# Improving Dual Language English Instruction for Third Graders Using the 50/50 Model

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A Special Project

Presented to

Dr. Gretta Merwin

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## FACULTY APPROVAL

Improving Dual Language Instruction for Third Graders Using the 50/50 Model.		
Approved for the Faculty		
, Faculty Advisor		
, Date		

#### **ABSTRACT**

The purpose of this project was to demonstrate how a dual language classroom with a 50/50 model instructed and assessed English language acquisition. In addition, the project was intended to prove that bilingual education did not interfere with English language development. The project focused on third grade and centered around the English instruction half of the day. At the third grade level students were required to take the same test that mainstream classroom students participated in such as MAPs and DIBELS. Scores of MAP testing and DIBELS were used to assess growth over time.

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#### CHAPTER 1

#### **Background for the Project**

The elementary school where this project took place was located in a town in the Northwest close to a nuclear plant. The town was near a major river and had a strong agricultural influence. The students who attended the school were impacted by poverty, a high migrant population, and were from a variety of ethnic populations. The school had supported a dual language program for four years. Every year the number of dual language classes offered had increased. The school district had implemented the dual language program in two elementary schools in the primary grades and hoped dual language programs would eventually be implemented in the higher grade levels, which would include not only the intermediate grade levels of 5<sup>th</sup> and 6<sup>th</sup> but also the middle school years.

#### Statement of the Problem

Dual language was a four year old program in the school and had many supporters and a fair share of skeptics. The district administrators as well as the parents and school staff wanted to make sure that even though dual language students received all literacy instruction in Spanish for the first three years in kindergarten through second grade, the students made adequate gains in English and continued to make progress in that language. By the end of third grade a

significant majority of students needed to be at or above third grade reading level in English, according to a district goal of 90%.

#### <u>Purpose</u>

The purpose of the project was to prove bilingual education did not interfere with English language development. Even though students were learning both Spanish and English simultaneously, both languages were highly developed. Dual language was a new program for the district. By providing strong data to the district that showed improve student performance, district officials would be encouraged to continue the present program and further the program on to the higher grade levels. The long-held belief that learning two languages slowed down a student's academic performance needed to be disproven.

#### **Delimitations**

According to the school report card provided by the Office of Superintendent of Public Instruction for the state of Washington the demographics of the school included an enrollment of 487 students. Of the 487 students 44.8% were female and 55.2% were male. Ethnicity of the student body was 0.8% American Indian/Alaskan Native, 1.4% Asian, 0.2% Pacific Islander, 1.6 Asian/Pacific Islander, 3.1% Black, 49.9 Hispanic and 41.5% white. The school had 57.0% qualified students for free or reduced meals. In May 2008, 9.9% of the students received special education services. There was a 29.0% transitional bilingual population and 27.2% migrant population (OSPI, 2009).

There was a diverse staff of 30 teachers. The average number of years of teacher experience was 14.6 with 53.3% of the teachers holding a master's degree. All teachers were highly qualified as defined by No Child Left Behind legislation.

The participants were the author's third grade dual language class which consisted of 21 students; of the 21 students all except six were native Spanish speakers. There were 9 girls in the class and 12 boys. The students were in a dual language program for the previous three years. Prior to third grade, students received literacy instruction in Spanish and content instruction such as mathematics and science in English. Third grade was the first year students received literacy instruction in English while content instruction such as mathematics, science and social studies was in Spanish.

None of the students received speech services; none were on an Individual Education Plan. However, three of the students had been retained before and continued to need intensive instruction. Two of the students were considered monolingual and had just begun to transition into English.

#### Assumptions

All children who were assigned to the dual language program were able to learn. The classroom teachers assigned to the dual language program and the reading specialist were highly qualified and met requirements as defined in No Child Left Behind. Decision-making regarding the placement of students was a

collective effort of both grade level teachers and the reading specialist. The students were treated fairly, equally, and were tested in an environment that yielded the most accurate results. All testers, par-professionals, mainstream teachers, district employees, and reading specialists were well-trained and well-versed in both Measures of Academic Progress and Dynamic Indicators of Basic Early Literacy Skills. After placement was made all teachers stayed with district-approved curriculum and taught according to district expectations.

#### **Hypothesis**

Third grade dual language students who received half of the instruction in Spanish and half in English following the 50/50 model would make greater than expected growth on the Measures of Academic Progress reading assessment from fall to winter. A year's expected growth for third grade students was eight points.

#### Null Hypothesis

Third grade dual language students who received half of the instruction in Spanish and half in English following the 50/50 model would not make greater than expected growth as measured by the Measures of Academic Progress reading assessments from fall to winter.

#### Significance of the Project

This study had the potential not only to impact the one school and district but also to challenge the long-believed view that bilingual education was ineffective. Since the No Child Left Behind legislation emphasized the importance of all

students reading at grade level by the end of third grade, the results of the study were long-awaited. The challenges the school faced were the same challenges faced by schools across the country. When taught together, dual language classrooms had proved that bilingual education made strong Spanish speakers and strong English speakers.

#### **Procedure**

Within the first four weeks of the school, third grade students were assessed and evaluated. Assessments included Dynamic Indicators of Basic Early Literacy Skills and Measures of Academic Progress testing. Once all scores were received, the student information was placed into a data base. After the data was reviewed, the Response To Intervention model was used and each student was placed into a specific reading level. The first reading level was Benchmark which consisted of students who were on grade level for reading at third grade. The next level was the Strategic level. Students were placed at the Strategic level if they were below grade level in reading but could reach grade level provided they received the correct intervention. The final level was Intensive. Intensive referred to students who were significantly behind in reading.

Each reading level received specific instruction according to the needs of the students. Benchmark and Strategic students used the standard third grade curriculum, *Imagine it!*. Unlike Benchmark, Strategic had two strands; language learner and non-language learner. The language learner group received language

support and explicit vocabulary development. The last strand, Intensive, was placed into a different curriculum than the other students called *Reading Mastery*. Lastly, the two monolingual students were not only placed in the language learner group but also received Rosetta Stone for knowledge of the English language.

After three mouths of instruction, intervention, progress monitoring and close observation, students were retested using Measures of Academic Progress. These results were compared to the pretest to determine whether significant growth had occurred.

#### **Definition of Terms**

Adequate Yearly Progress. Adequate Yearly Progress was the cornerstone of the federal Elementary and Secondary Education Act signed into law, January 2002, as the No Child Left Behind Act. In Washington state, year-to-year student achievement was measured using the Washington Assessment of Student Learning in reading and mathematics. Each year the state raised the bar in gradual increments so that by 2013-2014, all (100%) students were to achieve proficiency in each subject area. Adequate Yearly Progress applied to each school in the state that served students in grades four, seven, and ten. School totals for these grades were aggregated and compared to the district and state totals.

Benchmark. Benchmark was one of the three levels from the Dynamic Indicators of Basic Early Literacy Skills assessment which rated the student and

provided educators with a standard for gauging the progress of students individually.

bilingual. Bilingual meant the ability to be proficient in two languages.

<u>direct instruction</u>. "Direct instruction is a model for teaching that emphasizes well-developed and carefully planned lessons designed around small learning increments and clearly defined and prescribed teaching tasks" (National Institute for Direct Instruction, Encyclopedia, 2006, p. 1).

50/50. The term referred to the 50/50 dual language model where equal instructional time was spent in each language, English and Spanish.

Intensive. Intensive was one of the three levels from the Dynamic Indicators of Basic Early Literacy Skills assessment which rated the student as atrisk. The student required additional instruction in order for the student to succeed.

L1 and L2. L1 referred to the first language the students learned or their native language. L2 referred to the second language the students acquired.

monolingual. A monolingual speaker was one who spoke only one language. In this study the language was Spanish.

<u>progress monitoring</u>. Progress monitoring included assessments that determined if students were making adequate progress or needed more intervention to achieve grade level reading outcomes.

Response to Intervention. Response to Intervention was a framework for making instructional decisions based on assessment data obtained in order to accelerate learning for all students.

Strategic. Strategic intervention to reading was one of the three levels from the Dynamic Indicators of Basic Early Literacy Skills assessment which rated the student at some risk. The student required some additional instruction in order for the student to succeed.

<u>Walk-to-Read</u>. Walk-to-Read was a method of teaching reading in which the students were ability grouped and went to other teachers for instruction provided at the appropriate ability level. Walk-to-Read was a 90 minute block of uninterrupted reading instruction.

#### Acronyms:

CALLA. Cognitive Academic Language Learning Approach

**DIBELS**. Dynamic Indicators of Basic Early Literacy Skills

EALRs. Essential Academic Learning Requirements

ELL. English Language Learner.

ExC-ELL. Expediting Comprehension to English Language Learners

GLAD. Guided Language Acquisition Design

GLEs. Grade Level Expectation

MAP. Measures of Academic Progress

NWEA. Northwest Evaluation Association

NWREL. Northwest Regional Education Laboratory

OSPI. Office of the Superintendent of Public Instruction

SIOP. Sheltered Instruction Observation Protocol

#### **CHAPTER 2**

#### Review of Selected Literature

#### Introduction

The author chose to review three subsets of dual language programs. The first was the components of a successful dual program, which included best instructional practices. Three different resources were used as a foundation for understanding what constituted a successful dual language program. The primary books referenced included: 7 Steps to Success in Dual Language Immersion by Carrera-Carrillo and Smith (2007), Dual Language Essentials for Teachers and Administrators by Freeman, Freeman, and Mercuri (2005), and Guiding Principles for Dual Language Education developed by Dual Language Education of New Mexico (Howard, Sugarman, & Christian 2007). All were essential for understanding components of a dual language program. The second subset consisted of research and information about English Language Learners. The final subset dealt with assessment practices. Just as mainstream classrooms were held to high expectations and strong performance assessments, the same was true for dual language classrooms. Both had to perform to district expectations and had to meet a standard at each grade level. MAP data was used as the school and district assessment for determining students' academic performance along with DIBELS results.

#### Components of a Successful Dual Language Program

The author's review of literature found several key components in the development of a successful dual language program. The first component dealt with instruction and importance of language. The second was the use of effective curriculum integrated into the goal of bilingualism. The final component was having highly qualified teachers that led the program goals into reality. Because dual language programs offered the promise of educating every child to be biliterate and bilingual, the expectations were high. Cross cultural awareness was another outcome of such a program. Each component was a stepping stone in the success of academic achievement for all students.

In past years, as was common in most elementary schools, non-English speakers, also known as English Language Learners, were forced to assimilate and acquire English quickly. Most schools offered early exit programs, English as a Second Language pull-out, or transition programs where students were given only a few years of language support and then sent back into a mainstream classroom with their native English peers. In comparison, native speakers of English gained further academic achievement than English Language Learners. As the years progressed, native English speakers continued to progress while non-native speakers (English Language Learners) continued to fall further behind.

This gap between the progress of native English speakers and ELL students was the subject of a research project by Virginia P. Collier and Wayne P. Thomas from George Mason University. Their longitudinal study and research found that such programs that offered minimal support were unsuccessful and devalued the students' first language. In fact, such programs did not close the gap among native English speakers and non-native speakers. On the contrary, it grew over time. Therefore, such programs were defined as remedial. However, students that participated in dual language programs not only closed the gap but outperformed students who only received language for a few years. Thus, dual language programs offered an enriched education and yielded desirable results (Collier & Thomas, 2004).

In order to have a successful dual language program, instruction needed to be at the center. Research found that quality instruction and student achievement were closely tied together, with superior instruction giving the better results. According to *Guiding Principles for Dual Language Programs*,

Good instruction is even more complicated in dual language programs
because of the added goals of bilingualism, biliteracy, and multicultural
competence, and, in two-way immersion programs, because of the
constant need to integrate and balance the needs of the two student groups.
Thus it is even more important to use a variety of techniques that respond

to different learning styles and language proficiency levels. (Howard et al., 2007, p. 18)

In dual language programs, also known as two-way immersion programs, there needed to be clear guidelines to show how instructional time was spent. In a 50/50 model, instructional time was equally dispersed among the two languages, usually English and Spanish. The importance of having equity among the languages insured that all students, both second language learners (native Spanish speakers) and native English learners, had opportunity to develop both their first and second language.

Equity in language and a raised status of a second language other than

English valued language as a resource and constructed a bridge to another culture.

In many communities the implementation of a dual language program eased

tensions between speakers of two different languages and perhaps two different

cultures. Dual language programs helped understanding and forming

relationships among diverse groups of people. Both English speakers and Spanish

speakers gained cross-cultural awareness as both groups moved towards

becoming bilingual. Along the way, parents and families of the children gained

new knowledge and appreciation for another language and culture (Freeman,

Freeman, & Mercuri, 2005).

Since dual language offered two languages of instruction, both were viewed as equally important. The value placed on each language determined the

level of acquisition acquired by the students. If a language was given little importance and minimal instructional time was spent in that language, students did not acquire high levels of proficiency in that language. Various methods were used to show value and respect for each language such as respecting the guide lines of allocated time for each language. Therefore when it was Spanish time, only Spanish was used for both instructional purposes and communication. The use of translation was strictly forbidden due to the fact that it interfered with language acquisition. The same was true when English was the target language.

The goal was to have a balanced program. Balanced literacy experiences included modeled reading and writing, shared reading and writing, guided reading and writing, independent reading and writing, language exposure, language experience, partner reading, and skill and strategy instruction in both languages. The best learning opportunities incorporated flexible groupings—heterogeneous for whole group instruction, and homogeneous for small group instruction—to accommodate individual needs (Carrera-Carrillo & Smith, 2006).

In a balanced classroom, language acquisition strategies were part of both teacher-directed whole group instruction and small group instruction. In a two-way dual language immersion program, half of the students acquired knowledge through their second language at any given time. The methods and strategies used for instruction were consistent in both languages. Because instruction in dual language immersion classrooms hinged on language development, teachers

needed to use strategies that supported language acquisition. Every lesson had both a content-based and a language-based objective. Success in these classrooms depended on students' ability to comprehend instruction. Students understood lessons when teachers showed as well as told and provided additional low–risk support as necessary (Carrera-Carrilo & Smith, 2006).

The success of a dual language program was embedded in student achievement on standardized tests. Dual language program goals facilitated language proficiency for all students, therefore the desired outcome was to have students who were bilingual, biliterate and bicultural. To achieve the high status of being considered bilingual it was important that teachers stay in the target language. As stated previously, translation was strictly forbidden in any successful program. Never should the same lesson be taught twice with different languages. Language development extended past classroom walls.

Languages are the backbones of societies and global understanding.

Language is power. Language is understanding and being understood.

Knowing two languages well and being biliterate opens doors to the technological world that is advancing more rapidly than we can keep up with. Literacy is the basis of technology. The more languages our children know, the greater the opportunities to participate in those advances.

(Calderon & Minaya-Rowe, 2003, p. 27)

In order to teach in another language teachers must be bilingual themselves with high recognition of language structure. Teacher training was described as intensive and demanding. "Teachers are trained to have high academic expectations for all students and to teach importance and respect for diversity, languages, ethnicity, religions, and social class background" (Calderon & Minaya-Rowe, 2003, p. 31). Ongoing professional development opportunities were needed as well as assessment and accountability.

Authors Freeman, Freeman, and Mercuri (2005) suggested five teacher essentials for a successful program. First and foremost, teachers needed to have high levels of proficiency in two languages or proficiency in one language and receptive knowledge of the second. Equally important, teachers recognized and appreciated language variation but modeled conventional oral and written language when providing instruction in either language. Also teacher collaboration to articulate curriculum within and across grade levels was essential. Successful programs had teachers that collaborated for both short and long term planning. Lastly, programs had teachers that had a strong desire to collaborate and locate resources in both languages (Freeman et al., 2005).

As further research became more available and after several studies of a wide range of dual language schools, Howard, Sugarman, and Christian (2007) identified several characteristics that successful dual language schools shared.

These characteristics were defined as a culture of intellectualism. Four key points

were observed by the authors. The first was a commitment to ongoing learning meaning that there was an atmosphere of reflection and change, an attitude that it was acceptable to make mistakes, and the desire for high expectations for oneself and others. The second was the need for collaboration and exchange of ideas through the expression of multiple views, the use of multiple approaches to problem solving, and the acceptance of more than one correct answer. Third, there was a need to foster independence through provision of choice, encouragement of self-monitoring, and instruction in problem solving strategies. Finally, promotion of higher-order thinking skills, such as predicting, analyzing, interpreting, synthesizing and applying, were essential. Each feature of this culture of intellectualism served the diverse needs of students linguistically and culturally. With such features in place the success of student accomplishments had no end. Dual language schools that incorporated these features yielded the best results (Howard et al., 2007).

In addition to instructional choices, curriculum choices equally impacted dual language programs. When curriculum was reviewed, effective features of curriculum were identified. For example, the curriculum was aligned with standards, and assessment was meaningful and academically challenging while integrating higher-order thinking skills. Curriculum was thematically integrated and was enriching, not remedial. Curriculum was aligned with the vision and goals of bilingualism, biliteracy, and multiculturalism, and included language and

literature across the curriculum. Instructional material used was reflective and valued students' cultures. Curriculum was obliged to be horizontally and vertically aligned as well as incorporated into a variety of materials and integrated in technology (Howard et al., 2007).

Although choices in curriculum varied from program to program researchers agreed that those choices affected the success of the program.

Researchers Freeman, Freeman, and Mercuri (2005) identified their own curriculum essentials for a successful programs. For example, successful programs taught language through sustained content to develop academic language and academic content knowledge. Successful programs also needed to ensure that all aspects of curriculum were integrated through thematic teaching to provide a continuous preview, view and review. Effective dual language programs organized curriculum around themes that connected to students' lives and met content and language standards (2005).

#### English Language Learners and Effective Strategies

The English Language Learners' student population had grown over the past decade. Every year more and more students came to public school who were linguistically diverse. According to the U.S. Department of Education, "Between 1979 and 2007, the number of school-age children (children ages 5-17) who spoke a language other than English at home increased from 3.8 to 10.8 million, or from 9 to 20 percent of the population in this age range" (2009, p.1).

The need for teachers to be prepared to meet the needs of all learners was greater than ever.

In 2007 Washington state legislators and other policymakers asked educational researchers from Northwest Regional Educational Laboratory (NWREL) to find effective instructional practices for English Language Learners (ELLs). The response was a report that identified 14 key principles that teachers of ELLs should know. The first five principles were big ideas about second language acquisition that all teachers regardless of content area or grade level should know. The remaining principles dealt with content specific areas (Deussen, Autio, Miller, Lockwood, & Stewart, 2008).

The first principle that was identified was that ELLs moved through different stages as they acquired English proficiency and, at all stages, needed comprehensible input. The description of the language production stages came from the work of Krashen and Terrell (Deussen et al, 2008) and was identified in five stages. The first stage was preproduction of the language. In this first stage students were new to English and generally were not yet able to communicate in the language. Students at this stage spent approximately 0-6 months. The next stage was known as early production. Now students were able to speak in simple words or phrases and understood more than they produced. Students in this stage spent approximately 6-12 months in early production. The third stage was referred to as speech emergence. Students communicated using sentences in

English, though with some grammatical and pronunciation errors. Students understood spoken English, but sometimes needed visual or physical supports in addition to language. Speech emergence lasted 1-3 years. In the stage of intermediate fluency, students had excellent comprehension and made few grammatical errors. Students spent 3-5 years in this stage. The last stage was referred to as advanced fluency. In this final stage students used English to express a wide range of thoughts and feelings. Grammar was increasingly comparable to same-age native-speaking peers. This level of language production took 5-7 years to achieve.

In order to support the first principle teachers scaffolded their instruction and assignments and provided multiple representations of concepts that promoted student interaction that was structured and supported. Scaffolding strategies included modeling, bridging, schema building, re-presenting text, and developing metacognition skills. Also instructional strategies such as peer-assistance, cooperative learning and multiple representations were shown to be effective.

The second principle was the difference between conversational and academic language. Fluency used in everyday conversation was not sufficient to ensure access to academic texts and tasks. The distinction was made between the language used in everyday communication from the language used in classroom discourse. Often misinterpretation of a student's ability to communicate with classmates on the playground or in the lunchroom was mistaken for fluency.

Acquiring this necessary academic language took about 5 to 7 years (Cummins, 1984). The development of academic language was an ongoing process that ran along a continuum. Teachers that supported the second principle and helped develop students' academic use of the language provided explicit instruction in the use of academic language. Also teachers provided multi-faceted and intensive vocabulary instruction with a focus on academically useful words.

The next principle was the third principle which stated that ELLs needed instruction that allowed them to meet state content standards. Instruction for ELLs, as for all students, was based on rigorous academic standards. Each content area had academic standards. Washington, like other states, had a set of standards built on the national standards framework. These were the Essential Academic Learning Requirements (EALRs), which applied to all content areas and described the learning standards for K-10, and the Grade-Level Expectations (GLEs), which provided concrete details for instruction in K-10. Teachers provided bilingual instruction when feasible, which led to better reading and content area outcomes. English language instructional settings permitted and promoted primary language support. In English language instructional settings, teachers used sheltered instruction strategies and combined content area learning with academic language acquisition. Teachers needed to know that ELLs needed to be held to the same high standards, and that ELLs were capable of achieving them. What ELLs needed was the appropriate support that allowed them to

continue to build the necessary content knowledge even as they were developing their proficiency in English. Sheltered instruction was instruction in English that provided additional support to ELLs in vocabulary, language development and background knowledge. Language acquisition was enhanced through meaningful use and interaction such as Sheltered Instruction Observation Protocol, or SIOP. ELLs also needed numerous opportunities to practice skills and language usage. Skilled teachers who enunciated and used gestures and pictures where appropriate saw the best results. Content instruction that used a variety of instructional methodologies for the concepts presented, which included grouping strategies, preview strategies, and wide range of materials, were the most effective.

Instructional models such as Guided Language Acquisition Design, also known as Project GLAD, and Expediting Comprehension to English Language Learners, ExC-ELL, and Cognitive Academic Language Learning Approach, CALLA, provided support for ELLs to meet state standards (Deussen et al., 2008).

The fourth principle was that ELLs had background knowledge and home cultures that sometimes differed from the U.S. mainstream. ELLs had just as much background knowledge as any other student, but often that knowledge of different histories, cultures, and places was not the background knowledge which was expected by schools and texts in the United States. ELLs did not know about some of the topics their peers did. Names, events or customs mentioned in curricular materials were entirely alien to ELLs, for example, Martin Luther King,

the Fourth of July, ice cream trucks, and the Civil War. Teachers needed to be cautious of mistaking lack of knowledge for educational gap. Cultural differences were relative, and did not mean that the home cultures of ELLs were lacking in education or sophistication, or that ELLs were somehow deprived. Instead teachers used culturally compatible instruction to build a bridge between home and school. Teachers made the norms and expectations of the classroom clear and explicit. Activating existing background knowledge and building new background knowledge increased comprehension. Perhaps most importantly, culturally compatible instruction rested on teachers' ability to be open to other cultures (Deussen et al., 2008).

The fifth principle was assessments that measured English language proficiency as well as content knowledge. Students who had difficulty communicating in English often knew more about the content area being assessed than they were able to demonstrate on conventional written tests. To have an accurate assessment, teachers sometimes provided testing accommodations or alternative forms of assessment for ELLs. Accommodations included changes to the test administration procedures, such as the amount of time allocated for responses, the use of special equipment or materials such as dictionaries or glossaries, or the place where the test was taken. Alternative assessment changes also extended to the test format itself, such as replacing a written test with an oral one.

In all the research and observation that had been conducted it was important to note that in every dual language classroom there were always second language learners. During English instruction time Spanish speakers needed extra support to make language comprehensible. The same was true when instruction was changed to Spanish. Then the English speakers were in need of the very same strategies. Success for ELLs and all second language learners was found in mastery of academic language.

Measure of Academic Progress and Dynamic Indicators of Basic Early Literacy
Skills

The final subtopic was a review of literature in the area of effective assessment. The two areas of focus included Measure of Academic Progress and Dynamic Indicators of Basic Early Literacy Skills.

The Measures of Academic Progress tests were state-approved computerized adaptive tests that accurately reflected the instruction level of each student. The MAP tests also enabled teachers to measure growth over time, identified the skills and concepts students had learned, diagnosed instruction needs and were an aid in placing new students into appropriate instructional programs.

The NWEA reliability and validity estimates were conducted using a testretest reliability across time. The data was analyzed using a Pearson productmoment correlation coefficient (r). The test-retest data was examined for each grade level and the range was between .76 and .89 as documented in a NWEA Norms Study in 1999 (NWEA, 2004). Test-retest reliability only dipped slightly below .80 twice, both at the grade two level. Most coefficients were in the mid 80s to the low 90s.

The second assessment used was Dynamic Indicators of Basic Early

Literacy Skills also known as DIBELS. DIBELS was a set of procedures and
measures for assessing the acquisition of early literacy skills from kindergarten
through sixth grade. DIBELS was designed to be short one minute fluency
measures used to regularly monitor the development of early literacy and early
reading skills. DIBELS was developed to measure recognized and empirically
validated skills related to reading outcomes. Each measure was thoroughly
researched and demonstrated. Each measure was found to be reliable and valid
indicators of early literacy development and predictive of later reading
proficiency to aid in the early identification of students who were not progressing
as expected. The results were used to evaluate individual student development as
well as provide grade-level feedback toward validated instructional objectives
(University of Oregon, 2010).

DIBELS were specifically designed to assess the big ideas of early literacy, which included phonological awareness, alphabetic principle, and fluency with connected text, vocabulary, and comprehension. The measures were linked to one another, both psychometrically and theoretically, and were found to

be an indicator of later reading proficiency. Combined, the measures formed an assessment system of early literacy development that allowed educators to readily and reliably determine student progress (University of Oregon, 2010).

The purpose of the DIBELS benchmark goals was to provide educators with standards for gauging the progress of all students. The benchmark goals represented minimum levels of performance for all students to reach in order to be considered on track for becoming a reader. The DIBELS goals and cut scores were research-based, criterion-referenced scores. They indicated the probability of achieving subsequent early literacy goals. Benchmark goals for each measure and time period were established using a minimum cut point at which the odds were in favor of a student achieving the next benchmark goal. For a score to be considered a benchmark goal, at least 80% to 85% of students in the sample with that score at that point in time had to achieve the next goal. So, for a child with a score at or above the benchmark goal at a given point, the probability was high for achieving the next goal; the probability of need for additional support to achieve the next goal was low (University of Oregon, 2010).

#### Summary

Chapter two addressed the components of a successful dual language program. Instructional practices and the importance of language were discussed as well as the use of effective curriculum along with the need to have qualified highly capable teachers. Also the author researched information regarding ELLs

and effective strategies that supported the student and were proven to be effective.

Finally, the author addressed issues of assessment reviewing two different types of formal assessments, MAPs and DIBELS.

#### **CHAPTER 3**

## Methodology and Treatment of Data

# Introduction

For the study, the author included the reading data of 21 third grade students in a dual language class. There were two formal assessments used throughout the year. The first was DIBELS; the second was MAP. The DIBELS test was administered to students at the beginning of the year and monitoring continued through the school year. MAP testing was conducted three times in an academic school year and consisted of a fall score, winter score and finally a spring score. The combined fall scores of DIBELS and MAP were used to place students into reading groups. Each group was based on student reading needs and was flexible throughout the school year. As students acquired new knowledge and showed improvement in both DIBELS and MAP, they were moved to a more appropriate reading group. Both DIBELS and MAP had benchmark scores where students were considered to be at grade level. The goal of the reading RTI program was to have the majority of the students at or above grade level by the end of the year.

### <u>Methodology</u>

The author conducted a quantitative study using student reading scores during a given academic year. Quantitative research was defined as... "the

collection of numerical data in order to explain, predict and/or control phenomenon of interest" (Gay, Mills, & Airasian, 2006, p. 600). The author began by gathering the third grade students' DIBELS scores and results of the MAP fall assessment. Then the scores were interpreted by reading specialists and third grade teachers. The students were then placed in one of three RTI reading groups. Students who were at grade level according to both DIBELS and MAP assessments were placed in a Benchmark reading classroom for further reading instruction. Students who did not meet grade level expectations, but could potentially reach grade level with proper support, were placed into a Strategic reading group. And finally students who missed the benchmark goal in both assessments were assigned to Intensive reading groups where they could acquire the skills necessary to meet grade level expectations. The research was experimental. "In experimental research, the research manipulates at least one independent variable, controls other relevant variables, and observes the effect on one or more dependent variables" (Gay, Mills, & Airasian, 2006, p. 233).

### **Participants**

The participants were the author's third grade dual language class which consisted of 21 students; of the 21 students all except 6 were native Spanish speakers. There were 9 girls in the class and 12 boys. Most students were in a dual language program for the previous three years. However three students entered the program midway through second grade and two just started the

program in third grade. Prior to third grade, students received literacy instruction in Spanish and content instruction such as mathematics and science in English.

Third grade was the first year students received literacy instruction in English while content instruction such as mathematics, science and social studies was in Spanish.

None of the students received speech services; none were on an Individual Education Plan. However, three of the students had been retained before and continued to need intensive instruction. Two of the students were considered monolingual and had just begun to transition into English.

### Instruments

The instruments available to the author included DIBELS assessment data via the DIBELS website. The progress monitoring was conducted by reading specialists or para-professionals and then the author, along with other third grade teachers and reading specialists, interpreted the data.

The DIBELS assessments were short one-minute fluency measures and could be used to regularly monitor the development of early literacy and early reading skills of students. According to Good, Gruba, and Kaminski (2001), evidence of reliability, validity and sensitivity for DIBELS had been investigated in a series of studies. Alternative form reliability of the DIBELS measures was generally considered adequate, ranging from .72 to .94 for the various indicators. The lowest reliability measure for the initial sound fluency was at .72. DIBELS

literature stated, "By repeating this measure five times on five days using multiple alternative forms, the resulting average score would have a reliability of above .90" (Hall, 2006, p. 283). The second instrument used was MAP data provided by the NWEA website. The assessment was administered three times throughout the school year and included data of all third, fourth and fifth graders in the school. The data was reviewed by teachers and reading specialists.

# <u>Design</u>

The study consisted of the pre-post DIBELS and MAP scores of third grade dual language students. The first set of pretest scores were collected in September 2009 and were later compared to post test scores in January 2010, which provided an overview of the students' reading achievement half-way through the school year. The below benchmark students received progress monitoring intervention from October 2009 to May 2010. This included small class size, explicit instruction by reading specialists, and close monitoring using DIBELS. After the intervention of progress monitoring, the author analyzed the data and compared the growth from the pretest to the post test for the first half of the year.

#### Procedure

Within the first four weeks of the school, third grade students were assessed and evaluated. Assessments included Dynamic Indicators of Basic Early Literacy Skills and Measures of Academic Progress testing. Once all scores were received,

the Response To Intervention model was used and each student was placed into a specific reading level. The first reading level was Benchmark which consisted of students who were on grade level for reading at third grade. The next level was the Strategic level. Students were placed at the Strategic level if they were below grade level in reading but could reach grade level provided they received the correct intervention. The final level was Intensive. Intensive referred to students who were significantly behind in reading.

Each reading level received specific instruction according to the needs of the students. Benchmark and Strategic students used the standard third grade curriculum, *Imagine it!*. Unlike Benchmark, Strategic had two strands; language learner and non-language learner. The language learner group received language support and explicit vocabulary development. The last strand, Intensive, was placed into a different curriculum than the other students called *Reading Mastery*. Lastly, the two monolingual students were not only placed in the language learner group but also received Rosetta Stone for knowledge of the English language.

After three mouths of instruction, intervention, progress monitoring and close observation, students were retested using Measures of Academic Progress. These results were compared to the pretest to determine whether significant growth had occurred.

### Treatment of the Data

The author collected fall MAP scores and fall DIBELS scores of third grade dual language students. This information was used as a pretest. The first three weeks of school were spent assessing every student. Once data was received on each student the score of each student was charted and students were assigned a reading level according to the RTI model. From October 2009 until the year's end in May 2010, students were provided with appropriate instruction to support academic growth. Students were assessed three times in the year. The first was in the fall and served as a pretest, the next was in winter and was considered a post test for this study. Students that were below grade level and in the Intensive reading group were monitored closely and assessed frequently. Using the NWEA website and MAP tools, each student was graphed and compared to district and class norms. For each trimester of the school year, students had grade level expectations for MAPs and DIBELS. These expectations were identified on the Third Grade Title Reading Composite. As the year progressed the expectations were revised and recorded on the reading composite.

#### Summary

The researcher used a quantitative research method and included a pre and post test for the study. The study involved 21 dual language students in third grade and two formal assessments. The first assessment was in the fall of 2009

where students were given the MAP assessment. Afterwards, students were also assessed using DIBELS. Both scores were used to determine students' reading level. Once students were placed, instruction was administered at appropriate levels. Students that were below grade level expectations received intensive intervention, which included close progress monitoring. All third grade students were reassessed in winter repeating both assessments. The author examined students' scores on both DIBELS and MAP testing and studied the amount of growth from the pretest to the post test.

#### **CHAPTER 4**

# Introduction

Dual language education was a new program to the school and the surrounding area. There were mixed reviews in favor and against dual language programs and classrooms. Though many supported program implementation, others feared the instruction in two languages would delay educational growth and development of the primary language, English. District administrators, as well as parents and school staff, wanted assurance that even though students were learning two languages and spent their first three years in Spanish literacy instruction, the development of English would not be delayed or affected. The goal of the program was to develop bilingual students with high knowledge of literacy in both languages and strong academic performance. The data collected served as strong evidence in support of dual language programs and proved that dual language students did not experience delays or lack high performance.

### Description of the Environment

The study took place during the 2009-2010 academic school year. The participants included 21 third grade dual language students. All students were assessed in the fall using MAP and DIBELS. The assessments served as a pretest and gave student performance levels. Each student was charted and imputed into the Third Grade Title Reading Composite. Also students were given individual

profiles using the NWEA website. Finally a class chart was used to keep track of class progress. Following the RTI model, students were placed into instructional reading groups according to the assessment results. Each student was placed into one of three instructional levels. The first level was Benchmark and consisted of grade level students. Students must have met or exceeded grade level expectations in both assessments to qualify. The next level was Strategic, which included students that missed grade level expectations in one or both assessments but with appropriate support could reach grade level. The final instruction level was Intensive and required close monitoring and far more support than Strategic students. Several months of appropriate instruction was given as well as close monitoring of student performance and growth. Mid year, in the second trimester, students were assessed again in both MAP and DIBELS. The new results were used as a post test. The new data was imputed into the third grade reading composite, and also the individual profile as well as the class profile. Once again students were assigned to instructional groups. Instructional support continued until the end of the academic school year.

### **Hypothesis**

Third grade dual language students who received half of the instruction in Spanish and half in English following the 50/50 model would make greater than expected growth on the Measures of Academic Progress reading assessment from

fall to winter. A year's expected growth for third grade students was eight points.

Therefore half a year's growth was four points.

## Null Hypothesis

Third grade dual language students who received half of the instruction in Spanish and half in English following the 50/50 model would not make greater than expected growth as measured by the Measures of Academic Progress reading assessments from fall to winter.

### Results of the study

At the beginning of the school year students were assessed in both MAP and DIBELS. The grade level expectation for reading for third grade students in the fall on the MAP assessment was 192. DIBELS fall grade level expectation was 77 and above. Once data was collected on each student, the results were placed into the third grade reading composite, and the individual and class profiles. The data, along with teacher discretion, was used to place students into RTI reading groups.

In the first group, Benchmark, only three students qualified for this reading group. In the Strategic group, four students were placed. The last group, Intensive, was the largest with 14 students who qualified. Teachers and reading specialists divided this group into two different strands. The first strand consisted of students who did not meet grade level expectations in both MAP and DIBELS. However, with proper support, the students could reach the Strategic level. Due to the fact that almost all students in this group were ELLs, effective ELL strategies were

used to support learning. Of the 14 Intensive students, nine were placed in the language supported Intensive group. The remaining five students were placed in the intensive level which required close monitoring and support.

Chart 1-- Fall RTI levels—from Third Grade Reading Composite

Student	Fall MAP	Fall DIBELS	RTI reading group
ID	score	score	
6	157	12	Intensive
8	166	19	Intensive
17	158	0	Intensive Rosetta Stone support
19	161	19	Intensive
20	140	18	Intensive Rosetta Stone support
1	187	77	Intensive – With language support
2	174	38	Intensive – With language support
3	176	59	Intensive – With language support
7	168	46	Intensive – With language support
10	183	75	Intensive – With language support
11	174	38	Intensive – With language support
15	175	50	Intensive – With language support
16	167	30	Intensive – With language support
21	177	77	Intensive – With language support
12	192	98	Strategic
13	188	83	Strategic

14	198	87	Strategic

Chart 1-- Fall RTI levels—from Third Grade Reading Composite

Student	Fall MAP	Fall DIBELS	RTI reading group
ID	score	score	
18	184	99	Strategic
4	205	104	P 1
4	205	104	Benchmark
5	206	206	Benchmark
9	203	84	Benchmark

After several months of instruction and close monitoring, the students were assessed again in January using MAP and DIBELS as a post test. The results were charted along with the fall scores. Each student's progress from fall to winter was charted. However, the challenge had changed due to the fact that both MAP and DIBELS had increased grade level expectations. MAP grade level expectation was 196 and DIBELS was 92 words per minute at mid year.

The Benchmark reading group remained the same with three members.

However, Student 21 made enough growth to join the group. With a 24 point improvement on MAP and 21 word recognition growth on DIBELS there was much discussion on moving the student from Intensive with language support to the Benchmark level. However after much deliberation it was decided that a two

level move up might be too severe for the student. Instead Student 21 was moved to the Strategic group. The Strategic reading group originally had four members. Only one of the four students remained in the reading group without question. The remaining three were evaluated by the teachers and reading specialists. Student 12 and Student 13 did not meet grade level expectations for the winter MAP assessment. Discussion surrounded the students and there was mention of moving them down a level. However, both Student 12 and Student 13 had shown improvement in DIBELS. The students' growth on DIBELS allowed them to remain in the Strategic group. Also, two more students joined the Strategic group, Student 1 and Student 10. The remaining students stayed in their assigned reading groups. Though several students experienced growth in either MAP or DIBELS, the improvement was not enough to move them to the next reading level.

Chart 2---Fall to winter third grade dual language students—class chart

Student	Fall	Winter	MAP	Fall ORF	WinterORF	ORF
ID	MAP	MAP	growth	DIBELS	DIBELS	growth
	score	score		score	score	
1	187	199	12 pts	77	92	15words
2	174	188	14 pts	38	79	41 words
3	176	187	11 pts	59	84	25words
4	205	205	0 pt	104	106	2 words
5	206	207	1 pt	162	163	1 word
6	157	161	4 pts	12	18	6 words
7	168	169	1 pts	46	58	12 words
8	166	178	12 pts	19	49	30 words
9	203	214	11 pts	84	121	37 words
10	183	197	14 pts	75	96	21 words
11	174	181	7 pts	38	67	29 words
12	192	193	1 pt	98	102	4 words
13	188	193	5 pts	83	118	35 words
14	198	196	-2 pts	87	116	29 words

15	175	188	13 pts	50	91	41 words
16	167			30		

Chart 2--Fall to winter third grade dual language students—class chart

Student	Fall	Winter	MAP	Fall ORF	WinterORF	ORF
ID	MAP	MAP	growth	DIBELS	DIBELS	growth
	score	score		score	score	
17	158	150	-8 pts	0	28	28 words
18	184	197	13 pts	99	123	24 words
19	161	170	9 pts	19	48	29 words
20	140	159	19 pts	18	46	28 words
21	177	201	24 pts	77	98	21 words

# **Findings**

Over half of the third grade dual language class made greater than expected growth on their MAP reading assessment from fall to winter of the 2009-2010 school year. The hypothesis was proven true for the majority of the students. Thirteen students made greater than expected growth with over a four point improvement on the MAP test.

The class also experienced significant improvements in reaching grade level expectations. With less than five months of English literacy instruction, eight

students were already on grade level and two more were less than three points away. The average points gained from one trimester to the next was 8 points.

All students showed growth on the DIBELS assessment. As the year progressed, the students acquired more knowledge of the English language and gained further word recognition. Student 2 and Student 15 experienced significant growth of 41 additional words per minute as measured by the DIBELS assessment. A total of 10 students met grade level expectations in DIBELS by January. One student missed the mark by only one word; another by 8. The two students were expected to reach grade level by the end of the year.

## Discussion

The eight students who did not make adequate growth had very unique circumstances. For example, Student 4 did not make the necessary growth to prove the hypothesis. However, the student's fall score was already above the third grade level. The student's fall score of 205 was that of an average fourth grader. The same was found in the student's DIBELS score. Student 4 scored 104. The benchmark score needed was 77. So even though the student did not show dramatic growth in either assessment, his scores were already sufficiently greater than an average third grader. The same scenario occurred with Student 5. There was only a one point growth from fall to winter on the MAP assessment. However, in the fall the student was already above grade level and maintained that level in winter. Student 6 almost made sufficient growth to prove the

hypothesis but fell short by just one point. Student 6 could easily prove the hypothesis correct if given more instructional time. Student 7 also did not make the necessary growth but there were conversations of a more serious problem; perhaps a learning disability. Student 12 was discussed at great lengths among the teachers and reading specialists. Though the student did not make more than a point's growth on the MAP from fall to spring, the DIBELS results showed strength in reading ability. Perhaps the MAP winter test did not capture all of Student 12's abilities. Student 14 suffered a decrease in his score of 2 points. However, the student's score was classified as at grade level for both fall and spring. Student 16 started 2009-2010 school year in the third grade dual language classroom but left before the winter assessment was conducted. The student was de-enrolled from the school and moved. Three months later the student returned and participated in the final assessment in May. Finally, Student 17 was the second student who not only missed the hypothesis goal but experienced a decrease in points on the MAP reading assessment. This was explained by the student's lack of knowledge of the English language. Student 17 was enrolled in dual language at the end of second grade from Mexico with no English background. Therefore the student was classified as monolingual whose language abilities were limited to Spanish.

## Summary

The author explained the process in which the 21 dual language students were assessed using both MAP and DIBELS. Students participated in the assessments in the fall of the 2009-2010 school year and were then placed into appropriate reading groups, according to the assessment data and RTI grouping. After several months of instruction the students were assessed again in the winter. The winter MAP and DIBELS data along with the fall data were used to evaluate the reading groups and document student growth. The majority of the students made greater than expected growth on the MAP assessment from fall to winter. The hypothesis proved correct for over half of the students. Although not all students proved the hypothesis, circumstances explained why they did not make greater than expected growth. Even though the third grade dual language students in the 2009-2010 school year were in the first year of English instruction, overall results were favorable.

### **CHAPTER 5**

# Summary, Conclusions, and Recommendations

### Introduction

The purpose of the project was to provide data and information about dual language programs. The author set out to prove that dual language education did not interfere or delay English language development. Furthermore, students in the dual language program could anticipate greater than expected growth in the MAP assessment. Dual language was a new program for the district and had been in the schools only four years. By providing strong data and supporting research to the district, the worry that students would not be able to perform would vanish.

## Summary

In Chapter 1 the author discussed the background for the project as well as the statement of the problem and purpose of the project. The delimitations of the research project included 21 third grade dual language students and the use of two assessments, MAP and DIBELS. The research and data were collected during the 2009-2010 academic school year.

Chapter 2 addressed the components of a successful dual language program, as well as instructional practices, and effective ELL strategies. To conclude, the

author addressed issues of assessment by reviewing two different types of formal assessments, MAPs and DIBELS.

In the next chapter the author explained the use of quantitative research method and included a pre and post test for the study with the use of MAP and DIBELS assessment. The author examined students' scores on both DIBELS and MAP testing. The author studied the amount of growth from the pretest to the post test.

In Chapter 4 the author explained the process in which the 21 dual language students were assessed in the fall using both MAP and DIBELS. After several months of instruction the students were assessed again in the winter. The winter MAP and DIBELS data along with the fall data were used to evaluate the reading groups and document student growth. The majority of the students made greater than expected growth on the MAP assessment from fall to winter. The hypothesis proved correct for over half of the students. Although not all students proved the hypothesis, circumstances explained why they did not make greater than expected growth. Even though the third grade dual language students in the 2009-2010 school year were in the first year of English instruction, overall results were favorable.

### Conclusions

English language development was not hindered by the use of Spanish in the classroom. Students were still achieving grade level expectations. Students made

improvement on both MAP and DIBELS. For the majority of the students, the hypothesis was correct.

## Recommendations

The author recommends a longer study of the dual language students.

Third, fourth, and fifth grade teachers need to keep extensive records on students' performance throughout the academic school year. MAP and DIBELS data should be collected and charted. Students should have their own profile with performance levels that follow them into the next academic school year. This information could be shared with school board members, parents, and faculty to show the growth over time of dual language students. Constant monitoring and evaluation of the program would help it grow and improve. Teachers need to partner closely with reading specialists to document and oversee student development.

Dual language programs not only teach students two languages, but also bring two worlds together and help us move toward a more global society. This study is a stepping stone in understanding how students acquire a second language and how language development works to create highly capable, highly bilingual students.

### REFERENCES

- Calderon, M.E., & Minaya-Rowe, L. (2003). *Designing and implementing two-way bilingual programs*. Thousand Oaks, CA: Corwin Press.
- Carrera-Carrillo, L., & Smith, A. R. (2006). 7 steps to success in a dual language immersion: A brief guide for teachers and administrators. Portsmouth, NH: Heinemann.
- Collier, V.P., & Thomas, W. P. (2004). The astounding effectiness of dual language education for all. NABE Journal Research and Practice, 2:1, 1-20.
- Cummins, J. (1984). *Bilingualism and special education: Issues in assessment and pedagogy*. Clevedon, England: Multilingual Matters.
- Deussen, T., Autio, E., Miller, B., Lockwood, A., & Stewart, V.

  (2008, November 1). What teachers should know about instruction for English Language Learners. Retrieved January 14, 2010, from www.nwrel.org
- Freeman, Y.S., Freeman, D.E., & Mercuri, S. (2005). *Dual language essentials* for teachers and administrators. Portsmouth, NH: Heinemann.
- Gay, L.R., Mills, G. E., & Airasian, P. (2006). *Educational research:*\*Competencies for analysis and applications. (8<sup>th</sup> ed.) Upper Saddle River,

  \*NJ: Pearson.

- Good III, R. H., Gruba, J., & Kaminski, R. A. (2001). Best practices in early literacy assessment: Dynamic Indicators of Basic Early Literacy Skills in an outcomes-driven model. Washington, D.C: National Association of School Psychologists.
- Hall, S.L. (2006). *I've DIBEL'd now what: Designing interventions with DIBELS data*. Longmont, CO: Sopris West Educational Services.
- Howard, E.R., Sugarman, J., & Christian, D. (2007). *Guiding principles for dual language education*. Washington, DC: Center for Applied Linguistics.
- National Institute for Direct Instruction. (2006). *About direct instruction (DI)*.

  Retrieved January 11, 2010, from <a href="http://www.nifdi.org/15/about-di">http://www.nifdi.org/15/about-di</a>
- NWEA. (2004, March). Reliability and validity estimates: NWEA achievement level tests and measures of academic progress. Retrieved August 8, 2009, from http://www.nwea.org/
- OSPI. (2009). School report card. Retrieved January 4, 2010, from <a href="http://reportcard.ospi.k12.wa.us/summary.aspx?groupLevel=District&sch">http://reportcard.ospi.k12.wa.us/summary.aspx?groupLevel=District&sch</a> oolId=349&reportLevel=School&orgLinkId=349&yrs=&year=2008-09
- U.S. Department of Education, National Center for Education Statistics. (2009).

  The condition of education 2009 (2009-081) Retrieved March 4, 2010,
  from http://nces.ed.gov/fastfacts/display.asp?id=96

University of Oregon, Teaching and Learning. (2010, June 11). *DIBELS data system*. Retrieved June 11, 2010, from

https://dibels.uoregon.edu/dibelsinfo.php