengua hablada en el hogar: **Inglés**   **Español**   **Mixteco**

Circule el tipo de clase: **Dos lenguajes**   **Lenguaje No-Dual**

Direcciones: Lea cada declaración. Marque una X en la caja con la major respuesta.

Declaración	Si	No
Soy un buen estudiante.		
Todas las culturas se tratan igualmente.		
Aprender una nueva idioma me hace mas intelegente.		
El aprendizaje de dos idiomas me ayudará a conseguir un mejor trabajo.		