

Effectiveness of a Dual Language Program
on Washington Assessment of Student Learning Scores

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Effectiveness of a Dual Language Program
Washington Assessment of Student Learning on Scores

Approved for the Faculty

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ABSTRACT

The purpose of this experimental research study was to determine the extent to which 3rd grade students who received instruction in a Dual Language/English Language Learner (DL/ELL) program at Adams Elementary School in Yakima, Washington, met or exceeded the performance of ELL students who received instruction only in a content ESL classroom. To accomplish this purpose, a review of selected literature was conducted. Additionally, essential baseline data were obtained and analyzed, from which related inferences, conclusions, and recommendations were formulated. An analysis of data indicated that students who participated in a DL/ELL program generally performed better on the 3rd grade Reading ELL students who received instruction only in a content ESL classroom.

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CHAPTER 1

Introduction

Background for the Project

President George W. Bush stated, "If our country fails in its responsibility to educate every child, we were likely to fail in many other areas. But if we succeed in educating our youth, many other successes will follow throughout our country and in the lives of our citizens" ("Foreword by Pres." n.d.). In 2001, President Bush reauthorized the Elementary and Secondary Education Act (ESEA) with new revisions, policies, and requirements that was renamed the No Child Left Behind Act (NCLB). The requirements of the NCLB Act have made schools accountable for the achievement of all students. Of the rapidly increasing number of students who have recently entered the United States public school system who speak a language other than English at home, has opened widespread debate as to how these students should be educated to meet NCLB requirements.

According to the Office of Superintendent of Public Instruction (OSPI,/2007), Yakima School District enrolled 14,247 students in October, 2006, of which 60.9% were identified as Hispanic. Of the total YSD enrollment, 75.4% of students qualified for free or reduced-price meals, clearly evidencing a disproportionately high level of students from families of low income/poverty.

Adams Elementary School (AES), located on the southeast side of Yakima, Washington, has been characterized as a high-poverty neighborhood. The school's demographics indicated that nearly all AES students come from low income or poverty stricken families, with 93% receiving free or reduced-price meals. The AES transitional bilingual education program served 44.1% of the school population. More than 35% of AES students were identified as migrant. Recently AES has been placed on Step 5 of the Washington State mandated School Improvement Plan (SIP), indicating that the school did not meet adequate yearly progress (AYP).

During the 2006-2007 school year, AES offered a Dual Language/English Language Learner (DL/ELL) instructional model, from kindergarten through 3rd grade. However, due to the large enrollment of kindergarten students who entered AES with little or no English, two strands of One-Way Dual Language models had been implemented. In the One-Way Dual Language model, 90% of instruction focused on native language in grades K-1 and on English Language in grades 2-3.

The primary reason for the implementation of the DL/ELL instructional model at AES was to serve students' requiring special language support and to meet community needs. Dual Language programs helped ELL students to become academically stronger in their native language. When ELL students transitioned into English instruction later, they were more able to transfer information from their native language into English and to comprehend and retain meaning.

Statement of the Problem

Teachers at AES needed to continue their implementation of the DL/ELL program. The continuation of this program was needed based on the large enrollment of students who entered Adams with a primary language other than English. Students who entered school with a language other than English or those with little to no English language proficiency were termed English Language Learners (ELL). With the elimination of the of Dual Language/English Language Learner (DL/ELL) program, ELL 3rd grade students performed below reading grade level expectations on the Reading component of the Washington Assessment of Student Learning (WASL).

Phrased as a question, the problem which represented the focus of the present setting may be stated as follows: To what extent did 3rd grade students at AES who received DL/ELL instruction demonstrate higher scores on the Reading component of the WASL than ELL students who received instruction only in a content ESL classroom?

Purpose of the Project

The purpose of this experimental research study was to determine the extent to which 3rd grade students who received instruction in a DL/ELL program at AES met or exceeded the performance of ELL students who received instruction only in a content ESL classroom. To accomplish this purpose, a review of selected literature was conducted. Additionally, essential baseline data were obtained and analyzed, from which related inferences, conclusions, and recommendations were formulated.

Delimitations

Participating DL/ELL students received classroom instruction for four years from their kindergarten year through the end of 3rd grade. The DL/ELL instructional model offered at AES targeted students who were academically strong in English or Spanish Language. Each class contained twelve English speaking and twelve Spanish speaking students. Equalizing the balance of English and Spanish speaking students allowed for the DL/ELL model to work

effectively. English and Spanish speaking students were paired together for co-operative learning. Students learned reading in their native language while science was taught in Spanish. Mathematics was taught in English.

Assumptions

Adams Elementary School enrolled a large population of students with little or no English Language skills. Language demographics at AES determined which students might benefit from the DL/ELL Language model.

The assumption was made that implementation of the DL/ELL Language model would better serve the needs of ELL's while improving their prospects for meeting NCLB standards. The further assumption was made that the DL/ELL Language model would also help participating students achieve greater proficiency in core subjects of science and mathematics. In effect, the DL/ELL Language model was expected to produce bi-cultural and bi-literate students ready for the twenty-first century workforce and life.

Hypothesis or Research Question

English Language Learner (ELL) students who participated in a DL/ELL program will perform better on the 3rd grade Reading component of the Washington Assessment of Student Learning (WASL) than ELL students who received only content ESL instruction.

Null Hypothesis

English Language Learner students who participated in a DL/ELL program would not perform better on the 3rd grade Reading component of the WASL than ELL students who received only content ESL instruction. Significance was determined for $p \geq$ at .05, .01, and .001 levels.

Significance of the Project

Primary teachers at AES believed implementation of a DL/ELL instructional model would help serve students' needs. On the other hand, if identified ELL students were placed in a content ESL classroom, it was expected that many would struggle, fail, and not feel successful. A prevailing belief suggested that when students did not understand the language of

instruction that is being taught, they would not comprehend material or achieve grade level expectations. The present study was intended to provide valuable data and information that would confirm these beliefs and expectations.

Procedure

During Summer, 2006, the researcher (Monica V. Gonzalez) sought and obtained permission from Mr. Greg Day, Yakima School District Academic Assessment coordinator to undertake the present study.

In August, 2006, students selected to participate in the present research study first were identified as ELL's. When identified, ELL students were administered the Washington Language Proficiency Test (WLPT). The WLPT measured students' proficiency with English Language in areas of Reading, Writing, Speaking and Listening. The student score on the WLPT determined whether they were qualified to receive DL/ELL or content ESL classroom instruction. After the WLPT identified an ELL student, the students' parents made the final decision as to whether their

child should be enrolled in a DL/ELL or content ESL program. Students selected for the study were required to participate in either a DL/ELL or content ESL classroom instructional program from kindergarten through 3rd grade at AES. During spring, 2007, selected participating students completed the 3rd grade reading component of the WASL. These third grade WASL test scores were then used to compare students who received DL/ELL instruction with those who received content ESL instruction. During Spring semester 2008, the researcher obtained and analyzed data used to formulate final inferences, conclusions, and recommendations.

Definition of the Terms

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

Basic Interpersonal Communicative Skills (BICS).
Language skills needed to interact in a social setting or situation.

Cognitive Academic Language Proficiency (CALP).
Academic language used in content subjects.

Content ESL. Instruction taught only in Spanish with ESL techniques utilized.

Early-Exit bilingual education. This model was designed to move ELL students from their native language to English in the first three-year-period of their school's primary grades. Students are instructed in their native language for three years with daily ESL and L2 phased in. When students have some English proficiency they are pushed into mainstream classroom.

ESL pullout. Students are pulled out of mainstream classrooms for small-group tutoring in second language, typically lasting 30-45 minutes per day.

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

immersion. Instruction taught only in English with little or no special help adjusted to learner's level of understanding.

L1: A student's native language.

L2: A student's second language.

Late-Exit bilingual education. This was a transitional model designed to move ELL children from their native "other than English language" to English over the five or six year period of their school's primary grades. Students are instructed ninety percent in their L1 in kindergarten and first grade. Spanish instruction is gradually decreased to fifty percent or less by grade four with English instruction phased in.

One-Way bilingual education. Ninety percent of instruction in native language the first two years and phasing English in gradually.

school improvement. Schools that did not meet adequate yearly progress are sanctioned by the office of superintendent of public instruction.

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 bilingual education. A two-way bilingual enrichment program used two languages to teach students their core curriculum. Participating students were equally divided between native English speakers and native speakers of the program's other language.

Washington Language Proficiency Test (WLPT). The WLPT measured the students' proficiency of the English Language in the areas of Reading, Writing, Speaking and Listening.

Acronyms

AES. Adams Elementary School

AYP. Adequate Yearly Progress

BICS. Basic Interpersonal Communication Skills

CALP. Cognitive Academic Language Proficiency

DL/ELL. Dual Language/English Language Learner

ELL. English Language Learner

ESEA. Elementary and Secondary Education Act

ESL. English as a Second Language

L1: Level one

L2: Level two

NCLB. No Child Left Behind Act

OSPI. Office of Superintendent of Public
Instruction

SIP. School Improvement Plan

WASL. Washington Assessment of Student Learning

WLPT. Washington Language Proficiency Test

YSD. Yakima School District

CHAPTER 2

Review of Selected Literature

Introduction

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

- The Effectiveness of Selected Bilingual
Education Instructional Models
- The Influence of Basic Interpersonal
Communicative Skills (BICS) and Cognitive
Academic Language Proficiency (CALP) on ELL
Student Success
- Key Components of Dual Language
- 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.

The Effectiveness of Selected Bilingual Education

Instructional Models

(Crawford) (2004) defined dual language as a two-way bilingual enrichment program that used two languages to teach students a core curriculum. Students who participated were equally divided between native English speakers and native speakers of the program's other language. In contrast, the content ESL model provided instruction only in English using English as a Second Language strategies.

Research conducted by Cummins (1992) addressed the need to provide special language assistance to L1 (native language) and L2 (second language) learners. Said Cummins:

There is considerable evidence of interdependence of literacy-related or academic skills across such that the better developed children's L1 conceptual foundation, the more likely they are to develop similarly high levels of conceptual abilities in their L2 (p. 95).

Cummins' research suggested that to promote academic development in English, bilingual programs must strongly support minority students' L1. A study conducted by Thomas & Collier's (1997) similarly found:

Enrichment 90-10 and 50-50 one-way and two-way developmental bilingual education (DBE) programs or dual language, bilingual immersion) are the only programs we have found to date that assist students to fully reach the 50th percentile in both L1 and L2 in all subjects to maintain that level of high achievement, or reach even higher levels through the end of schooling (p. 7).

Crawford also investigated the positive impact of a 50/50 dual language model implemented in 1986, at Key school located in Arlington, Kansas. The 50/50 model consisted of 50% instruction in English in the morning and 50% in Spanish in the afternoon. English instruction focused on content areas of language arts and mathematics. Spanish instruction in language arts, social studies, and science. After tracking

students' progress for 5 years, data obtained indicated that students who participated in the 50/50 model outperformed their peers who participated in immersion classrooms. An immersion class was instructed only in English. The 50/50 model students excelled above average in district and state of Virginia tests. Students still performed above average in content areas that were taught in Spanish. This research supported the notion that dual language instruction allowed for improved transfer of academic knowledge. This research found that almost all 3rd grade native Spanish speakers scored "fluent" in oral fluency on the Language Assessment Scales by scoring either a level four or five. In addition, 43% of native English speakers in 4th grade were fluent in the Spanish oral measure. Similarly, Thomas and Collier (1992) found:

Native-English speakers in a two-way bilingual immersion programs maintained their English, added a second language to their knowledge base, and achieved well above the 50th percentile in all

subject areas on norm-referenced tests in English (p. 5).

Research conducted by Lindholm-Leary (2005) further supported the perceived benefits of bilingual education. These authors stated:

Bilingual education, when properly implemented, can be very effective pedagogical technique for assisting both in the smooth transition to English and in an orderly educational preparation of students from non-English speaking homes. In fact, this may be the best way to achieve participatory democracy since the beneficiaries of bilingual education are both proficient in English and equipped educationally to contribute to society (p. 20).

Ramirez et al. (1991) conducted a longitudinal study of the structured English Immersion strategy. Following their investigation of early-exit and late-exit transitional bilingual education programs for language-minority children, these authorities concluded:

LEP students with substantial amounts of instruction in their primary language does not impede their acquisition of English language skills, but that it is as effective as being provided with large amounts of English. Of equal importance is the finding that students who are provided with substantial amounts of primary language instruction are also able to learn and improve their skills in other content areas as fast as or faster than the norming population, in contrast to students who are transitioned quickly into English-only instruction (n.p.).

Ramirez et al., also compared students academic performance in mathematics, English language, and reading skills when enrolled in an immersion strategy classroom using an English only, early-exit, and late-exit model. Based on data converted in growth curves, students enrolled in the immersion strategy, early-exit, and late-exit instructional program made similar gains from 1st to 3rd grade in mathematics, English, and reading. Over a period of six years, from the period

of 3rd grade to 6th grade, immersion and early-exit students did not make significant gains or improve their rate of growth. However, late-exit students continued to demonstrate growth in mathematics, English, and reading, while increasing their rate of growth as fast as or faster than the norming population. Research produced by these authorities suggested that limited-English proficient students may need prolonged assistance if they are to succeed in an English-only mainstream classroom" (n.p). Cummins (1992) also suggested that students' academic development may be hindered if they were exited from bilingual programs before the development of their L1. The content ESL classroom may not have had an environment that was supportive of language acquisition for the student who was pulled from a bilingual program. Thomas and Collier (1997) stressed the importance of not placing students who have no English Language skills in any bilingual program that was short in duration. Studies have shown that in order for Ells to reach grade-level performance in

second language, it takes a minimum of four years up to seven.

In a review of the Ramirez report cited above, Cummins observed that students in the late-exit program caught up academically to students in the general population regardless of having received less English instruction than immersion or early-exit students. These data supported the belief that ELL students in bilingual programs needed more than five years to begin to close the gap between themselves and native English speakers. "Achievement gap" was defined as follows:

The "achievement gap" in education refers to the disparity in academic performance between groups of students. It is most often used to describe the troubling performance gaps between many African-American and Hispanic students, at the lower end of the performance scale, and their non-Hispanic white peers, and the similar academic disparity between students from low-income and well-off families. The achievement gap

shows up in grades, standardized-test scores, course selection, dropout rates, and college-completion rates. It has become a focal point of education reform efforts (www.edweek.org).

Collier and Thomas (1992) found, "Bilingually schooled students outperformed comparable monolingually schooled students in academic achievement in all subjects, after four to seven years of dual language schooling" (p. 7). Accordingly, the duration of dual language programs should be extended to see the effectiveness of the results noted in the Collier & Thomas study.

The Influence of Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP) on ELL Student Success

Cummins, as cited in Paulston & Tucker (2006), coined the terms Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP) to distinguish the time period when each language skill was acquired. Cummins defined BICS as language skills needed to interact in a social

setting or situation. English Language Learners acquired BICS after the initial two years of exposure to a second language. Cummins defined CALP as academic language used in content subjects. Cognitive Academic Language Proficiency instruction was essential for ELL students to succeed in school which required from five to seven years to become proficient in their second language.

Many ELL students first acquired BICS in their second language that mislead educators to believe students were ready to exit a bilingual education program. Teachers made this assumption because ELL students' second language sounded comparable to a native English speaker and ELL students would be capable of success in the mainstream classroom.

Paulston and Tucker stated:

Similarly, analysis of psychological assessments administered to ELL showed that teachers and psychologists often assumed that children had overcome all difficulties with English when they could converse easily in the language (as cited

by Cummins, 1984). Yet these students frequently performed poorly on English academic tasks...(p. 322).

Research conducted by Collier & Thomas determined that ELL students placed in short-term bilingual education models or content ESL classrooms, due to students' BICS in second language, never fully reached achievement levels of other ELL students enrolled in two-way or late-exit bilingual education programs. Cummins also suggested that students' academic development may be hindered if they are exited from bilingual programs before the development of their L1.

Key Components of Dual Language

Thomas & Collier performed extensive research studies to understand the process of acquiring a second language in relation to ELL students during their school years. These authorities developed a conceptual model, termed Language Acquisition for School, that helped illustrate the developmental second language acquisition that occurred in a school

setting. The Thomas & Collier (1997) model was comprised of four components including:

1. Social and Cultural Processes
2. Language Development
3. Academic Development
4. Cognitive Development

The model's first component, established an order for students to learn a second language, dependent on the surrounding culture and environment the student had been exposed to. The second component focused on the ability to acquire language through oral and written means in native language and the ability to transfer native language to a second language. The third component of model included all academic knowledge and conceptual development in the content areas that transferred from the first language to the second language. The model's fourth component related to the students' thought process developed from birth and continued throughout their life past their school career. According to Thomas & Collier:

If one is developed to the neglect of another, this may be detrimental to a student's overall growth and future success. For the child, adolescent, and young adult still going through the process of formal schooling, development of any one of these three components depends critically on simultaneous development of the other two, through both first and second languages (p. 44).

An article entitled, "Language Acquisition," reported that Asian ELL students experienced difficulties in second language acquisition due to discontinuity arising from: school to home environment; society's stereotype; expectations of Asian students; and, the conflict of assimilation to mainstream society (<http://www.sscnet.ucla.edu/aasc/unz/langacq.html>).

Another factor involving second language acquisition was attributed to the affective filter hypothesis which hypothesis proposed that variables such as motivation, self-confidence, and anxiety

determined how the student will respond to second language acquisition. Thus, if a student had motivation, high self-confidence, and low anxiety, their affective filter would help support second language learning to take place. However, if a student has low self-esteem, high anxiety, and little motivation, then their affective filter would impede learning of a second language (Shutz, 2002). Thomas & Collier agreed with Shutz when stating:

It is crucial that educators provide a socioculturally supportive environment that allows natural language, academic, and cognitive development to flourish in both L1 and L2 (p. 44).

Summary

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

1. A review of selected Bilingual educational models confirmed that students who received DL/ELL classroom instruction outperformed their ELL peers who participated in language immersion programs.

2. Research related to Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP) confirmed that these language skills were essential to interacting in a social setting as well as for proficiency in second language acquisition.

3. According to the affective filter hypothesis, it was essential that educators allow natural language, academic, and cognitive development to flourish in both L1 and L2.

Chapter 3

Methodology and Treatment of Data

Introduction

The purpose of this experimental research study was to determine the extent to which 3rd grade students who received instruction in a Dual Language program at AES met or exceeded the performance of ELL students who received instruction in a content ESL classroom. To accomplish this purpose, a review of selected 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 3rd grade Reading component of the WASL scores of participating students. The reading component of the WASL provided essential baseline data needed to formulate related 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 0.005, 0.01, and 0.001 levels.

Participants

The present study included 20 students who participated in either Dual Language or content ESL classroom instruction from kindergarten through 3rd grade at AES. For purposes of this study, participants were organized into the following experimental and control groups:

Experimental Group (X): Ten ELL students who participated in a DL program.

Control Group (Y): Ten randomly selected ELL students who did not participate in a DL program.

Instruments

During Spring, 2007, experimental and control groups for the present study were identified and posttested, using the Reading component of the WASL. Essential baseline Reading component WASL data were obtained and analyzed throughout the 2007-2008 school years.

Design

This experimental research design utilized a *t*-test for independent samples to determine whether the means of the two participating groups were significantly different. This involved posttesting the two groups of students as follows:

Experimental Group (X): Ten ELL students who participated in a DL/ELL program.

Control Group (Y): Ten randomly selected ELL students who did not participate in the DL/ELL program.

Procedure

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

1. During Summer, 2006, the researcher sought and obtained permission from Mr. Greg Day, Yakima School District Academic Assessment coordinator to undertake the present study.
2. During August, 2006, students selected to participate in the present research study first had to be identified as ELL's. To accomplish this, students were administered the Washington Language Proficiency Test (WLPT).
3. After the WLPT identified an ELL student, the students' parents made the final decision as to whether their child should be enrolled in a Dual Language or content ESL classroom.
4. Students selected for the study were required to participate in either Dual Language or content ESL classroom instruction from kindergarten through 3rd grade at AES.
5. During Spring, 2007, experimental and control groups for the present study were identified

and posttested, using the 3rd grade reading component of the WASL.

6. Essential data were obtained and analyzed throughout 2008 which provided information needed to formulate related conclusions and recommendations.

Treatment of the Data

The researcher gathered statistical data for the study, using the STATPAK statistical software, which accompanied Educational Research: Competencies for Analysis and Application (Gay & Airasian, 2003). A *t*-test for independent samples was administered to assess experimental and control group results. The following formula was used to test for significance:

$$t = \frac{\bar{D}}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

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 3rd grade students at AES who received DL/ELL Language instruction demonstrated higher scores on the Reading component of the WASL than ELL students who received only content ESL instruction.

Chapter 4 has provided details concerning a description of the environment, hypothesis/Research question, results of the study, findings, discussion, and a summary.

Description of the Environment

The present study included 20 students who were identified as ELL's and who received either DL/ELL or content ESL classroom instruction from kindergarten through 3rd grade at AES. The researcher utilized 3rd grade reading component scores from the WASL reading reported from spring, 2007.

The study utilized the following experimental and control groups:

Experimental Group (X): Ten ELL students who participated in a DL program.

Control Group (Y): Ten randomly selected ELL students who did not participate in a DL program.

Hypothesis

English Language Learner (ELL) students who participated in a DL/ELL program will perform better on the 3rd grade Reading component of the WASL than ELL students who received only content ESL instruction.

Null Hypothesis

English Language Learner students who participated in a DL/ELL program did not perform better on the 3rd grade Reading component of the WASL than ELL students who received only content ESL instruction. Significance was determined for $p \geq$ at .05, .01, and .001 levels.

Results of the Study

Table 1 disclosed the results of the 3rd grade posttest scores for the WASL Reading component for Experimental and Control groups, Spring, 2007.

Table 1

3rd Grade Posttest Scores for the WASL Reading Component, Experimental and Control Groups, Spring, 2007.

Student Number	Experimental Group X WASL Reading Score/Level*	Control Group Y WASL Reading Score/Level*
1	2	1
2	1	1
3	4	1
4	3	2
5	2	2
6	3	2
7	2	1
8	2	2
9	2	1
10	2	1

*NOTE: Reading Scores represent the four reading proficiency levels of the WASL (i.e., level 4= met or exceeded grade-level standard; Levels 1, 2, and 3 did not meet grade-level standard).

As indicated in the Table: In the Experimental Group, one student achieved a level 4 WASL reading

score; two students scored at level 3; six students earned a level 2 score; and one student scored at level 1. In the Control Group, four students scored at level 2, and 6 students at level 1.

Table 2 displays *t*-test for Independent Samples, Groups X and Y. As shown in the Table, the sum of scores in Group X was 23.00 and the mean score was 2.30. The sum of scores in Group Y was 22.00 and the mean score was 1.40. The *t*-value was 2.93 and the degrees of freedom 18.

Table 2

t-test Results for Independent Samples Groups X and Y.

Statistics	Values
Sum of scores in Group X	23.00
Mean of Group X	2.30
Sum of scores in Group Y	22.00
Mean of Group Y	1.40
<i>t</i> -value	2.93
Degrees of Freedom	18

Findings

Data presented in Tables 1 and 2 were used to compare 3rd grade ELL students who participated in the DL/ELL program at AES with 3rd grade ELL students who received only content ESL instruction. The mean score of DL/ELL students in experimental Group X was 2.30 compared to the mean score of 1.40 for Control Group Y. From this comparison and from data presented in Table 3 detailing the distribution of t with 18 Degrees of Freedom, it was determined there was significant difference between Experimental and Control Groups the levels 0.005 (2.10) and 0.001 (2.818). There was no significant difference at the 0.001 level.

Table 3

Distribution of t With 18 Degrees of Freedom.

P≤ Levels	0.05	0.01	0.001
t-value	2.93	2.93	2.93
Degrees of Freedom	2.101	2.878	3.922

P≤ Levels	0.05	0.01	0.001
Null Hyp.	Reject	Reject	Accepted
Hypothesis	Supported	Supported	Not supported

The analysis of data presented in Tables 1, 2, and 3 indicated:

1. The hypothesis was supported at $p \geq 0.05$ and 0.01 levels. That is, students who participated in a DL/ELL program generally performed better on the 3rd grade Reading component of the WASL than ELL students who received instruction only in a ESL classroom.

2. The hypothesis was not supported at the 0.001 level.

Summary

Chapter 4 reviewed and detailed the description of the environment, hypothesis, null hypothesis, results of the study, and major findings.

The fundamental research question on which the study focused indicated that 3rd grade ELL students who participated in a Dual Language program performed better on the 3rd grade Reading component of the WASL than ELL students who received only content ESL instruction.

Chapter 5

Summary, Conclusions, and Recommendations

Summary

The purpose of this experimental research study was to determine the extent to which 3rd grade students who received instruction in a Dual Language program at AES met or exceeded the performance of ELL students who received instruction in a content ESL classroom. To accomplish this purpose, a review of selected literature was conducted. Additionally, essential baseline data were obtained and analyzed, from which related inferences, conclusions, and recommendations were formulated.

Conclusions

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

1. A review of selected Bilingual educational models confirmed that students who received Dual Language/English Language Learning classroom

instruction outperformed their ELL peers who participated in language immersion programs.

2. Research related to Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP) confirmed that these language skills were essential to interact in a social setting as well as for proficiency in second language acquisition.

3. According to the affective filter hypothesis, it was essential that educators allow natural language, academic, and cognitive development to flourish in both L1 and L2.

4. The fundamental research question on which the study focused indicated that 3rd grade ELL students who participated in a Dual Language program performed better on the 3rd grade Reading component of the WASL than ELL students who received only content ESL instruction.

Recommendations

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

1. Bilingual education programs that provide students with Dual Language/English Language Learning should be implemented/encouraged to students can positively impact academic performance and help acquire English Language skills sooner.
2. Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP) instruction should be adopted to improve students' social interactions skills as well as for proficiency in second Language acquisition.
3. Bilingual educators may wish to adapt the affective filter hypothesis to allow native natural language, academic, and cognitive development to flourish.
4. To improve 3rd grade student learning scores on the WASL, educators are encouraged to develop and utilize DL/ELL programs.
5. School personnel seeking information related to the effectiveness of Dual Language programs

may wish to reference this study or, they may wish to undertake related research more suited to their unique needs.

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