

Introduction

In this issue of the TABE Journal, authors describe programmatic innovations embedded in bilingual programs of study and provide valuable data on program outcomes from the perspectives of teachers, parents and students in diverse contexts. These approaches to bilingual education offer powerful possibilities for enhancing student achievement, and the articles provide an overview of student outcomes vis-à-vis academic achievement, and personal/prosocial development. While many of these articles describe bilingual education's impacts on Spanish-speaking students some of them describe outcomes for English language learners from other cultural/linguistic backgrounds, (e.g., Wright & Li, scholars from the University of Texas at San Antonio, describe the impacts of high stakes testing in mathematics on Cambodian students in a Texas school).

Articles by Gómez and Collier/Thomas/Tinajero describe best practices in bilingual education, providing background information on two-way dual language education and its implementation in diverse school contexts. Although dual language programs are not new in this nation, interest in effective implementation of this model in diverse contexts has increased dramatically in recent years. Key characteristics of the model are discussed and applications in Texas schools are provided as examples. Curts provides an overview of concept mapping and its potential as a tool for further enhancing the cognitive development of second language learners.

The perspectives of teachers engaged in diverse processes of change in their own schools and classrooms are presented in articles from Austin and Brownsville. Palmer/Johnson/Chavez explore the power of individual teachers in subtractive bilingual school context to bring about change towards more enriched, additive programs. Alanís provides discussion of the characteristics of teachers' personal experiences, attitudes, and professional development needs in dual language programs. A study from UT Brownsville scholar, Rodríguez, provides unique perspectives on pre-service teacher beliefs and attitudes, examining future bilingual teachers' perceptions of the role of teaching and learning Spanish in the classroom.

Helms/Irby/Lara-Alecio/Mathes' article explores the important dimension of parent involvement in their children's educational experience. Their study collected and analyzed data measuring parents' perceptions about the effectiveness of a controlled and structured ESL intervention on their children's language development.

Another TABE Journal issue on bilingual education research and practice will appear again in the spring of 2007. We encourage readers to join the growing number of scholars and practitioners from around Texas and the nation who are conducting research on the effectiveness of innovative approaches to teaching and learning for English learners in a wide variety of contexts, documenting the processes and impacts and disseminating their findings with others in this public forum.

Josefina V. Tinajero and Judith H. Munter, Co-Editors
University of Texas at El Paso

Acknowledgements

Thanks to members of the Editorial Board for their assistance in reviewing all manuscripts submitted. Special thanks to Joe Follman, for his thorough editing of each selected published article. Thank you to the UTEP College of Education Technology Implementation Manager, Gerardo Urquiza, and staff for their assistance in technical preparation of the web page and all associated documents.

Thanks to all authors for their contributions
to advancing the research agenda in bilingual education.

**TEXAS ASSOCIATION FOR BILINGUAL EDUCATION
TABE JOURNAL**

Editors-in-Chief

Dr. Josefina Villamil Tinajero, The University of Texas at El Paso

Dr. Judith Hope Munter, The University of Texas at El Paso

Associate Editor

Dr. Judy Reinhartz, The University of Texas at El Paso

Editorial Board

Dr. Iliana Alanís, The University of Texas at San Antonio

Dr. Virginia Collier, Emeritus, George Mason University, Research Associate/UTEP

Dr. Jim Crawford, Institute for Language and Education Policy

Dr. Jose Ruíz-Escalante, The University of Texas-Pan American

Dr. Leo Gómez, The University of Texas-Pan American

Dr. Richard Gómez, University of Texas at Brownsville

Dr. Virginia González, University of Cincinnati

Dr. Steve Krashen, Professor Emeriti, University of California

Dr. Rafael Lara-Alecio, Texas A& M University

Dr. Deborah Palmer, UT Austin

Dr. Wayne Thomas, Emeriti, George Mason University, Research Associate/UTEP

The TABE Journal

SPRING/SUMMER 2006

VOLUME 9

Number 1

Introduction

Josefina Tinajero & Judith Munter, Co-Editors.....i

Catching up in Math? The Case of Newly-Arrived Cambodian Students in a Texas Intermediate School

Wayne Wright & Xiaoshi Li.....1

From Remediation to Enrichment: Transforming Texas Schools through Dual Language Education

Virginia Collier, Wayne Thomas, & Josefina Tinajero.....23

Parents' Reflections of Their Children's Participation in Project ELLA, a Comparative Study of English Language Learners in Bilingual and Structured English Immersion Classrooms

Sallie Helms, Beverly Irby, Rafael Lara-Alecio, & Patricia Mathes.....35

Promising Practices: Dual Language Enrichment for ELL Students K – 12

Rafael Gómez.....46

Supporting Change in our Schools and Classrooms: Two Teachers' Journeys Towards Additive Bilingual Education

Deborah Palmer, Marta C. Johnson, Guadalupe Chavez.....66

Utilización de los Mapas Conceptuales como Herramienta Meta-cognitiva Bilingüe

Jaime Curts.....82

Teacher Perspectives on the Implementation of a Dual Language Program

Iliana Alanís.....94

<i>The Role of Spanish as Perceived by Future Bilingual Teachers</i> Alma Rodríguez.....	109
Call for Papers, TABE Journal v. 9 #2, Winter 2006/07.....	128

Catching up in Math?
The Case of Newly-Arrived Cambodian Students in a Texas Intermediate School

Wayne E. Wright & Xiaoshi Li
University of Texas, San Antonio

ABSTRACT

This article reports the findings of a case study of two newly arrived 5th grade students from Cambodia attending a Texas intermediate school. The students could not speak any English at the time of their arrival, yet federal and state policy required that they take and pass the 5th Grade Math TAKS test at the end of the school year. This article describes efforts of the school to help the students catch up to their grade-level peers in math, but calls into question the appropriateness of the policy to test newcomer ELLs in English on high-stakes tests, and the reasonability of the expectations that these students should pass the test. Detailed analyses of the students' prior education in Cambodia, the type of work they were capable of completing in school, and the content and linguistic demands of the TAKS test items, reveal that these policies and expectations are not reasonable for newly arrived ELLs.

Contact Information:

Wayne E. Wright, PhD
Assistant Professor
University of Texas, San Antonio
College of Education and Human Development
Division of Bicultural-Bilingual Studies
6900 N. Loop 1604 West
San Antonio, TX 78249
Office (210) 458-5963 or -2024
Fax (210) 458-5962
e-mail: wayne.wright@utsa.edu

Xiaoshi Li
Doctoral Student
University of Texas, San Antonio
College of Education and Human Development
Division of Bicultural-Bilingual Studies
6900 N. Loop 1604 West
San Antonio, TX 78249
e-mail: xiaoshi.li@utsa.edu

Catching up in Math?

The Case of Newly-Arrived Cambodian Students in a Texas Intermediate School

Newcomer English language learning (ELL) students—immigrant students who arrive in the United States and begin school with little or no proficiency in English—face a number of challenges, as do the schools and educators charged with meeting their linguistic, cultural, and academic needs. Bilingual education programs have been shown to be very effective in helping ELL students learn English and academic content before they are transitioned into mainstream classrooms (August & Hakuta, 1997; Cheung & Slavin, 2005; Rolstad, Mahoney, & Glass, 2005; Slavin & Cheung, 2003; Thomas & Collier, 2002). Unfortunately, quality bilingual programs are in short supply, and few bilingual programs are available for non-Spanish-speaking ELL students. While Spanish-speaking ELLs make up more than 80% of the over 5,000,000 ELL students nationwide (National Clearinghouse for English Language Acquisition, 2003), and 94% of the ELLs in Texas, the remaining quarter of a million ELLs across the country are a diverse group with students from hundreds of different language minority groups. In Texas alone, there are over 37,000 non-Spanish-speaking ELLs—more than the total ELL student population in 30 of the 50 States, and more than the total ELL student populations of Delaware, Kentucky, Maine, Mississippi, New Hampshire, South Carolina, South Dakota, Utah, and West Virginia combined¹. One large school district in San Antonio recently reported it has ELL students who speak 118 different languages or dialects (Lacoste-Caputo, 2006).

In the absence of bilingual education programs, it becomes incumbent on schools to offer the best possible ESL and sheltered English content-area instruction possible. Nonetheless, as these students are required to learn academic content in English at the same time they are learning the language, catching up to their English-fluent peers at their grade level is a major challenge. Cummins (2003) describes this challenge as follows:

Research has repeatedly shown that ESL students usually require *at least* 5 years of exposure to academic English to catch up to native-speaker norms. In addition to internalizing increasingly complex academic language, *ESL students must catch up to a moving target*. Every year, native-speakers are making large gains in their reading and writing abilities and in their knowledge of vocabulary. In order to catch up to grade norms within 6 years, ESL students must make 15 months' gain in every 10-month school year. (p. 3; Emphasis in original)

Adding to this challenge are the mandates of the federal No Child Left Behind (NCLB) Act, and Texas' own school accountability and high-stakes testing programs. Under state and federal law, ELL students must take the state's high-stakes test—the Texas Assessment of Knowledge and Skills (TAKS)—and schools are held accountable for the results (Valenzuela, 2004). The TAKS test is only offered in English and Spanish, thus non-Spanish-speaking ELL students have no choice but to take the TAKS in English. NCLB allows newly arrived ELLs to be excluded from the language arts portion of the test during their first year of enrollment, but students still must take the Math portion of the TAKS, regardless of how long they have been in

the United States. The federal law calls for ELLs to be provided with “reasonable accommodations” which enable ELLs to be tested in a “valid and reliable manner” (Wright, 2005a, 2005b). The Texas Education Agency has developed extensive guidelines for Linguistically Accommodated Testing (LAT) for the TAKS Math subtest—guidelines that are designed to meet the requirements of the federal law to make the English language test more accessible to ELLs, particularly those who are unable to take the exam in their native language (Texas Education Agency, 2005). Despite the state’s efforts, little research is available (and that which exists is inconclusive) in terms of how ELLs can actually be accommodated on large-scale high-stakes tests while maintaining the validity and reliability of the testing instrument (Abedi, 2004; Hollenbeck, 2002; Liu, Anderson, Swierzbis, & Thurlow, 1999; Rivera, 2003; Rivera & Stansfield, 1998; Wright, 2005a). Moreover, as will be argued in this article, the attempts at accommodation do not address the deeper issues of the appropriateness of requiring newly arrived ELLs to be tested in English, or the reasonability of the expectations as established by the state’s standards and high-stakes test (Abedi, 2004; Valenzuela, 2004; Wright, 2005b).

The research question addressed in this study is, how reasonable is the expectation that newly arrived non-Spanish-speaking ELLs can catch up to their peers in grade-level math instruction sufficient to pass the TAKS Math test in English? To answer this question, this article reports the findings of a case study of two newly arrived 5th grade students from Cambodia attending an intermediate school in the greater San Antonio, Texas area. The two students, Nitha and Bora, are sisters who arrived in the United States in October 2004. Neither could speak any English at the time of their arrival, and by the time they entered school, it was already two months into the school year. In addition to helping Nitha and Bora learn English, the school placed major emphasis on math instruction, given the fact that they would be required to take the TAKS Math test, and given the fact that (technically) they would have to pass it in order to be promoted to 6th grade.ⁱⁱ Thus, the school put forth considerable effort to help these newly arrived students catch up in math to their English-fluent grade-level peers.

The methodology utilized in this study is described below, followed by descriptions of the participants and the research site. Next, the general issue of math instruction for ELLs is described, noting the particular areas of difficulty this content area can pose. The study then compares and contrasts the level of math instruction Nitha and Bora received in Cambodia, the level of math instruction they received once they arrived in Texas, and the level of math required to pass the TAKS test. In addition, there is a comparison of the linguistic complexity of the work the students were able to successfully complete in school, versus the linguistic complexity of actual TAKS Math test items. The conclusion discusses the implications of the findings of this study for other newly-arrived ELLs in Texas and throughout the United States.

Methods

This case study utilizes participant observation, interviews with teachers and support personnel, and the collection and analysis of school-based documents (e.g., policy documents, memos, notes, lesson plans, curricular materials, progress reports, assessments, etc.) and samples of work completed by the two students. The first author (Wright), who is proficient in Khmer (Cambodian), volunteered at the school an hour each week from November 2004 to May 2005 to provide primary language support and math tutoring for Nitha and Bora. In addition to the

tutoring sessions, observations were conducted in Nitha and Bora's regular and ESL classrooms, in their tutoring sessions with a (non-Khmer-speaking) paraprofessional, and in the school's computer lab (where the students used a math software program). Digital audio recordings were made and field notes were taken during the tutoring session and in the observations described above. Formal interviews were conducted with the classroom teacher, ESL teacher, and the paraprofessional, and these interviews were digitally audio-recorded and fully transcribed. Detailed field notes were also kept of informal conversations with these individuals and other school personnel. Fieldnotes, transcripts, and documents were imported into and organized using QSR Nvivo, a qualitative data analysis software program.

Content-level analyses were conducted of the students' math instruction in their classroom, tutoring sessions, and the computer lab, and of TAKS math test items from the released 2004 5th grade Math TAKS test. To determine the grade-level equivalency of the students' math work in class, samples of the math work collected throughout the school year were matched with state's math content standards outlined in the Texas Essential Knowledge and Skills (TEKS), for Kindergarten through Grade 5. These standards were also matched to the released 5th grade Math TAKS (if Math TAKS is a proper term, then "math" should be capitalized when used this way; otherwise, not capitalized) test items.

In addition to the content-level analysis, student work and test items were also analyzed from a linguistic framework to determine the relative level of linguistic difficulty of the student work and test items. A lexical analysis was completed by compiling a list of all words appearing in the students' math worksheets, and this was compared to a list of all words appearing in the Math TAKS test. Words were classified according to their frequency of use in English and in terms of the number of math-specific vocabulary words. Analysis was aided by the use of an on-line vocabulary profiler tool (see below). Sentence-level analyses were also conducted to determine the syntactic complexity of sentences appearing in the student worksheets versus the TAKS test items.

Analyses of our qualitative research data were guided by the work of Erickson (1986) and Miles and Huberman (1994). To maintain the confidentiality of the participants, all names of students, teachers and staff, and the school are pseudonyms.

Participant and Site Description

Nitha and Bora are sisters who arrived in Texas in the middle of October 2004. In Cambodia, they lived in a poor village in the Takeo Province, far from their provincial capital or any major cities. They live with their aunt and uncle in a spacious two-story home—a far cry from the one-room thatched hut with no electricity or running water where they used to live. The girls had attended school in their village since Kindergarten; Nitha, who is older, had completed 6th grade, and Bora had completed the 4th grade.ⁱⁱⁱ Despite the poor condition of Cambodian schools (Um, 1999), particularly in the rural areas, both girls had strong Khmer (Cambodian) literacy skills, and could do basic arithmetic. While both reported they were among the top students in their class, the curriculum they received in their school in Cambodia was far below that of equivalent grade-levels in American schools (see below). Neither had studied English

before coming to the United States, and could not speak a single word of English upon their arrival. Despite differences in personality, both showed a tremendous amount of courage as they faced the challenges of adjusting to a new country, a new school, as well as a strange language, customs, and food.

Rodgers Intermediate School, Nitha and Bora's neighborhood school, is in a medium-sized Texas school district of 13 schools serving 7,636 students in grades PreK-12. The district is located in a suburb, on the outskirts of San Antonio, in a rapidly growing area. Rodgers provides instruction to 590 students in grades 5 and 6. Over half of the students are white (58%), 29% are Hispanic, 10% are African American, and only 2% are Asian/Pacific Islanders. The school is located in a middle-class neighborhood, and only 31% of students participate in the free/reduced lunch program (well below the state average of 53%). English language learners represent less than 1% of the schools' enrollment. In the 2004-2005 school year, Rodgers was rated as "Academically Acceptable" by the Texas Education Agency (District and School information retrieved from www.greatschools.net).

Math Instruction for ELLs

A common misconception is that of all the academic content areas, Math instruction poses the least amount of difficulty for English language learners because it relies less on language and more on numbers. Indeed, the federal policy appears to be based on this assumption, as newly arrived ELLs may be excluded from their state's reading tests, but not the math tests, during their first year of enrollment. However, research has shown that math instruction in general, and high-stakes math tests in particular, have a high language demand that poses significant difficulties for ELLs and which prevents students from demonstrating their mathematical knowledge and skills (Abedi & Lord, 2001; Brown, 2005; Buchanan & Hellman, 1997; Dale & Cuevas, 1992).

Brown (2005) describes math as having "a language all its own," and describes math as a "third language" that ELLs must learn (p. 340). Dale & Cuevas (1992) describe this unique "language of mathematics" as follows:

The language register for mathematics is composed of meanings appropriate to the communication of mathematical ideas together with the terms or vocabulary used in expressing these ideas and the structures or sentences in which these terms appear. Like other registers or styles of English, the mathematics register includes unique vocabulary, syntax (sentence structure), semantic properties (truth conditions), and discourse (text features). (p. 332)

The vocabulary of math includes words that are specific to math (e.g., divisor, denominator, quotient), everyday words that have specific meanings in math contexts (e.g., table, column, equal), and complex phrases (e.g., least common multiple, negative exponent) (Dale & Cuevas, 1992). The syntax of math can be confusing, as there may not be a one-to-one correspondence between the words and symbols they represent, and the order of the words may not necessarily correlate with the order in which the numbers and math symbols are written in a numeric equation or sentence (e.g., "the square of the sum of x and y " = $(x+y)^2$). In addition, as Dale and Cuevas (1992) have observed, mathematical texts are conceptually packed, have high density,

require left-to-right as well as up-and-down eye movement, must be read more slowly than natural language texts, often require multiple readings, and use numerous symbolic devices such as charts and graphs (p. 338). Furthermore, math tests typically rely on word problems that may contain complex syntax that must be understood in order to answer the problem correctly.

Another challenge is that ELLs who received math instruction in their home countries may have learned different algorithms for problem solving and may use mathematical symbols differently than the way they are used in the United States (Brown, 2005; Jarrett, 1999). For example, in Cambodia (and many other countries) the decimal is used in the same way the comma is used in the United States to separate place value, and the comma is used as the decimal is used here (e.g., the number 5,234,232.56 would be written as 5.234.232,56 in Cambodia).

Abedi and Lord (2001) have documented how the language factor in tests of mathematics—which often rely heavily on word problems full of unfamiliar vocabulary and difficult syntax—causes great difficulty for ELL students. Cummins (2003) notes:

ESL students often make good progress in acquiring basic computational skills in the early grades, however, they typically experience greater difficulty in carrying out word problems, and this difficulty increases in the latter grade of elementary school as the word problems become more linguistically and conceptually complex. (p. 2)

In order to successfully answer word problems, students need to know how to read well. Indeed, there is a high correlation between reading ability in English and performance on (English-language) mathematics tests (Brown, 2005). Evidence for the fact that math is indeed heavy-laden with language demands can be found in test scores for ELLs in Texas and Arizona, where many ELLs actually score lower on their Math test than they do on reading and writing tests (Wright & Pu, 2005).

Schooling and Math Instruction in Cambodia

In addition to language challenges, another major obstacle for newly arrived students in catching up with their grade-level English-proficient peers has to do with the notion of opportunity to learn. As noted by Brown (2005), “math learning must be accrued,” meaning simpler concepts must be mastered (e.g., addition, subtraction) before more difficult and complex concepts can be learned (multiplication, division, fractions, ratios, etc.) (p. 340). Brown observes that “as ELL students proceed to higher grades, they face increasingly greater challenges in keeping up or catching up with their counterparts” (p. 340).

Oftentimes, newcomer ELLs from developing countries come from schools that are very poor and do not offer a curriculum that is equivalent to the level and demand of similar grade levels in the United States.^{iv} This is certainly true in the case of Cambodia. By 1979, during the Cambodian Genocide under the Khmer Rouge, nearly all schools in the country had been shut down, and the majority of teachers had been executed, died of starvation, or fled as refugees (Becker, 1986; Chandler, 1993; Kiernan, 1996; Wright, 2004). Reestablishing schooling in Cambodia in the early 1980s was a major challenge, and despite tremendous progress over the past 16 years, many problems remain today in terms of providing even the most basic education

to all of Cambodia's school-aged children (Clayton, 2002; Needham, 1996). According to recent Cambodian government reports (Ministry of Education, 2004; Planning Department, 2006), many schools lack water, restroom facilities, electricity, or even walls or roofs. In addition to poor facilities, average class size for primary schools is between 40 and 60 students. The amount of instructional time is considerably less than the United States, as most students only attend half-day (morning or afternoon). Many students, especially females in the rural areas, drop out of school as early as the primary grades. In the Takeo Province where Nitha and Bora attended school, 69% of the primary school teachers have less than a high school education.

The Cambodian government is still struggling to provide each student with a textbook, each school with curricular guidelines for basic subject areas, and each teacher with adequate training (Ministry of Education, 2004; Planning Department, 2006). The government is just now beginning work on defining minimal standards of student achievement for each grade level and content area. Current math textbooks in Cambodia are small flimsy paperback books with poor binding, and printed on low quality paper in black-and-white ink. There is only one math textbook available nationally per grade level, and math textbooks tend to focus on computational problem solving rather than word/story problems. The textbooks Nitha and Bora used for math instruction in their Cambodian classrooms stand in stark contrast to the large, thick, colorful math textbooks approved for use in Texas public schools. More importantly, the content of the Texas math textbooks provide much greater depth and breadth than Nitha and Bora were afforded the opportunity to learn as students in Cambodia.

In summary, while Nitha and Bora were fortunate to attend school in their home country, their level of education was not on par with those of their grade-level peers educated in the United States. While both were excellent students in their village in Cambodia, Nitha and Bora simply did not have the opportunity to learn the level of mathematical content expected of students in the same grade levels in Texas. Thus, when they entered the fifth grade at Rodgers Intermediate school, even without the language barrier, they were already academically far behind their classmates.

Math Instruction at Rodgers Intermediate School

When Nitha and Bora first arrived at Rodgers Intermediate school (two months into the school year), the teachers and staff were quite apprehensive as even the most basic communication with the girls was difficult. Their classroom teacher, Mrs. Moore, described a hectic first week of just trying to help them adjust to the classroom, helping them get lunch in the school cafeteria (food which they were afraid to eat), and conveying to them safety rules such as not running out into street, looking both ways before crossing streets, and using the crosswalks. While the school had an excellent and experienced pull-out ESL teacher, Mrs. Moore was frustrated as she knew Nitha and Bora needed much more support than she was able to provide in her classroom. Through persistence with her administrators and the help of some of her colleagues, arrangements were made for the Nitha and Bora to receive daily assistance for one or more hours a day from a paraprofessional, about an hour a week of Khmer primary language support and tutoring from an volunteer from the local university (the first author), and additional support through the school's computer lab.

Mrs. Moore decided that, in addition to English language development, math instruction would be a major focus because, as she described, “the math TAKS is the first thing they start to hold all kids responsible for.” Each week she would carefully plan and gather the necessary materials for use in the tutoring sessions. Rather than attempt to use the designated 5th grade math curriculum—which she found was too far beyond the girls’ level—Mrs. Moore pulled together hands-on manipulatives and worksheets from supplemental workbooks designed for lower grade levels. She saved for later the more challenging “higher-order” concepts and worksheets, which were closer to 5th grade level for the primary language tutoring sessions, as these concepts proved too difficult for her and others to teach in English.

Computer Lab

The school’s computer lab utilized a software program for self-paced reading and math instruction produced by Compass Learning.^v The use of this software allowed students to work and progress at their own level. The program’s levels corresponded with grade levels (e.g., K, 1, 2, 3 etc.). The program utilizes graphics and sounds, with child-friendly illustrations and animations to help students explore math concepts. The program then gives students guided practice, followed by a check-up with multiple-choice or other problem-solving-type questions. If students do not get the questions right, they must repeat the lesson until all questions are answered correctly. For students who have difficulty reading the on-screen text, they can choose to have the computer read it aloud to them (in English).

Arrangements were made for Nitha and Bora to have two extra sessions a week in the computer lab in addition to their regularly scheduled time with their class. Due to Nitha and Bora’s lack of English language proficiency, and the inability of the school to determine their level of math knowledge, the computer lab teacher decided to start them out at the Kindergarten level. Less than seven months later, both girls had completed the Kindergarten and Grade 1 levels, and were just beginning the Grade 2 level. According to the Compass Learning manual, the Kindergarten level “addresses major concepts, such as place/value numeration, whole numbers, measurement, and beginning geometry.” The Grade 1 level covered these same areas but at a slightly higher level. When they girls began the Grade 2 level, they were working on lessons titled “Ones, Tens, and Hundreds” and “Count by 10s and 100s.” Despite tremendous progress—completing over two grades levels of math in less than 120 school days—the fact that they were far behind their fifth-grade peers was evidence by the content of lessons from the Grade 5 level that their fellow classmates were working on. While Nita and Bora were counting pictures of boats and tents by 10s and 100s, their classmates were completing lessons with titles such as “Introducing Percentage,” “Averaging with Decimals,” “Calculating Multidigit Sums,” “Arranging Data,” and “Measuring Quadrilaterals.”

The mathematic concepts covered in the K- 2nd grade levels were similar to ones Nitha and Bora had already learned in Cambodia, however the girls said the work in the computer lab was hard for them, mainly due to the language barrier. While the program provided read-aloud support, they simply did not have enough vocabulary to understand the words. Nitha even quit wearing the headphones, complaining that they hurt her ears. Even when the paraprofessional or

computer lab teacher provided assistance, they had difficulty understanding. Observations of their work in the computer lab revealed that they got through the program by trial-and-error. They did their best to try and figure out the concepts through the illustrations and examples. Oftentimes they would have to repeat a lesson anywhere from two to five times. Sometimes they would fly through the “exploring” and “guided practice” portions, just to get to the check-up questions so they could get the right answers (by choosing different options than they did previously) and move on.

Student Math Work in Class, with a Paraprofessional, and with the Khmer Primary Language Support Tutor

Despite the low level of the work completed in the computer lab, Nitha and Bora completed higher-level work in class (with help from the teacher) with their paraprofessional, and in particular with the Khmer primary language support tutor. An analysis of samples of student math work completed over the school year shows that the two made substantial progress from worksheets covering concepts at the Kindergarten level, to those covering 5th grade-level concepts by the end of the school year. Nearly all of the worksheets utilized story problems, rather than straight-forward computational tasks and drills. This was a conscious decision on the part of Mrs. Moore, after she determined the girls had basic computational skills but needed to learn how to read and solve story problems, as this is what they would encounter on the TAKS test.

The concepts and skills covered progressed from interpreting simple picture graphs to single-digit addition and subtraction, two- and three-digit addition and subtraction with regrouping, modeling and naming fractions, adding and subtracting decimals to the hundredths place, adding and subtracting fractions with like denominators, two- and three-digit multiplication and division, and solving multi-step/multi-operational problems. These worksheets did not come from the school’s adopted math curriculum, *Saxon Math* (Hake & Saxon, 1997), but rather from supplemental workbooks (such as those published by School Zone Publishing Company, www.schoolzone.com) commonly available at teacher supply stores. Table 1 provides examples of the simple and straightforward word problems Nitha and Bora completed on these worksheets and the concepts they covered.

Table 1. Examples of the Types of Math Problems Completed by Nitha and Bora

2-Digit Addition with Regrouping
Adam found 91 small twigs and 29 larger twigs for the campfire. How many twigs did he find all together? (Addition Story Problems, p. 2)
2-Digit Subtraction with Regrouping
Jennifer sold 72 candy bars. Patti sold 56 candy bars. How many more candy bars did Jennifer sell? (Subtraction Story Problems, p. 4)
1-Digit by 2-Digit Multiplication
Daniel has 3 cases to hold his toy trucks. Each case holds 18 trucks. How many trucks can Daniel store in his cases? (More Multiplication Story Problems, p. 15)
2-Digit by 1-Digit Division (no remainder)
Jason swam 81 laps over a 9-day period. If he swam the same distance every day, how many laps

did he swim each day? (More Division Story Problems, p. 18)

Money Addition Problems with Decimals (and regrouping)

Jaric saw a bottle of shampoo that cost \$1.72. He also saw conditioner that cost \$1.18. If he purchased both items, what would the sum be? (Addition and Subtraction Problems, p. 7).

Adding Fractions with Common Denominators

Luis used $\frac{1}{4}$ cup of paste in one tray and $\frac{2}{4}$ cup in the other. How much paste did he use altogether? (More Fractions in Story Problems, p. 24)

Note: All examples are from math workbooks (grades 1-5) published by School Zone Publishing Company.

Two major foci of the tutoring sessions, by both the paraprofessional and the Khmer primary language support tutor, were helping Nitha and Bora locate the numbers needed to solve the problems and locating the key words that signaled which operation to use (e.g., sum, total, in all = Addition; difference, are left, how many more = subtraction, etc.). Despite the fact that these simple word problems assumed a great deal of vocabulary and American cultural knowledge, and the efforts of the Khmer tutor to translate and explain each word problem, Nitha and Bora soon discovered they could solve these word problems without the need to read or understand them. Once they understood the concept, they were simply able to pull out the numbers and figure out the operation from the clue words to get the right answer. Oftentimes it was easy to figure out the operation because each worksheet focused on only one or at the most two operations, with easily identifiable clue words.

The classwork provides evidence that Nitha and Bora were somewhat successful in catching up to their grade level peers in Math. However, most of the worksheets were completed with assistance. In addition, most, if not all, of their work completed covered only the “Number, Operation, and Quantitative Reasoning” strand of the TEKS Math Standards (see Table 2), focusing mainly on word problems leading to simple computations. Even the worksheets covering Grade 5 content standards were much simpler than the math work being completed by their classmates.

The 5th Grade Math TEKS describes the focus of Grade 5 math as follows:

Within a well-balanced mathematics curriculum, the primary focal points at Grade 5 are comparing and contrasting lengths, area, and volume of geometric shapes and solids; representing and interpreting data in graphs, charts, and tables; and applying whole number operations in a variety of contexts. (Texas Essential Knowledge and Skills, §111.17. Mathematics, Grade 5, (a)(1))

The student work samples reveal that the math work completed by Nitha and Bora did not even begin to address most of the areas outlined in the Grade 5 Math TEKS. Indeed, none of the students’ work samples were aligned with the following major sections in the Grade 5 Math TEKS: Patterns, Relationships, and Algebraic Thinking; Geometry and Spatial Reasoning; Measurement; Probability and Statistics; or Underlying Processes and Mathematical Tools.

While some of these concepts were covered in their work in the computer lab, these concepts were covered only at the Kindergarten and First Grade levels (see Table 1).

Grade 5 math textbooks approved for adoption by the Texas Education Agency, including the one used in Nitha and Bora's classroom (*Saxon Math*), cover a broad range of math concepts and are generally aligned to the TEKS.^{vi} Thus, while Nitha and Bora were solving simple word problems covering basic number sense and operations (typically at the K-3 level), their classroom peers were completing work from grade-level textbooks covering more difficult math concepts.

Fifth-Grade Math TAKS Test

While the actual TAKS test which Nitha and Bora were required to take in the Spring of 2005 is not yet available, the Grade 5 Math TAKS test from Spring 2004 (Texas Education Agency, 2004) has been released by the Texas Education Agency and serves as the basis of analysis in this section. While the version taken by Nitha and Bora obviously contained different test items, the 2004 released test nonetheless is considered by the TEA to be equivalent enough to warrant year-to-year comparisons, and thus is arguably representative of the depth, breadth, and complexity of the types of problems Nitha and Bora encountered when taking the TAKS in 2005.

The 44 math questions on the TAKS test differ substantially from the type of math work completed by Nitha and Bora. Only six of the problems were similar to the worksheet problems they had had been practicing; that is, word problems that required straight computation to obtain a single number answer. However, even these types of familiar problems were more difficult on the TAKS test, as most required logical reasoning, multiple steps, and more than one operation. In many problems, extra information and numbers are given which are not required to solve the problem (see linguistic analysis section below for an example).

Many of the TAKS items did not ask for a number resulting from a straight calculation. Rather, students were required to pick answers that demonstrated their mathematical reasoning. For example, Question 37 asked:

A track team ran 4 miles in 36 minutes. Which shows how to find the number of minutes it would take the track team to run 20 miles?

- A $36 \div 4 = 9$, so $9 \times 20 = 180$ minutes
- B $4 \times 9 = 36$, so $9 \times 36 = 324$ minutes
- C $36 \div 4 = 9$, so $4 \times 36 = 144$ minutes
- D $4 \times 5 = 20$, so $5 \times 20 = 100$ minutes

Another difficulty of the TAKS items is the fact that nearly half (20) of the problems required the use and interpretation of graphs, tables, charts, and illustrations to solve problems—tasks with which Nitha and Bora had little practice. Most importantly, however, is the fact that 5th Grade TAKS Math test contained a breadth and depth of grade-level concepts and skills that went well beyond what Nitha and Bora were able to learn by the time they were required to take

the TAKS test. Table 2 reveals the extent to which Nitha and Bora's math work was well below grade level and did not cover the broad range of knowledge and skills needed for the TAKS.

Table 2. Nitha and Bora's Math Work vs. Grade 5 TAKS Math Test

Nitha and Bora's Math Work (Computer Lab and Worksheets)	5 th Grade TAKS Math Test
Number, Operation, and Quantitative Reasoning	
<u>Worksheets</u>	
<ul style="list-style-type: none"> Single-digit addition and subtraction (<i>1st grade</i>) Two- and three-digit addition and subtraction with regrouping (<i>2nd – 3rd grade</i>) Modeling and naming fractions (<i>2nd grade</i>) Adding and subtracting decimals to the hundredths place (<i>4th grade</i>) Adding and subtracting fractions with common denominators (<i>5th grade</i>) Two- and three-digit multiplication and division (<i>4th – 5th grade</i>) Solving multi-step/multi-operational problems (<i>5th grade</i>) 	<ul style="list-style-type: none"> Addition and Subtraction, up to 5-digits (including decimals and money) Multiplication, up to 1-digit x two-digit Division, up to 3-digits divided by 1-digit. Prime factors, common factors of a set of whole numbers Multi-step problem solving requiring logical reasoning to identify the correct number sentence needed to solve the problem Comparing (e.g., <, >, =) fractions without common denominators Adding fractions (single digits) with common denominators Reduce fractions with up to 3 digits to single digits Comparing decimals to the thousandths place Converting decimals to fractions Interpreting and using data in charts, graphs, and tables to solve problems Estimation and rounding
<u>Computer Lab</u>	
<ul style="list-style-type: none"> Whole Numbers concepts 0-19 (<i>Kindergarten</i>) Add and subtract whole numbers to 10 (<i>Kindergarten</i>) Money value (<i>Kindergarten</i>) Add and subtract 1- and 2-digit numbers (<i>1st grade</i>) Place value and numeration to the hundreds place (<i>2nd grade</i>) Identify and write simple fractions (<i>1st grade</i>) Counting money and making change (<i>1st grade</i>) 	
Geometry and Spatial Reasoning	
<u>Computer Lab</u>	
<ul style="list-style-type: none"> Plane figures (<i>Kindergarten</i>) Plane and solid shapes (<i>1st grade</i>) 	<ul style="list-style-type: none"> Describe shapes and solids in terms of vertices, edges, and faces Parallel lines Calculating perimeter Calculating volume Congruency and symmetry Identify coordinates of points of a line on a graph Describe the transformation that generates one figure from the other when given two congruent figures (reflection, translation, rotation)
Measurement	
<u>Computer Lab</u>	
<ul style="list-style-type: none"> Comparing length and height (<i>Kindergarten</i>) Telling time (<i>Kindergarten – 1st grade</i>) Using a calendar (<i>1st grade</i>) 	<ul style="list-style-type: none"> Relationships between units of time using fractions (e.g., 1 second is 1/60 of one minute) Determining the amount of elapsed time

- Measure length in inches (*1st grade*)
- Measure weight using pounds (*1st grade*)
- Use liters and kilograms (*1st grade*)
- Convert cups, pints, quarts (*1st grade*)
- Convert pounds to ounces
- Convert inches to feet/feet to inches
- Convert liters to milliliters
- Describe numerical relationships between units of measure within the same measurement system such as an inch is one-twelfth of a foot

Probability and Statistics

Worksheets

- Interpreting simple picture graphs (*Kindergarten – 1st grade*)
- List all possible outcomes of a probability experiment
- Determine the median from data provided in a table

Computer Lab

- Pictographs and bar graphs (*Kindergarten*)
- Tallying and Pictographs (*1st grade*)

Patterns, Relationships, and Algebraic Thinking

None

- Identify the patterns in number sets (make generalizations from patterns or sets of examples)
- Identifying missing information in a word problem needed to solve the problem

Linguistic Complexity of Student Work vs. TAKS Test Items

On top of the wide discrepancy between the level of the questions in the TAKS test and the students' math work, the linguistic complexity of the TAKS test items also posed great difficulties for Nitha and Bora. A linguistic analysis of the math worksheets completed by the students, and the math items on the released Grade 5 Math TAKS test reveals major differences in complexity on both the lexical and syntactic levels.

Lexical Level

Table 3 provides an overview of the number of words on Nitha and Bora's math worksheets in comparison with the TAKS test. In terms of the number of words, the worksheets may appear to be more challenging as they required more vocabulary. However, this larger number of words is really a function of the large number of worksheets completed over seven months of school versus a single test which is typically completed within one to two hours. A much different picture emerges, with a more sophisticated linguistic analysis.

Table 3. Number of Words on Student Math Worksheets and 5th Grade Math TAKS

	Student Math Worksheets	TAKS Math Test
Questions (pages)	122 (24 pages)	44 (18 Pages)
Words (including repetitions)	2,685	1,429
Unique words	603	491

The word lists for the student math worksheets and the 5th Grade Math TAKS test were imported into the Web Vocabulary Profiler, a freely available on-line research tool developed by the University of Quebec at Montreal (<http://www.lex tutor.ca/vp/eng/>). The Vocabulary Profiler divides the words of texts into various categories based on the frequency of usage in English at large and into the following categories: first thousand words (broken down further into First 500 function and content words, and Second 500 content words), second thousand words, academic words (550 words that are frequent in academic texts across subjects), and off-list words (i.e., those not on the above lists). Table 5 reports the results of these analyses.^{vii} With a focus on these categories, the number of unique words is surprisingly nearly even, with the student math worksheets containing only 24 more words than the TAKS Math test. However, the number of academic and math specific words on the TAKS Math Test is more than double those on the student math worksheets. Indeed, the mathematical lexical density (math words divided by unique words) is 47% for the TAKS Math test items, as compared to only 26% for the student math worksheets.

Table 5. Lexical Demands of Student Math Worksheets vs. 5th Grade Math TAKS

Word Category	Student Math Worksheets		TAKS Math Test	
	Unique Words	Math Words	Unique Words	Math Words
First 1,000 (content) words	231	60	179	70
Second 1,000 words	73	6	62	22
Academic words	9	5	26	13
Off-list math words	14	14	36	36
Total	327	85	303	141

As revealed in Table 5, the lexical demands in general, and demand for specific math vocabulary knowledge in particular, on the Math TAKS test are much higher than those Nitha and Bora encountered on their worksheets. For example, many math-specific academic words, such as *digit*, *rectangular*, *congruent*, *parallel*, *transformation*, and *diagram*, just to name a few, do not occur a single time in the student math worksheets. On the TAKS, however, these are often the key words necessary to understand to solve the problems.

Another lexical issue is related to the clue words, which served as a crutch for Nitha and Bora when completing their worksheets. As described above, the girls often did not need to read the problems on their worksheets in order to solve the problems; they simply pulled the numbers and looked for the clue words signaling the appropriate operation. Unfortunately, these familiar clue words did not appear anywhere in the TAKS items. An exception was in Question 40, where the clue word “had left” appears. However, the clue word here is of little help, as Question 40 is a multi-step logical reasoning problem requiring students to identify missing information needed to solve the problem. Table 6 provides a contrast of the “clue words” in the student worksheet versus the TAKS test item.

Table 6. Clue Words in Student Worksheet and TAKS Test Item

Student Worksheets	TAKS Item (Question 40)
--------------------	-------------------------

Matt picked 8 apples.
He ate 2 of them.
How many does he *have left*?
(with picture support)

Juan bought 4 packets of notebook paper for school last year.
Each packet contained 500 sheets of paper. He used about 20
sheets of paper each week. What information is needed to find
the approximate number of sheets of paper Juan *had left* after
the school year was over?

- F. The number of hours Juan did homework every day.
- G. The number of classes Juan had.
- H. The number of students in Juan's grade.
- J. The number of weeks in the school year.

Another linguistic challenge is the fact that many TAKS questions give more information than is needed. Students cannot determine which information is needed or not needed unless they can read and fully understand the question. Take Question 21 as an example:

Bart's drama club put on a play. There were 843 people in the audience.
Each ticket to the play cost \$8. The audience was seated in 3 sections. If
each section had the same number of people in it, how many people were
in each section?

Here, the price of each ticket is not needed to solve the problem, but students struggling to read in English may be tricked into using the number 8 in their calculations. Yet another lexical difficulty is the fact that 17 of the 44 TAKS questions required students to select an answer that partially or totally contained words rather than only numbers. Occasionally, students would have to convert a word in the problem to a number in order to get the correct answer. For example, two problems required students to know that a *dozen* equals 12, while another problem required students to convert the number 200,000,000,000 to word form (two hundred billion). Finally, as discussed above, there are many examples in the TAKS test of lexical items that have common meanings that may be known to ELLs, but that have different meanings within the math register: face, table, feet, sum (some), product, fair, volume, figure, point, even, odd, translation, place (as in place value), and ruler.

Syntactic Level

In addition to the difficulties on the lexical level, more challenges (in terms of the linguistic complexity) reside in the syntactic structures of the test items. There are all together 246 sentences in the questions in the student worksheets, 225 (91.5%) of which bear basic subject-verb-object (SVO) sentence structures. In contrast, for the TAKS test questions, there is a total of 118 sentences of which only 88 (74.6%) have the basic SVO sentence structures. Figure 1 provides the results of a detailed analysis of the specific syntactic features of the student worksheets versus the TAKS Math test items.

As can be seen in Figure 1, the sentence structures in the TAKS questions are much more complicated than those in the student worksheets, as the former outnumbers the latter in almost every syntactic feature except "conditional clause" and seven out of twelve (looks awkward to spell out seven and not 12 in the same sentence) syntactic features examined never occur in the

student worksheets. Although there are more conditional clauses in the student worksheets than in the TAKS test, three out of the seven conditional clauses in the TAKS items occur in multiple-clause sentences.

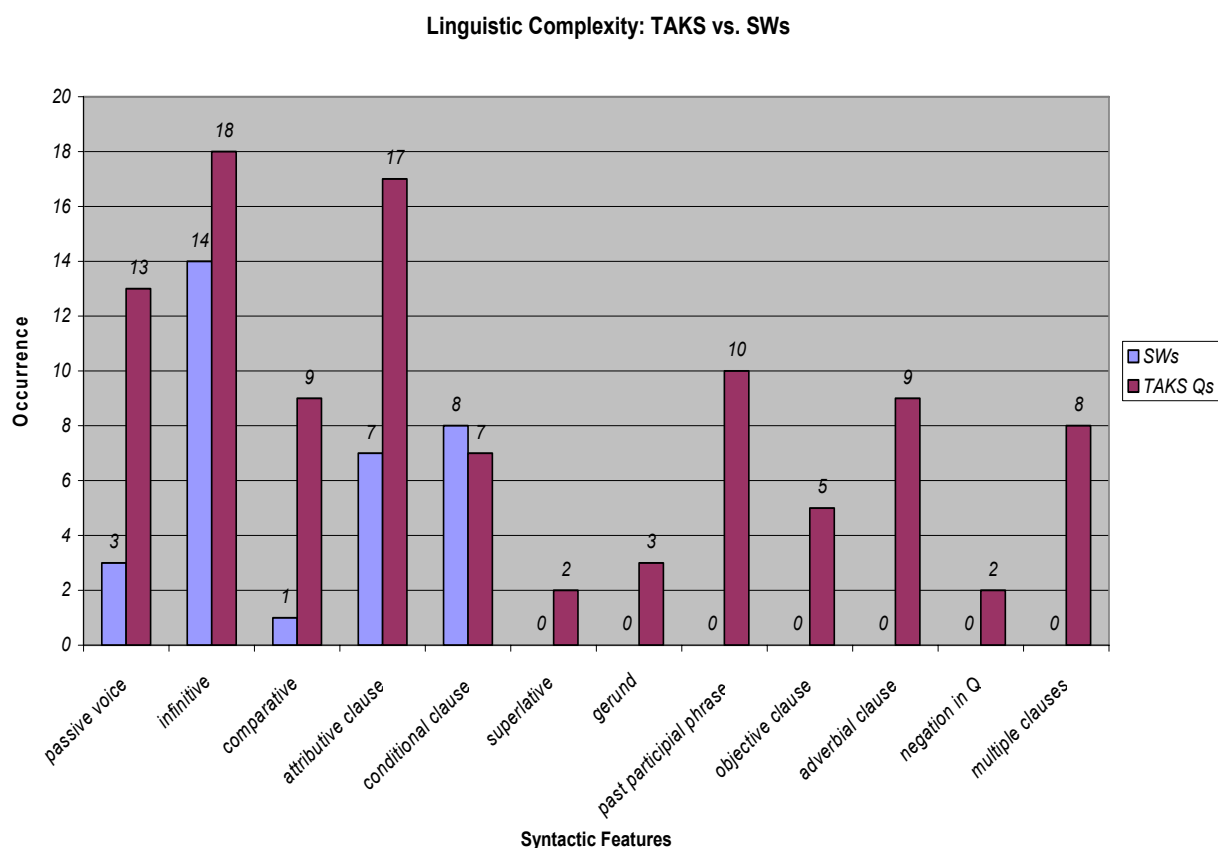


Figure 1. Syntactic Complexity of Student Worksheets (SWs) vs. TAKS Questions

Note: Numbers represent raw number of occurrences

Multiple clauses occur eight times in seven questions in the TAKS test but never in the student worksheets. Seven out of the seventeen attributive clauses, two out of the five objective clauses, and four out of the nine adverbial clauses in the TAKS test occur in multiple-clause sentences. For example, consider the following multiple-clause sentence in Question 22: “What is the least number of boxes he can buy so that each fifth-grader gets at least 1 ice-cream bar?” In order to answer this question correctly, and ELL student would need an understanding of every linguistic feature in this sentence, including the phrase “at least,” and the superlative, attributive, and adverbial clauses.

Another syntactic challenge for ELLs is negation in questions. The 5th Grade TAKS Math test contained two questions with this syntactic feature:

Question 4: “Which of the following combinations of supplies does she NOT have enough money to buy?” (emphasis in original)

Question 8: “Which is NOT a way to find how much money Leanne spends on lunches each week?” (emphasis in original)

Negations in the questions of multi-step problems with difficult lexical items and complicated sentence structures (without the benefit of familiar clue words) are certainly beyond the reasonable range of capability for most newcomer ELLs such as Nitha and Bora.

Students' Performance on the TAKS Math Test

Nitha and Bora were required to take the TAKS Math Test in April of 2005 after having only been in a U.S. school for a little over six months. As mentioned above, as newly arrived ELLs, Nitha and Bora were entitled to some form of linguistically accommodated testing. The school had hoped that the Khmer primary language support tutor could administer the test and provide translation, or at the very least, provide a bilingual glossary with translations of math terms. However, queries to the district and the Texas Education Agency indicated that these accommodations would not be allowed as the tutor was not an employee of the school district, and as the classroom teacher would not be able to verify that the bilingual glossary contained only translations, and did not contain any explanations. In short, Nitha and Bora took the exact same Math TAKS test as their English-proficient peers, and with no linguistic accommodations.

When Nitha and Bora's scores came back, Mrs. Moore expressed little surprise at their low scores—Nitha answered six out of the 44 questions correctly, while Bora answered only seven correctly. What was surprising, however, is that Nitha scored lower than Bora. Nitha, who was older and had more education in Cambodia, was clearly more skilled in math than her sister, as demonstrated by her work in class. Indeed, she was typically the first one to understand difficult math concepts, and then she would teach them to her sister. Mrs. Moore even observed that Nitha was trying harder on the TAKS test than Bora. Mrs. Moore suspects that Bora was simply making random guesses. At one point during the test, Bora bubbled-in five answer circles in a row on her answer sheet, and then shouted out enthusiastically, "BINGO!"

Conclusions and Implications

Nitha and Bora, two sisters from a poor village in Cambodia, arrived in Texas and began school in 5th grade (two months into the school year) with literally no English proficiency whatsoever. While both were top students in their village school, the poor condition of education in Cambodia meant they had little access to a well-defined curriculum, adequate textbooks, or knowledgeable teachers. The level of math instruction they received in Cambodia was far below that provided to their Texas peers. Despite their lack of English and opportunity to learn grade-level math content, Nitha and Bora were nonetheless required, by state and federal policies, to take and pass the Grade 5 Math TAKS test. For various reasons, they did not receive the linguistic accommodations to which they were entitled.

Given the fact that their school could not reasonably be expected to offer a Cambodian bilingual program, Nitha and Bora faced the challenge of learning grade level content at the same time they were learning English. The teachers and staff at Rodgers Intermediate school went to great lengths to help Nitha and Bora learn English and catch up to their grade-level peers, particularly in math. They provided differentiated instruction, ESL instruction with an experienced teacher, substantial daily one-on-one instruction with a paraprofessional, extra

assistance through the computer lab, and even weekly primary language support tutoring sessions where Nitha and Bora could learn new math concepts in Khmer.

As a result of these efforts, Nitha and Bora made tremendous progress in a short period of time. By the end of the school year, both could hold simple conversations with school staff and peers in English, both learned to read in English up to about the 2nd grade level,^{viii} and both made over two-years of growth in math. Unfortunately, No Child Left Behind and Texas's testing and accountability program do not recognize or reward this kind of progress. In the end, the school's efforts were simply not enough to help Nitha and Bora catch up in math to their grade-level peers sufficiently to pass the 5th Grade Math TAKS test.

The case of Nitha and Bora calls into question the appropriateness of federal and state policies in regard to mandates that newly arrived ELLs be included in statewide high-stakes testing programs, and the reasonableness of expectations that these students perform at the same level as their English-proficient peers. These expectations are further complicated when newly arrived ELLs speak languages for which there are no bilingual programs or tests written in their native languages. As shown above, academically speaking, Nitha and Bora's math knowledge and skills upon arrival were already far below their peers because the poor education system in Cambodia did not provide them the opportunity to learn the breadth and depth of content expected in Texas as outlined in the Math TEKS. Even without the language barrier, catching up to their peers in math would have been a major challenge.

The language barrier, however, makes a clear case that catching up to their peers and passing the Math TAKS test would have been nearly impossible for the girls. Teachers and staff struggled the first few months just to communicate with Nitha and Bora. The students' vocabulary was not sufficient to learn grade-level math content, and the simplified math worksheets and work in the computer lab—which proved challenging enough to Nitha and Bora—did not cover the full range of math concepts covered on the TAKS, nor did these efforts expose them to level of math-specific vocabulary covered on the TAKS. The linguistic analysis of the TAKS Math test items themselves reveal a wide range of lexical and syntactic complexities that a newly arrived ELL student could not reasonably be expected to comprehend.

The case of Nitha and Bora raises a number of implications that apply (using the word “equally” makes a very broad and sweeping statement for which no evidence is provided—the idea is clear without this word) to newly arrived ELLs throughout Texas and the United States in terms of including such students in state high-stakes testing and accountability programs:

- There cannot be a one-size-fits-all policy regarding the testing of ELL students.
- Policies need to take into account students' educational backgrounds from their home countries and their prior opportunity to learn content covered by high-stakes tests.
- Policies need to take into account the students' levels of English language proficiency.
- Policies need to recognize the fact that many newly-arrived ELLs speak a language for which there are no bilingual programs or tests.
- Policies need to acknowledge that “linguistically accommodated testing” rarely happens in practice, and that current research on valid and reliable test accommodations for ELLs is lacking.
- State and federal accountability systems need mechanisms to ascertain the entry-level abilities of newly-arrived ELLs (and all other students) and track their progress over time.

- State and federal accountability systems need to recognize and reward schools and ELL students who make significant improvements over time, rather than punishing them if they fail to attain pre-determined passing test-scores designed for English-proficient students.

Some current political leaders contend that those who argue against the full inclusion of ELLs in high-stakes testing and accountability programs exhibit the “soft bigotry of low expectations.” However, based on the findings of this study, we argue that requiring newly-arrived ELL students like Nitha and Bora to take and pass the TAKS exhibits a *hard discrimination of unrealistic expectations*. Indeed, in Texas and many other states, unrealistic expectations are used to deny ELL (and other) students grade-level promotions and high school diplomas. Unless policies and programs are made more reasonable for newly arrived ELLs, many of them will likely be left behind.

ACKNOWLEDGEMENTS

This research was supported by a grant from the Academy for Teacher Excellence (ATE) at the University of Texas, San Antonio. The authors are grateful for this support and the encouragement of ATE faculty members and staff as they conducted this study. They wish to also express gratitude to the dedicated teachers and staff at “Rodgers” Intermediate School, and most importantly to “Nitha” and “Bora” for their courage, hard work and perseverance, and for their willingness to participate in this research project.

REFERENCES

- Abedi, J. (2004). The No Child Left Behind Act and English language learners: Assessment and accountability issues. *Educational Researcher*, 33(1), 4-14.
- Abedi, J., & Lord, C. (2001). The language factor in mathematics tests. *Applied Measurement in Education*, 14(3), 219-234.
- August, D., & Hakuta, K. (1997). *Improving schooling for language-minority children: A research agenda*. Washington, DC: National Academy Press.
- Becker, E. (1986). *When the war was over: Cambodia's revolution and the voices of its people*. New York: Simon & Schuster.
- Brown, C. L. (2005). Equity of literacy-based math performance assessments for English language learners. *Bilingual Research Journal*, 29(2), 337-364.
- Buchanan, K., & Hellman, M. (1997). *Reforming mathematics instruction for ESL literacy students*. Washington, DC: Center for Applied Linguistics.
- Chandler, D. P. (1993). *A history of Cambodia*. Chiang Mai, Thailand: Silkworm Books.
- Cheung, A., & Slavin, R. E. (2005). Effective reading programs for English language learners and other language-minority students. *Bilingual Research Journal*, 29(2), 241-268.
- Clayton, T. (2002). Language choice in a nation under transition: The struggle between English and French in Cambodia. *Language Policy*, 1(1), 3-25.
- Cummins, J. (2003). *Supporting ESL students in learning the language of mathematics*. Glenview, IL: Pearson Education, Inc.
- Dale, T. C., & Cuevas, G. J. (1992). Integrating mathematics and language learning. In P. A. Richard-Amato & M. A. Snow (Eds.), *The multicultural classroom: Readings for content-area teachers* (pp. 330-348). New York: Longman.
- Hake, S., & Saxon, J. (1997). *Math 65: An incremental development* (2nd ed.). Norman, OK: Saxon Publishers, Inc.
- Hollenbeck, K. (2002). Determining when test alterations are valid accommodations or modifications for large-scale assessments. In G. Tindal & T. H. Haladyna (Eds.), *Large-scale assessment programs for all students: Validity, technical adequacy, and implementation* (pp. 395-425). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Jarrett, D. (1999). *Teaching mathematics and science to English-language learners*. Portland, OR: Northwest Regional Educational Laboratory.
- Kiernan, B. (1996). *The Pol Pot regime: Race, power, and genocide in Cambodia under the Khmer Rouge, 1975-79*. New Haven, CT: Yale University Press.
- Lacoste-Caputo, J. (2006, 1/20-1/21). Influx of foreign students taxing Northside District; Children speaking 31 languages and 87 dialects are being accommodated. *San Antonio Express News*.
- Liu, K., Anderson, M. E., Swierzbins, B., & Thurlow, M. (1999). *Bilingual accommodations for limited English proficient students on statewide reading tests: Phase I (Minnesota Report 20)*. Minneapolis: University of Minnesota, National Center on Educational Outcomes. Retrieved January 1, 2003, <http://education.umn.edu/NCEO/OnlinePubs/MnReport20.html>.
- Ministry of Education. (2004). *Cambodian education strategic plan 2004-2008*. Phnom Penh, Cambodia: Royal Government of Cambodia.
- National Clearinghouse for English Language Acquisition. (2003, June). The growing number of limited English proficient students 1992/93 - 2002/03. Retrieved May 15, 2005, from

- http://www.ncela.gwu.edu/policy/states/reports/statedata/2002LEP/Growing_LEP0203.pdf
- Needham, S. A. (1996). *Literacy, learning and language ideology: Intracommunity variation in Khmer literacy instruction*. Unpublished Doctoral Dissertation, University of California, Los Angeles, Los Angeles.
- Planning Department. (2006). *Education statistics and indicators (School year 01/02)*. Phnom Penh, Cambodia: Ministry of Education, Youth, and Sports.
- Rivera, C. (2003). *Preliminary findings: State assessment policies for English language learners 2000-2001*. Paper presented at the Language Minority Research Institute, San Diego, CA.
- Rivera, C., & Stansfield, C. W. (1998). Leveling the playing field for English language learners: Increasing participation in state and local assessments through accommodations. In R. Brandt (Ed.), *Assessing student learning: new rules, new realities* (pp. 65-92). Arlington, VA: Educational Research Service.
- Rolstad, K., Mahoney, K., & Glass, G. (2005). The big picture: A meta-analysis of program effectiveness research on English language learners. *Educational Policy*, 19(4), 572-594.
- Slavin, R. E., & Cheung, A. (2003). *Effective reading programs for English language learners: A best-evidence synthesis* (No. Report No. 66). Baltimore: Center for Research on the Education of Students Placed at Risk, John Hopkins University.
- Texas Education Agency. (2004). Texas Assessment of Knowledge and Skills - Grade 5 (Released Spring 2004 test). Retrieved February 14, 2005, from <http://www.tea.state.tx.us/student.assessment/resources/release/taks/2004/gr5taks.pdf>
- Texas Education Agency. (2005). *Linguistically accommodated testing (LAT) supplement to the TAKS and SDAA II test administrator manuals Grades 3-8 and 10 mathematics*: Austin, TX: Author.
- Thomas, W. P., & Collier, V. P. (2002). *A national study of school effectiveness for language minority students' long-term academic achievement*. Berkeley: Center for Research on Education, Diversity & Excellence, University of California, Berkeley.
- Valenzuela, A. (2004). *Leaving children behind: How "Texas-style" accountability fails Latino youth*. New York City?: State University of New York Press.
- Wright, W. E. (2004). What English-only really means: A study of the implementation of California language policy with Cambodian American students. *International Journal of Bilingual Education and Bilingualism*, 7(1), 1-23.
- Wright, W. E. (2005a). English language learners left behind in Arizona: The nullification of accommodations in the intersection of federal and state policies. *Bilingual Research Journal*, 29(1), 1-30.
- Wright, W. E. (2005b). *Evolution of federal policy and implications of No Child Left Behind for language minority students* (No. EPSL-0501-101-LPRU). Tempe, AZ: Language Policy Research Unit, Education Policy Studies Laboratory, Arizona State University. Available: <http://www.asu.edu/educ/epsl/EPRU/documents/EPSL-0501-101-LPRU.pdf>.
- Wright, W. E., & Pu, C. (2005). *Academic achievement of English language learners in post Proposition 203 Arizona*. Tempe, AZ: Language Policy Research Unit, Educational Policy Studies Laboratory, Arizona State University. Available: <http://www.asu.edu/educ/epsl/EPRU/documents/EPSL-0509-103-LPRU.pdf>.

NOTES

ⁱ Data and figures calculated from State Report Cards in Education Week, 23(17), 124-153 (*Quality Counts, 2004*).

ⁱⁱ Exceptions to this policy can be made on a case-by-case basis at the school level.

ⁱⁱⁱ Despite their age and grade-level difference, the school decided to put them both in the same 5th grade classroom so they would not feel isolated in their new school, and so they could provide each other with support.

^{iv} For other ELLs, the opposite is true. Many students who come from middle and upper-class communities in Mexico, and many students from more economically advanced Asian countries such as Taiwan, Hong Kong, Japan, and Korea, actually find the level of math instruction in the United States to be lower than that of equivalent grade levels in their home countries. But the linguistic issues described later in this study still pose great challenges even for students with this advanced knowledge.

^v The school used a much older version of Compass Learning products. See www.compasslearning.com for similar but more recent products.

^{vi} Many of the textbook companies produce special “Texas Edition” versions of the math textbooks to ensure they are aligned to the Math TEKS.

^{vii} The raw results of Web Vocabulary Profiler had to be cleaned up quite a bit (this is a slangy phrase—how about edited or modified significantly?) to remove repeated words, proper nouns (e.g., names of people in word problems), and non-words (e.g., single letters and abbreviations). Also, words sharing the same root (e.g., add, adding; count, counts) were combined and counted as one word for the purposes of this analysis. The results shown in Table 5 are after this clean-up procedure. Table 5 eliminates the first 500 function words (e.g., high frequency words such as “the, am, is, it, on,” etc...), as well as non-math words appearing in the off-list category.

^{viii} Nitha in particular could actually decode text at a much higher grade level, and even attempted to read grade-level chapter books. However, her lack of English vocabulary meant she understood little of what she was reading.

**From Remediation to Enrichment:
Transforming Texas Schools through Dual Language Education**

Virginia Collier, Wayne Thomas, and Josefina Tinajero
George Mason University and the University of Texas at El Paso

ABSTRACT

This article focuses on the major contrasts between transitional bilingual schooling and dual language education, showing that remedial forms of transitional bilingual classes can be transformed into quality, enrichment dual language classes, with the same instructional personnel and resources. The following characteristics are discussed: one- and two-way dual language models, segregation or integration with the mainstream, length of the program, alternation of the two languages, additive and integrated versus subtractive and isolating, and 90:10 and 50:50 models. The article concludes with a brief overview of two major concepts from theory and research in our field that inform these two bilingual models of schooling.

Contact Information:

Dr. Virginia Collier
Graduate School of Education
George Mason University
4400 University Drive, MSN-4B3
Fairfax, Virginia 22030
703.993.3688
vcollier@gmu.edu

Dr. Wayne P. Thomas
Graduate School of Education
A343 Robinson Hall
George Mason University
Fairfax, VA 22032
(703) 993-2018
wthomas@gmu.edu

Dr. Josefina V. Tinajero
College of Education, Dean
University of Texas at El Paso
El Paso, TX 79968
(915) 747-5572
tinajero@utep.edu

From Remediation to Enrichment: Transforming Texas Schools through Dual Language Education

The State of the Art in Transitional Bilingual Education

Texas state regulations based on state legislation currently specify that the “default” program for English learners is transitional bilingual education when there are enough speakers of one language group (for example, at least 20 Spanish speakers in one grade level) for the hiring of a bilingual teacher to be practically feasible. Transitional bilingual schooling has been around since the late 1960s, when this form of bilingual schooling was developed and funded through both federal and state legislation passed in many states across the United States. Texas bilingual educators are therefore very familiar with this form of schooling through two languages, having experienced various versions of it for almost a half-century.

Transitional bilingual education has been studied from many points of view. Studies have examined, for example, bilingual teacher preparation, student-teacher interaction in bilingual classes, patterns in use of the two languages of instruction, literacy development across the two languages, sociolinguistic and sociocultural consequences of program participation, and comparisons with English-only and other instructional programs, including comparisons of student outcomes under different program types

Instructional practices in transitional bilingual classes have improved over time, with the same reforms that pervaded general teacher education of the 1990s being applied to this program model. For instance, staff development and pre-service teacher preparation have led to an increase in bilingual teachers’ use of cooperative learning and discovery approaches, moving away from a transmission model and into constructivist approaches, which in general led to improved student achievement across the curriculum during the 1990s.

So how are we doing? Not as well as we should be, given the tremendous amount of energy, resources, funding and analyses invested in this program called “transitional bilingual education” (TBE). The United States is among the few countries of the world that have experimented with this program model; yet the experiment leaves a lot to be desired. Yes, the academic achievement results have indeed shown that students who receive transitional bilingual classes achieve at a level higher than students who receive English-only instruction, where less than half the gap is closed. TBE closes slightly more than half of the academic achievement gap with native-English speakers who are on grade level. In fact, those who receive an improved form of TBE, in which teachers are using constructivist approaches with cooperative learning as a vehicle for interactive peer-teaching, and in which students attend these classes for at least four-five years (rather than the more traditional form of two-three years), can improve their scores to

close two-thirds of the academic achievement gap when tested across the curriculum in English (Thomas & Collier, 1997, 2002). Is that educational equity? We don't think so!

What's wrong with this picture? Since neither English-only nor TBE programs are fully closing the achievement gap, what can we do to change what's happening in schools? Bilingual educators are constantly bombarded with pressures from administrators, school board members, the community, and sometimes fellow teachers to switch to English-only instruction as the "best and quickest way" to help our English learners reach grade-level achievement in English. This approach seems "logical" to non-bilingual educators. And current high-stakes testing pressures do not make things any easier. But as many faithful and tireless bilingual educators have correctly and adamantly stated, **ENGLISH-ONLY INSTRUCTION DOES NOT CLOSE EVEN HALF OF THE GAP IN THE LONG-TERM** (Lindholm-Leary, 2000, 2005; Rolstad, Mahoney, & Glass, 2005; Slavin & Cheung, 2003; Thomas & Collier, 1997, 2002). English-only may lead to transitory, short-term gains in some cases. But ESL graduates do not typically maintain those gains, and it is the long term that really matters!

Transitioning into Dual Language Education

What can we do to change existing transitional bilingual programs to make them more effective? The solutions presented herein make operational sense, and school administrators like them. There is a natural administrative transition from traditional TBE to one-way dual language education (DLE) (in which mostly English learners are enrolled). Making this transition does not disrupt both teachers and students by jumping onto a new bandwagon. Rather, it is taking the existing program and using existing teaching staff to improve the program's quality.

Dual language programs address the central problem—closing the second half of the achievement gap, which is much more difficult to close than the first half. And dual language instruction is the only program, bilingual or English-only, that closes the second half of the gap. When an improved and sustained TBE program focuses on cognitive and academic development through students' primary language as the important first step, the gap never happens! English learners need to achieve at or above grade level in the language in which they are the most cognitively developed and therefore the most efficient learners. With primary language schooling provided for at least half of each instructional year, we can have confidence that as English is added to the curriculum through meaningful and challenging academic content, English learners will with time reach **AND MAINTAIN** grade-level achievement in both English and their primary language. Full gap closure is assured, and all students are thus guaranteed educational equity!

Student Demographics: Two-way Dual Language Education

So, step by step, let's walk through transforming a remedial TBE program into an enrichment DLE program. The first question typically asked by teachers in Texas concerns the demographics of the classes being served. Many bilingual educators have gotten the impression that dual language classes can only be implemented when the school has a mix of native-English speakers and native-Spanish speakers; this is not true. Two-way models of dual language (two language groups being schooled in an integrated program through their two home languages) do include native-English speakers whose parents choose to enroll their children in the bilingual classes. But there is another alternative when native-English speakers are few in number in a school or school district, or they prefer not to enroll in the dual language classes.

Student Demographics: One-way Dual Language Education

Dual language is equally effective in its one-way form, found in a context where almost no students are fully proficient in English when they begin school, or where students are mostly of one ethnolinguistic background. South and West Texas school districts, especially along the border with Mexico, typically enroll mostly students of Mexican heritage. Many of these students are more proficient in Spanish than English when they enter school. These schools are one-way dual language demographic contexts (one ethnolinguistic group—e.g., Mexican Americans—being schooled through their two community languages). DLE classes have great potential for helping all students reach grade level achievement in English and Spanish, when the schools develop quality, enrichment, one-way DLE programs.

One-way is no different than two-way, other than the demographic mix of the students attending the bilingual classes. So having native-English speakers in the bilingual classes is NOT essential to the dual language model. But if some students of Mexican heritage are initially classified as more fluent in English than in Spanish, they can also benefit greatly from enrichment instruction through the two languages, leading to high academic achievement of all students. When dual language is a whole-school model, whether one-way or two-way, this transformation can become one of the most powerful reforms for schools of the 21st Century.

With time, these schools become perceived as schools for the gifted because of the high academic achievement of the students, even when these schools are serving mostly students of very low socioeconomic background. This enrichment model of bilingual schooling has been shown to overcome the negative influence of poverty on test scores, which in the past has been the most powerful variable influencing student achievement (Thomas & Collier, 2002).

Segregation or Integration with the Mainstream

Transitional bilingual classes were developed as a separate instructional program to serve students who are not yet proficient in English. TBE students are allowed to work on academic content through their primary language for a portion of the school day, and

they receive English as a second language (ESL) through academic content for a portion of each school day. But the goal of the program is to move them into all-English instruction as soon as possible. Regular assessments determine when they have acquired enough English to move into “the mainstream,” where all the other students are located. Note that they may be only minimally prepared to enter the mainstream because TBE programs close only about half of the achievement gap with native-English speakers.

This segregation of TBE classes has led to the perception that they are remedial classes for students who are not doing well in school, and both staff and students sense this social “stigma.” They recognize that TBE students are perceived as low-achieving. The same social stigma is often felt in ESL classes, and students assigned to both TBE and ESL classes prefer to escape their placement or learn to lower their expectations for themselves. They sense that it is a remedial class, cognitively slow down in comparison to the mainstream. TBE/ESL teachers tend to provide “watered down” instruction, to accommodate new arrivals with missed years of schooling, especially with older students. Typical placement in TBE/ESL is 2-3 years; some higher quality TBE programs keep students for 4-5 years before placing them in the English mainstream.

In contrast, dual language education IS the mainstream, taught through two languages. Because of this and because DLE bilingual classes are not remedial, “special” programs, they have no exit. Students commit to receiving schooling through the two languages throughout their schooling, or at least for as many years as the school system can provide.

How can school systems accomplish this? Schools starting a dual language program typically take one year to design a plan for Grades PK-5, including beginning talks with the feeder middle and high schools for eventual PK-12 classes. Then, following the planning year, only the early grades begin the program, perhaps PK, sometimes only K if there is no preschool, or K-1. And with each succeeding year, one additional grade level is added until the program runs throughout the elementary school grades, followed eventually by a continuation of the program in middle and high school.

Length of the Program

To reach grade-level achievement in second language, it is crucial that all students receive A MINIMUM OF SIX YEARS of high quality, grade-level, cognitively challenging academic work through the two languages. For ONE-WAY contexts with very few English-proficient students, it is crucial that all students receive a minimum of EIGHT YEARS of dual language education (Lindholm-Leary, 2005; Thomas & Collier, 1997, 2002). At the end of this article, we will explain why so much time is necessary.

Alternation of the Two Languages: Monolingual Lesson Delivery in DLE

Another major difference between TBE and DLE is the pattern of alternation allowed between the two languages used for instructional purposes. In dual language

classes, keeping the two languages separate--using only one language in a given instructional session--is non-negotiable. This characteristic of DLE is based on the research from TBE. When examining the patterns of language use that emerged in TBE classes, researchers have encountered a myriad of variations—such as immediate translation, teachers’ constant use of code-switching, repetition of the same material in both languages, inconsistency in which language is being used, and other alternations driven by the social context in the classroom. Teacher educators have worked on helping bilingual teachers to explicitly plan language alternation so that lessons are more consistent and purposeful in their switches between the two languages (Milk, 1986). Interestingly, most of the TBE classroom research has demonstrated that the majority of the switches are to English, the dominant language of the U.S. and the language with higher status, resulting in less cognitive and academic development in students’ primary language. But formal schooling through primary language is the KEY to academic success in second language!

When language alternation occurs in the bilingual classroom with no explicit purpose for the switches, students soon learn to tune out the language that they know less well. Why bother to pay attention, when eventually the material will be repeated in their more familiar language? This duplication reduces available instructional time. It is equivalent to receiving a half-day of school in a poor country, because of overcrowded conditions and limited resources. Certainly the repetition of lessons slows down students’ cognitive and academic growth and gives students the message that they are slow learners.

Dual language enrichment classes resolve this complex issue BY TEACHING DIFFERENT CURRICULAR MATERIAL IN EACH LANGUAGE. As teachers plan together the curriculum for each grade level, they make decisions regarding language alternation by choosing what will be taught in English and what will be taught in Spanish (or Vietnamese, Arabic, Mandarin Chinese--whatever the primary language of the students—we use Spanish as an example throughout this article). Possibilities include alternation by time of day, day, half-week, or week. The alternation can be by thematic units or by subjects. Alternating can occur with one teacher who is academically proficient in both languages responsible for the curriculum to be taught in the two languages; or by team teaching, where two teachers are assigned two classes that alternate between the two teachers, with one teacher teaching only in Spanish and the other teacher teaching only in English. With explicit planning, both languages get the maximum instructional time needed for students to stay on grade level in L1 AND completely close the gap in L2.

DLE teachers understand that the concepts of NO TRANSLATION AND NO REPETITION OF LESSONS IN THE OTHER LANGUAGE are important principles of enrichment bilingual classes. Students who enroll in DLE classes are informed that they will have to pay close attention during the Spanish instruction, because these lessons will not be repeated in English, and the same is true during English instruction. Lessons should interconnect across the two languages, through spiraling into increasingly cognitively complex material that builds on the initial concepts, and through thematic

units that unite the work in both languages. Eventually and with appropriate instructional planning across several grade levels, students will have experienced all subject areas in each language.

Some schools choose to alternate equally—e.g., if math is taught in Spanish this year, next year students will receive math in English; or if English is the morning language in the fall semester, then Spanish is the morning language in the spring semester. However, the Gomez and Gomez DLE model (2006) separates the two languages by subjects, with math taught in English and social studies and science taught through Spanish throughout Grades PK-5. However, students get experiences through both L1 and L2 in those three subjects, alternating the language of the day, through bilingual learning centers and L1/L2 conceptual refinement and content support, and through specials (P.E., sustained silent reading, music, art, computer lab, and library). This model has worked especially well in South Texas and is now being implemented in other regions of Texas and other states of the U.S.

How about code-switching? Teachers who have grown up in code-switching communities (including most of the State of Texas) want to understand why their regional variety of bilingualism appears not to be validated by the dual language enrichment model. Code-switching is indeed an important and rich use of the two languages and occurs naturally among bilinguals in any region where two languages come into contact. Switching from one language to the other has purpose, such as serving as an identity marker, or because the other language says it better.

When older students have become deeply proficient in their two languages, a very meaningful thematic unit exploring uses of code-switching in the community is a fascinating linguistic exercise for teachers and students, usually leading to a deeper understanding of language use in varied social contexts. It is indeed important to formally acknowledge and affirm patterns of code-switching in the community. One way this can be done in the DLE classroom is to explicitly discuss code-switching with students and then acknowledge the relevance of natural uses of code-switching in social settings in the school and the community. Overall, the rationale for keeping the two languages separate during the instructional time is to help students develop very strong academic proficiency in each language.

Nature of the Program: Additive and Integrated vs. Subtractive and Isolating

Transitional bilingual classes tend to be isolated from the mainstream. They are designed for English learners to get access to the curriculum through their primary language, and for them to receive ESL instruction through the curriculum, in a self-contained classroom, separate from native-English speakers. This strategy has been well-intentioned over the decades of TBE implementation. However, as a result, students in TBE classes have tended to be perceived as slow learners, separated for remedial instruction because they cannot succeed in a mainstream class. This social stigma is hard to overcome, and students soon sense this “distance” present in their social settings in

school. Some begin to perform like slow learners—a self-fulfilling prophecy created by their isolation.

Dual language classes are the mainstream (in this region, in these schools, in Texas?—certainly not across the U.S.). Students attending these classes are thrilled that they are enrolled in the “gifted” program, as it is perceived by students and staff. They know that being schooled through two languages is very hard work—much more complex than monolingual schooling—and they rise to the task at hand, excelling academically and cognitively as they make the leaps in learning. They take much more seriously the process of acquiring two languages, because they know that they have to continue to excel academically in both languages, throughout Grades K-12. They are aware that when they graduate from high school, they will be fully equivalent to monolingually-educated native-English speakers. In addition, they will have many more advantages in the professional world because they are gifted bilinguals.

Furthermore, DLE classes transform the context of bilingual schooling from subtractive to additive bilingualism (Lambert, 1975). In a subtractive context, lack of societal support for a minority language leads to gradual loss of that language. In TBE classes, social pressures are placed on students to eradicate use of their first language as soon as possible. Students who lose their first language at too young an age risk interrupting their cognitive development, which must continue in primary language through age 12, to assure full cognitive development. In contrast, DLE creates an additive bilingual context, where students acquire their second language at no cost to their primary language or to cognitive development (Baker, 2006; Collier & Thomas, 2006). Proficient additive bilinguals typically outscore monolinguals on all types of tests. Students around the world who have been through the process of additive bilingualism, developed in school, are the high achievers of this planet (Baker, 2006; Collier, 1992).

An Implementation Decision: 90:10 or 50:50?

Does it make a difference whether you choose to start the program in Grades PK, with 90 percent of the initial instruction in the MINORITY language (e.g., Spanish), gradually increasing English instructional time until the two languages receive equal time by fourth grade? The answer from the research is yes, the 90:10 model is more efficient and more effective! Studies (Collier & Thomas, 2004; Lindholm-Leary, 2005; Thomas & Collier, 2002) have clearly demonstrated that students can reach higher achievement in L2 in a shorter time when attending the 90:10 model. But in Texas, sometimes the 50:50 model is easier to sell politically (50 percent of the instructional time in each language, Grades K-12). Both DLE models (90:10 and 50:50) are highly effective in the long term. Houston Independent School District chose the 90:10 model for their TBE and DBE classes, and it works very, very well for their students. English learners fully close the gap in English, and native-English speaking participants in the two-way classes outscore their monolingually educated peers (Thomas & Collier, 2002).

Research-based Concepts for TBE and DLE

So how come it (can't tell what "it" refers to.) takes so long? How could it be that dual language education is so superior to transitional bilingual schooling? Why doesn't English-only work better than either TBE or DLE?

The key to understanding why it (can't tell what "it" refers to.) takes so long is based on two concepts from the theory and research that informs our field. Cognitive and academic development is taking place all through the school years. Cognitive development is a natural, subconscious, developmental process that occurs through stimulation of a child's mental processing, by interacting with the child's immediate social environment, using the language the child knows best. At home, cognitive development is stimulated by parents, siblings, and other family members through problem-solving together at home for basic needs (e.g., food, clothing, shelter), emotional support, and lifelong learning together to carry out basic responsibilities. This is best done through the language (or languages) in which the parents and family are cognitively mature. When children get nonstop cognitive development until age 12 through the language (or languages) in which they were nursed, they will reach full cognitive maturity. Since children of ages 5-12 spend quite a few hours of each day attending school, when the school helps students develop cognitively through both their home language and their second language, they receive nonstop cognitive development, which assists with the process of high academic achievement (Baker, 2006; Collier & Thomas, 2006; Ovando, Comb, & Collier, 2006). On the other hand, students in TBE programs may experience cognitive and academic "slowdown" while they are losing L1 and gaining English. The achievement gap eventually seen in test score comparisons starts here.

The second concept is that the native-English speaking group (against whom English learners are competing in Texas schools) is a moving target! They are not sitting around waiting for the English learners to catch up with them. Every school year, they make another ten months of academic gain in all curricular subjects, on average. The English learners have to make more than one year's progress every year, for at least six years in a row, to catch up to this moving target when tested in English. And the academic work gets more and more complex with each year of school. This means that English learners must be as cognitively and academically advanced as the comparable native-English speakers, or cognitive and academic gaps will appear, leading to lower test scores for English learners with each school year.

But when English learners receive instruction through their primary language, they can catch up and keep up with academic work (making that ten months of progress each year) AND the English instructional time helps them to acquire their second language and stimulates cognitive development as well. Instruction through both languages allows students to make more than one year's progress—accelerating students' growth. Each year they gain more than typical native-English speakers gain. After six years of academic work through both languages, students in a high quality dual language program can reach grade-level achievement in their second language and stay on grade

level through the remainder of their schooling (Collier & Thomas, 2004; Thomas & Collier, 1997, 2002).

Understanding the importance of nonstop cognitive development through primary language and the length of time it takes to catch up for any student group initially performing below grade level when the tests are given in English are the two major theoretical concepts underpinning the success of dual language schooling. Why not enrich your bilingual schooling for English learners, and, once you are fully meeting the needs of English learners, expand the program to meet the needs of all students who want to enroll? It's a win-win for all!

References

- Baker, C. (2006). *Foundations of bilingual education and bilingualism* (4th ed.) Clevedon, UK: Multilingual Matters.
- Collier, V. P. (1992). A synthesis of studies examining long-term language minority student data on academic achievement. *Bilingual Research Journal*, 16(1-2), 187-212.
- Collier, V. P., & Thomas, W. P. (2006). Predicting second language academic success in English using the Prism Model. In J. Cummins & C. Davison (Eds.), *The International Handbook of English Language Teaching, Volume 1*. Norwell, MA: Springer Publications (formerly Kluwer).
- Collier, V. P., & Thomas, W. P. (2004). The astounding effectiveness of dual language education for all. *NABE Journal of Research and Practice*, 2(1), 1-20.
- Gomez, L., & Gomez, R. (2006). Promising practices: Dual language enrichment education for English language learners at all grades. *TABE Journal* (this issue).
- Lambert, W. E. (1975). Culture and language as factors in learning and education. In A. Wolfgang (Ed.), *Education of immigrant students*. Toronto: Ontario Institute for Studies in Education.
- Lindholm-Leary, K. (2000). *Dual language education*. Clevedon, UK: Multilingual Matters.
- Lindholm-Leary, K. (2005). The rich promise of two-way immersion. *Educational Leadership*, 62(4), 56-59.
- Milk, R. (1986). The issue of language separation in bilingual methodology. In E. Garcia & B. Flores (Eds.), *Language and literacy research in bilingual education* (pp. 67-86). Tempe, AZ: Center for Bilingual Education, Arizona State University.
- Ovando, C. J., Combs, M. C., & Collier, V. P. (2006). *Bilingual and ESL classrooms: Teaching in multicultural contexts* (4th ed.). New York: McGraw-Hill.
- Rolstad, K., Mahoney, K., & Glass, G. (2005). The big picture: A meta-analysis of program effectiveness research on English language learners. *Educational Policy*, 19(4), 572-594.
- Slavin, R. E. & Cheung, A. (2003). *Effective reading programs for English language learners: A best-evidence synthesis*. Baltimore: Center for Research on the Education of Students Placed At Risk, Johns Hopkins University.

- Thomas, W. P., & Collier, V. P. (1997). *School effectiveness for language minority students*. Washington, DC: National Clearinghouse for English Language Acquisition (Resource Collection Series, No. 9).
- Thomas, W. P., & Collier, V. P. (2002). *A national study of school effectiveness for language minority students' long-term academic achievement*. Santa Cruz, CA: Center for Research on Education, Diversity and Excellence, University of California-Santa Cruz.

**Parents' Reflections of Their Children's Participation in Project ELLA,
A Comparative Study of English Language Learners in
Bilingual and Structured English Immersion Classrooms**

Helms, Irby, Lara-Alecio, & Mathes
Sam Houston State, Texas A & M, and Southern Methodist University

ABSTRACT

The purpose of this study was to determine the extent to which Hispanic/Latino parents of English language learners (ELL) who have children participating in Project English Language/Literacy Acquisition (ELLA), a controlled and structured English as a second language intervention, and being served in either a structured English immersion classroom or a transitional bilingual education classroom, (a) perceive that the structured intervention has improved the oral language development and general use of English by their children and (b) note that cross-domain co-variation is attributed to their student's participation in the intervention. For the purposes of this paper, cross-domain co-variation is defined as the observable variation or correlation across or between growth domains such as self-agency and oral language development within an intervention.

Contact Information:

Sallie G. Helms, M.A., L.M.F.T., Counselor Education Doctoral Student/Graduate Assistant
USDOE Project ELLA Grant
Sam Houston State University
Huntsville, TX 77341
salliehelms@houston.rr.com

Beverly J. Irby, Ed.D.
Professor and Chair, Education Leadership and Counseling
Sam Houston State University
Huntsville, TX 77341
edu_bid@shsu.edu

Rafael Lara-Alecio, Ph.D.
Professor and Director, Bilingual Programs
Texas A&M University
College Station, TX
a-lara@tamu.edu

Patricia Mathes, Ph.D.
Professor and Director, Institute for Reading Research
Southern Methodist University
Dallas, TX
pmathes@smu.edu

Note: These data were gathered as a part of the federal research grant, R305P030032, U.S. Department of Education, Institute for Educational Science.

Parents' Reflections of Their Children's Participation in Project ELLA, a Comparative Study of English Language Learners in Bilingual and Structured English Immersion Classrooms

The purpose of this study was to determine the extent to which Hispanic/Latino parents of English language learners (ELL) who have children participating in Project English Language/Literacy Acquisition (ELLA), a controlled and structured English as a second language intervention, and being served in either a structured English immersion classroom or a transitional bilingual education classroom, (a) perceive that the structured intervention has improved the oral language development and general use of English by their children and (b) note that cross-domain co-variation is attributed to their student's participation in the intervention. For the purposes of this paper, cross-domain co-variation is defined as the observable variation or correlation across or between growth domains such as self-agency and oral language development within an intervention.

Statement of Problem

"More than half of Texans are minorities for the first time. Fewer than half of state residents are Anglos, statistics show" (Pinkerton, 2005, p.1). In fact, in the United States, "Hispanics/Latinos, as a group, are one of the fastest growing ethnic populations..." (Bean, Perry, & Bedell, 2001, p. 43). U.S. Census Bureau projections have suggested that the estimated 36 million Hispanics who live in the United States today will grow to more than 60 million by 2020 and 103 million by the year 2050 (U.S. Census Bureau, 2004).

Among the great challenges noted in the demographic changes, particularly related to Hispanics/Latinos, the literature regarding child development and literacy is replete with studies that reference the overrepresentation of children of ethnic minority showing early school failure (Goldenberg, 2002; Hoerner, 2001; McCarthy, 2000). Furthermore, "Hispanic/Latino children are more likely than their non-Hispanic counterparts to have poorer literacy skills, read less, have fewer chances to read with their parents, and have poorer school achievement (Hoerner, 2001, p. iv). In addition to the connection between social problems, poverty, ethnicity, and low literacy skills, the relationship to individual self-agency has been explored as well. Preliminary research regarding the relationship of self-efficacy to school performance and ethnicity (Callahan, 2002) has yielded sobering implications:

The literature clearly reflects that ethnic minorities continue to experience prejudice and to struggle with the effects of poverty, limited educational opportunities, and many of the ravages concomitant with being 'different' from the dominant culture or nation. (p. 111)

With an awareness of the cultural differences and power differentials inherent in the situation of white interviewers seeking information from Hispanic participants, we were drawn to the view of a social constructivist rather than a cultural literacy lens. Perhaps the concept that had the most impact on the research approach to this project was articulated Dyche and Zayas

(1995) in their discussion of the value of curiosity and naiveté, the philosophical stances that inform social constructivist family therapy and that can be extrapolated to social constructivist inquiry in qualitative research. Our goal was to maintain a position of respectful curiosity that leads to expanded description so that we could determine the cross-domain co-variations and to chosen questions so that we could come away from the study with an awareness of the hierarchical and assumptive implications.

Methods

The design of our research was a descriptive qualitative study, with the potential for contribution to grounded theory development through an associated research project, Project ELLA. (We will from time to time refer to the “intervention” or “research project,” and “study” respectively as related the broader longitudinal study, ELLA.) Procedures of our descriptive qualitative study included the administration and completion of the Project ELLA Parent Survey (*Proyecto ELLA Encuesta Para Los Padres*), as depicted in Table 1, and three individual semi-structured interviews based upon the Project ELLA Parent Interview (*Proyecto ELLA Cuestionario*), as depicted in Table 2. Participants in the semi-structured interviews included the Interviewer (Ir), Translator (Tr), and Parent (P1, P2, and P3) of three students who were involved in the kindergarten year of the intervention and who were in the second year of intervention at the first grade level. We developed both instruments for use in this study and established face validity of the instruments with a different set of parents.

Taking a social constructivist approach, we were keenly aware of the part that language might play in the participants’ perception of power differentials. As Anglos and Spanish-speakers of intermediate capability (two of the researchers), we determined that we (with the help of a translator) would respect the culture of the participants by offering them the option of communicating in Spanish or English, in both the written and oral components of this study. The other Spanish-speaking researcher was included to help formulate the issues and to triangulate the research findings.

Credibility of the study was established by *investigator triangulation* and *peer review* by native English-speaking and native Spanish-speaking members of the Project ELLA research team. Team members include principal investigators, research coordinators, the director of testing, and “paraprofessionals” (the school district’s nomenclature).

A purposive sample was selected from an urban school district among ELL students who had participated in the intervention during the Kindergarten year. The teachers involved with the intervention distributed the ELLA Parent Survey to all parents of children involved in the intervention—either during fall parent meetings, or by sending the surveys home with the students. Of the surveys distributed to approximately 450 households, 40 were returned. The parents selected as interview participants were part of a limited convenience sample. One of the interviews was a result of that particular teacher’s recommendation. Two other participants were interviewed: one is an employee of the public pre-school that houses the ELLA research team, and the other is well-known by the Director of Testing who had been her child’s classroom teacher during the first year of the intervention. The interviews were audio-taped, and ranged

from 30 minutes to 50 minutes. Interviews were conducted at the place most convenient to the participants. Each school year, parents signed consent forms regarding participation in Project ELLA. At the beginning of each interview, we assured the participants of their anonymity and reminded them of the purpose of the study. We took particular care to explain our interest and belief in the importance of the voices of the parents—their opinions, suggestions for improvement, and their impressions of their child’s growth since the beginning of the intervention. We invited the participants to call any of us involved with the interview, including the translator, if they had questions or further ideas following the interview. During the first interview at the family restaurant, the Lead Coordinator accompanied us to translate; during the second two interviews, a team member working with the testing of ELLA student participants translated and participated in the interviews as desired. We hoped to facilitate a collaborative, non-hierarchical atmosphere during the interviews, believing that a non-expert position (Anderson, 1997) would convey respect to the participants and potentially yield richer conversations and thicker narratives than a more modernist structure might have done. At the conclusion of the interview, parents (mothers) were asked to choose one English-language and one Spanish-language age-appropriate item from a selection of books. Additionally, after saying goodbye to the parents, we took time to share reflections with the translator. Following is a short transcript of one such conversation, after the conclusion of the second interview, that is representative of our impressions of the processes of all three interviews:

- Tr: Wow! That was great. At first she seemed a little nervous, but then she kind of like... softened up.
- Ir: I can see why she would have been nervous.
- Tr: And you know she started to really tell us a lot about her child.

Data Analysis

Responses to Item Seven of the Parent Surveys, related to their children’s participation, were transcribed verbatim from the questionnaire, and coded according to general themes. This approach to data analysis is informed by a grounded theory approach. Twelve themes emerged from the data and are illustrated by low-inference descriptors or selected samples of the parent’s written words (see Table 3). We reproduced answers as closely as possible to the way in which they were written by the parents, without making corrections. We provided the actual answer first, followed by a translation into either English or Spanish. The question was stated as follows, either on the English or the Spanish version of the survey: List three ways your child’s participation in Project ELLA has improved her/his English (*Escriba tres maneras en las que su niño(a), por la participación en el Proyecto ELLA ha mejorado su Inglés*).

Additional Themes

A similar analysis of themes of verbatim transcripts of the interviews was conducted and was informed by a grounded theory approach. Several additional categories for themes emerged from these data: (a) *Mothers* (how their children use their developing English language proficiency to help their mothers; the mother's focus on her child's educational development; the importance of volunteering in schools; fear of using English incorrectly; mothers' interest in becoming more proficient in speaking English); (b) *ELLA student more proficient in English language usage than the older sibling was at that age, or is at this at this time*; and (c) *Examples of cross-domain effects in school*. Following is a sample of the interview excerpts (Ir = Interviewer, Tr = Translator, P1= First Parent, P2=Second Parent, and P3=Third Parent):

Mothers – P1: A veces tengo miedo, pero [think she was saying that sometimes she is frightened without the help of her children translating, but that she works mornings at the restaurant without the benefit of anyone to translate, and that she does pretty well taking the orders from a busy crowd.]

Proficiency of intervention participant as compared with sibling – P3: Oh sí, ella ve a Enrique mas avanzado que sus otros hermanos. Tr: Yeah, that she sees Enrique more advanced in comparison to the other brothers. Ir: At that age...

Cross-domain effects – Tr: A ver, a ver. ¿Podría pensar en otra forma que la intervención podría ayudar a su niño? “ En otros áreas... de la escuela ... o... [...] P1: ¿En otros áreas en la escuela? / Tr: Sí / Ir: Y algunas personas hablan de mas confianza, o ... you know ... en la escuela que puedan ir a la oficina y preguntar por cosas que necesitan en *Inglés*. You know, estos son ejemplos ./ Tr: Lo veo bien. / P1: Sí [...] Esta bien en todos. Sus exámenes casi puras “A”. En todo ... matemática... Las maestras ponen notitas, que dicen “excelente” *Translation:* Tr: Can you think of other ways that the intervention as helped your child? In other areas ... in school ... or? / P1: En other areas at school? / Tr: Yes / Ir: Some parents have talked of more confidence ... you know in school that they can go to the office and ask for things that they need in English. You know, those examples. / Tr: She understands. / P1: Well. He does well in everything. His tests almost all “A’s”. In everything ... math. The teachers put a sticker that says “excellent”!

Findings/Discussion

The mothers who spoke with us demonstrated their interest in their child's education in a variety of ways: one mother rides the bus to school with her child one day a week and spends the entire day on campus as a volunteer. Another mother sent her child to an enrichment summer school program. The third mother's delight in her child's development through Project ELLA is evident in this passage from the transcript of her interview:

Tr: She often wonders: Wow, where does he get that vocabulary?”

Ir: Wow

Tr: And she is amazed....At the age of seven!

Confidence—*confianza*—is a theme that appeared in transcripts of interviews with teachers at the completion of the first year of the ELLA intervention. Confidence as a theme is woven throughout the written responses to the questionnaire: *S/he feels more secure in talking; S/he is less shy; S/he speaks English with more confidence; S/he doesn't worry if she makes a mistake speaking English; S/he can talk with children that only speak English; S/he can defend her/himself in talking with other children.* In the interviews, eloquent examples of the theme were offered by the mothers:

- Tr: She compares her son with other children that probably are not in the project...
- Ir: Yes
- Tr: And she sees that Ricardo, he doesn't have difficulty. Or he's not scared to express what he has to say in English. And...
- Tr: Right, I guess what she's trying to say is that his self-esteem is pretty high now. And that it has helped him, and it will help him in the future. He'll be confident. And it can help him for a lifetime even.

The eloquent manner in which the mothers spoke of the development of *confianza* in their children as they become proficient in the use of English, and the *confianza* that these mothers express in Project ELLA (both implicitly and explicitly) indicate to us a potential for rich narrative-based research based upon this construct.

In fact, it is the construct of *confianza* that is the sirens' call to our curiosity regarding the possibility that cross-domain co-variation could be attributed to the students' participation in Project ELLA. Certainly cross-domain co-variation in other areas of academic performance and achievement is a topic that we suggest for further fruitful quantitative and qualitative research; the area of possible future investigation that captivates us at the conclusion of this study, however, is that of the relationship between students' participation in the intervention and the perceptions of the students and/or of others of increased *confianza* in both the intrapersonal and interpersonal domains.

A re-visiting of the work of Vygotsky (1978) informed our desire for further investigation. A cornerstone of Vygotsky's theory of human development is the concept of the Zone of Proximal Development, which relates to the gap between what the child can learn unaided and what he or she can learn with the help of an adult or a more capable peer. Furthermore, Vygotsky's model is generally classified as a sociocultural approach. In other words, the individual's development is a result of her or his culture and is precipitated through the process of social interactions with others. Cole and Wertsch (1996) elucidated these concepts that point to the importance of investigation of the relationship between the intervention and the emerging theme of *confianza*:

Higher psychological functions are transactions that include the biological individual, the cultural mediational artifacts, and the culturally structured social and natural environments of which they are a part. This is not to say that the processes of becoming socialized can be reduced to simple learning or that there is no room for active

construction in it. It is to say, however, that social processes give rise to individual processes and that both are essentially mediated by artifacts. (1996, pp. 3-4)

From anecdotal narrative and from grounded theory-based analysis, we are beginning to see the possible connection between the intervention (that Vygotsky would term an artifact) and *confianza* as perceived of the students by teachers, parents, and school counselors. We submit this finding of cross-domain co-variation as exploratory to this point, but which leads us to think there is a perceived positive achievement and confidence as related to participation in the intervention, ELLA.

References

- Anderson, H. (1997). *Conversation, language, and possibilities: A postmodern approach to therapy*. New York: Basic Books.
- Bean, R. A., Perry, B. J., & Bedell, T. M. (2001, January). Developing culturally competent marriage and family therapists: Guidelines for working with Hispanic families. *Journal of Marital and Family Therapy*, 27(1), 43-54.
- Callahan, B. (1999). *Ethnicity and hope in children*. Retrieved July 16, 2002, from ProQuest Digital Dissertations database
- Cole, M., & Wertsch, J. V. (1996). Beyond the individual-social antimony in discussions of Piaget and Vygotsky. *The Virtual Faculty's Second Project*, pp. 1-7. Retrieved December 14, 2005, from <http://www.massey.ac.nz/~alock/virtual/colevyg.htm>
- Dyche, L., & Zayas, L. H. (1995). The value of curiosity and naiveté or the cross-cultural psychotherapist. *Family Process*, 34, 389-399. Retrieved September 25, 2005, from <http://www.blackwell-synergy.com/doi>.
- Goldenberg, C. (2002). Making schools work for low-income families in the 21st century. In S. B. Neuman, & D. K. Dickinson (Eds.), *Handbook of early literacy research* (pp. 211-231). New York: The Guilford Press.
- Hoerner, S. A. (2001, May). *Home environments and emergent literacy skills of Hispanic preschoolers*. Retrieved November 16, 2005, from <http://proquest.umi.com.unx1.shsu.edu:2048/pqweb?did=728466211&sid=2&Fmt=2&clientId=96&RQT=309&VName=PDQ>.
- McCarthy, S. J. (2000, January/February). Home-school connections: A review of the literature. *Journal of Educational Research*, 93(3), 145-153.
- Pinkerton, J. (2005, August 11). More than half of Texans are minorities for the 1st time. *Houston Chronicle*, p. 1.
- U. S. Census Bureau (2004, March 18). *U.S. interim projections by age, sex, race, and Hispanic origin*. Retrieved November 27, 2005, from <http://www.census.gov/ipc/www/usinterimproj>.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press

Table 1

Project ELLA Parent Survey

Please circle the number which best represents your answer:

1. My child is speaking more English now than this time last year.

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

2. My child has confidence about speaking English.

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

3. It is important to me that my child speaks and reads in Spanish.

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

4. It is important to me that my child speaks and reads in English.

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

5. My child reads the books that the school project sent home in Kindergarten.
**Pictures of the books are on the cover sheet of this survey.*

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

6. I think that Project ELLA is helping my child learn English.

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

7. List three ways your child's participation in Project ELLA has improved her/his English.

8. I am interested in learning more English.

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

Note. Only data from Item 7 were used for the purposes of this qualitative study.

Table 2

Project ELLA Parent Interview

1.	What would you like to know about Project ELLA?
2.	Can you provide specific examples of your child's growth in speaking English since this time last year?
3.	Can you provide specific examples of your child's growth in reading English since this time last year?
4.	Please give some examples of times you have been surprised to see your child use English.
5.	The school project is designed to impact children's learning. Can you think of any other abilities or attitudes of your child that Project ELLA may impact?

Table 3

Twelve Themes and Low-Inference Descriptors from Parent Survey

<i>Theme</i>	<i>Low-Inference Descriptors</i>
Speaking	<i>Se siente mas seguro al hablar</i> (S/he feels more secure in speaking); <i>Puede entablar [sic] conversación con niños que solamente hablan Inglés</i> (S/he can have conversations with children that speak only English; <i>me corrige</i> (S/he corrects me.)
Reading	<i>Mi niña lee mucho</i> (My daughter reads a lot.); <i>Mi niña estudia libros en Inglés</i> (My daughter studies books written in English.)
Writing	<i>Ha aprendido a escribir en Inglés s. No al 100%. Pero va avanzando y practicando con su hermano</i> (My child is learning to write in English. Not 100%. But s/he is advancing and practicing with her brother.)
Singing	<i>y porque le gustan las canciones en Inglés y Español</i> (s/he likes to sing English and Spanish songs.)
Under- standing (including studying, learning, and growing)	<i>Porque yo me doy cuenta que entiende el Inglés</i> (Because I notice that s/he understands English.); <i>Contesta en Inglés y entiende cuando se le habla</i> (S/he answers in English and understands it when she speaks it.)
Practicing	<i> practica con su tía</i> (s/he practices with her/his aunt); <i>Mi niña practica el Inglés con sus hermanos</i> (My daughter practices English with her brothers.)
Confidence	<i>y se puede defender con otros niños</i> (S/he can defend her/himself speaking with other children.); <i>y no le da pena si se equivoca al hablar</i> (S/he does not worry if s/he makes a mistake speaking.); <i>se le quitó lo penoso</i> (S/he's not shy anymore).
Enjoyment (including fun and interest). (Because it is fun for her.)	<i>Platica y juega con otros niños, que hablan Inglés</i> (S/he chats and plays con other children who speak English); <i>y está más interesada en el idioma</i> (and is more interested in the language); <i>Por que es divertid para ella</i>
Family	<i>Entiende la mayoría de las conversaciones en Inglés que decimos en casa</i> (S/he understands the majority of the conversations in English that we speak at home.); <i>Yo le pregunto en Inglés y ella contesta en Inglés</i> (I ask her questions in English and she answers in English)
Friends	<i>Con su amiga</i> (With her friend.)
School	<i>En casa habla y dice frases que a aprendido en la clase</i> (At home s/he says phrases that s/he has learned in class.); <i>Understanding class rules a little better.</i>
Television and Computers	<i>be[sic] programas en la televisión en Inglés</i> (S/he watches television programs in English.); <i>trabaja más en la computadora</i> (S/he works more on the computer.)

Promising Practices: Dual Language Enrichment For ELL Students K-12

Richard Gómez
The University of Texas at Brownsville

ABSTRACT

Dual language programs are not new in this country. However, the interest in dual language education has increased dramatically in the last 15 years (Howard & Christian, 2002). This article describes a unique One-Way 50/50 Dual Language Enrichment (DLE) model that is currently being implemented at two South Texas elementary schools and at one middle school. The dual language program utilized by these schools divides language of instruction by subject area as well as by time. The model has been successfully implemented in regions with high concentrations of Latino students. The schools studied in this article implemented a One-Way DLE model and therefore did not require a 50/50 balance of native English speakers and native Spanish speakers. In addition to describing the model implemented by the three schools, this article reports standardized test results indicating that students learning under this DLE model are achieving at high levels of academic proficiency as demonstrated on English-based reading and mathematics statewide assessments of both elementary and middle school grades.

Contact information:

Dr. Richard Gómez Jr., Associate Professor
The University of Texas @ Brownsville
360-970-5846 (cell)
956-882-5723 (office)
Richard.Gomez@utb.edu

Promising Practices: Dual Language Enrichment For ELL Students K-12

“No Child Left Behind” (NCLB) legislation and mandates have raised the stakes for educators across America to more effectively meet the academic needs of all students and, in particular, of children who have historically performed poorly in our schools. In this pursuit, educators across the country are turning to second language acquisition research to provide them with guidance for implementing promising practices that will better meet the academic and linguistic needs of second language learners. This renewed search for “what works with ELLs” (English language learners) has led more and more educators to Dual Language Enrichment (DLE) models.

Dual language programs are not new in this country. The Spanish/English Coral Way program in Florida and the French/English Ecole Bilingüe in Massachusetts were implemented in the 1960s. However, the interest in dual language education has increased dramatically in the last 15 years (Howard & Christian, 2002). Part of the appeal of DLE programs for educators is that they promise more effective academic and linguistic success for both ELLs and mono-English speaking students alike! Howard and Christian (2002) state that “Two-way immersion education is a dynamic form of education that holds great promise for developing high levels of academic achievement, bilingualism and biliteracy, and cross-cultural awareness among participating students.” (p.1) The promise of research-based DLE programs has in turn fueled the expansion of DLE programs across the country, including the largest ELL population states of California, Texas, and Florida. In Texas, the Texas Two-Way Consortium listed 234 DLE programs in the state at the end of 2005, compared to fewer than ten DLE programs in 1995 (<http://texastwoway.org>). This growth represents an increase of over 2,000% in the number of DLE programs across Texas over the past decade! In all likelihood, the number of dual language programs in the state of Texas and across the country is a conservative figure, given that a significant number of DLE programs—particularly new ones—are not registered. An example of this undercount is illustrated by information available from the national Two-Way directory at the Center for Applied Linguistics (CAL) (<http://www.cal.org/twi/directory/>). In the spring of 2004, the Center for Applied Linguistics (CAL) listed 283 dual language programs in 24 states, including 100 DLE programs in California. Adding the Texas Two-Way Consortium count of 234 to the CAL count for California alone (100) results in more DLE programs than CAL has listed for all 24 states!

For many, implementing a DLE program has been a journey based on faith in DLE research that consistently finds that ELL students learn English and academic content more effectively when taught in their native language for at least half the school day. Thomas and Collier (2002) state the following:

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 [first language] and L2 [second language] in all subjects and to maintain that level of high achievement, or reach even higher levels through the end of schooling. (p. 7)

ELL students must learn English not just for social settings but also for academic settings in order to compete academically with their native English-speaking peers. Academic proficiency--or Cognitive Academic Language Proficiency (CALP) as it is referred to in second language research--is a longer process requiring five to seven years for ELL students to master (Cummins, 1991). The time required to develop CALP is the rationale given for making academic and linguistic goals for DLE programs be at the end of fifth grade and not goals for third or fourth grade. A sizeable majority of students engaged in a well implemented DLE program for a minimum of six years (if starting from Kindergarten) should be able to fully close the achievement gap with native-English speakers (Thomas & Collier, 2002). Thus, educators implementing DLE programs wait patiently (and sometimes not so patiently) as their DLE program is initiated at Kindergarten and/or first grade and then progresses to the following grade level with each subsequent school-year. Educators wait for up to six years for academic and linguistic validation of the faith they have placed on second language acquisition research. They wait to review ELL fifth grade state reading and mathematics assessments, written in English, as measured by statewide assessments. The DLE program academic results presented in this article are from three schools in South Texas that followed the research, implemented a quality DLE program, and waited for more than eight years to validate the decision made by school staff, school board, and the local communities. The findings presented are intended to inform, guide, and further the study of promising practices in educating ELL students. The findings are also one more affirmation, among a growing body of evidence, that faith placed in DLE research has not been misplaced.

Dual Language Enrichment Characteristics

Common Characteristics of Dual Language Programs

Although dual language programs vary widely in design and implementation, they all share certain characteristics. Students in the programs usually include some native English speakers in addition to the native speakers of another language. These two groups of students study together most of the day. In their classes, students learn language through academic content instruction in both languages. All students become proficient in using two languages for communication and learning. In addition, in this era of high stakes testing, researchers have shown that both groups of students do as well as or better on standardized tests given in English than students learning only in English (Lindholm-Leary, 2001; Thomas & Collier, 2002). Figure 1 lists some common characteristics of dual language programs (Freeman, Freeman, & Mercuri, 2005).

Figure 1: Common Characteristics of Dual Language Programs

Students include English speakers and native speakers of another language
Students are integrated during most content instruction
Instruction is provided in two languages
Students become proficient in two languages
Student achievement in English for all students is equal to or exceeds that of students learning in English only

Variations among Dual Language Programs

Although dual language programs share certain characteristics and are based on the same orientation, they vary in several ways. For one thing, they are called by different names. They involve different languages and different student populations. In addition, there are different program models, and these models are implemented in a variety of ways.

While there is widespread agreement about the success of dual language programs, there is not the same agreement about what the programs should be called. Programs that share the characteristics listed in Figure 1 have been given a variety of names (Cloud, Genesee, & Hamayan, 2000; Crawford, 2004; Soltero, 2004):

- dual language education (DLE)
- dual immersion (DI)
- two-way bilingual education (TWBE)
- enriched education
- two-way immersion (TWI)

I have chosen to use a relatively new term, dual language enrichment (DLE), because this term captures more completely the essential components as well as ancillary benefits associated with dual language enrichment programs that are just beginning to be researched and documented. These benefits include the following:

- student-centered instruction/learning
- use of two languages for instruction
- biliteracy (academic proficiency) in two languages
- project-based/discovery learning
- students demonstrate stronger self-esteem and self-confidence
- mutual multicultural respect
- increased parental involvement
- higher expectations by teachers, administrators, students, and parents
- biliteracy favorably affecting aspects of mental health as demonstrated by early brain research
- reduced identification for special education services
- increased identification for gifted and talented or highly capable services

Given the partial list of benefits associated with quality DLE programs, I felt that the term “enrichment” is a fair descriptor to any program touching so many areas. Still, the primary goal is for all students to develop full conversational and academic proficiency as they study academic content in two languages.

There is also variation in the languages included in the programs. Dual language enrichment (DLE) programs have been implemented in the United States for native English speakers and speakers of Spanish, Cantonese, Korean, French, Portuguese, Haitian-Creole, Tagalog, Arabic, and Japanese. Districts have also considered implementing programs in Hmong and Vietnamese. The Center for Applied Linguistics (CAL) (<http://www.cal.org/twi/directory/tables.html>) maintains a database of dual language enrichment (DLE) programs. New programs are added frequently, and the

list of non-English languages continues to expand. However, Spanish is the non-English language in the overwhelming majority of DLE programs.

Dual language enrichment (DLE) programs vary in both languages of instruction and student characteristics. In Two-Way DLE programs, about half the students are native English speakers and about half are native speakers of the non-English language featured in the program. In these programs, though, there can be considerable variation in the ethnicity and race of the native English speakers. Native English speakers may include Anglos, African Americans, and members of other ethnic groups such as Latinos. Often, students come from different social and economic backgrounds. In some programs, all students are of the same race/ethnic group but differ in their language proficiency. For example, in South Texas, almost all students are Latinos. However, some are English-dominant, some are Spanish-dominant, and some are more balanced bilinguals.

Dual language enrichment programs also vary in the amount of time they allocate for instruction in each language. The two basic models, the 90/10 model and the 50/50 model, exemplify this variance. In the 90/10 model, the non-English language is used 90% of the time in early grades, and gradually more English is added until students are in the third or fourth grade when the instructional time in both languages is equal. Many schools have adopted this model with the early emphasis on the non-English language to help compensate for the dominant power of English outside the school context.

One variation within the 90/10 model involves literacy instruction. In most 90/10 programs, all students learn to read and write in the non-English language. However, in some programs all students receive initial literacy instruction in their native language, and the rest of the day is divided with 90% of the instructional time in the non-English language and 10% in English.

In the 50/50 model, students learn in each language about half the time throughout the program. In many programs, all students learn to read in their primary language and then add the second language. Time for the two languages may be divided in various ways—half day, alternate day, or even alternate week. This model is often used in areas with limited numbers of bilingual teachers. Teachers can team teach, and the bilingual teacher can provide the non-English language to one group in the morning and the other group in the afternoon (or on alternate days or weeks), thus maximizing faculty language resources.

As this brief review indicates, despite the common characteristics among DLE programs, considerable variation exists in the languages used for instruction, the student population, and the time each language is used. Schools planning to implement a dual language program should choose the model that best fits their student population and is most responsive to community perceptions and needs.

Potential Problems with Dual Language Enrichment Programs

Although research supports the implementation of DLE programs, and many examples of successful programs can be found, certain potential problems still exist. No program for English

language learners is a panacea. Effective programs must be well implemented and have adequate administrative, faculty, and resource support. There is always the danger that critics of bilingual education will seize on data from poorly conceived or implemented programs and use those program results as ammunition in their ongoing opposition to any form of bilingual education.

In addition, even proponents of bilingual education have pointed out that DLE programs may be designed to serve primarily the native English speakers who enroll in them. One reason that DLE programs have become popular is that they attract Anglo/Caucasian parents who want their children to become bilingual/biliterate. Native English speakers do very well in these programs. As Valdés (1997) has pointed out, if such programs succeed in developing these native English speakers into fully proficient bilinguals, the programs may serve to take away the one advantage that English language learners have traditionally had—the distinction of achieving a high level of bilingualism.

An even more subtle potential problem is that in some cases, DLE programs may not be established at all unless a sufficient number of native English speakers, usually at least one third of the students, are inclined to enroll. As a result, English Language Learners may be denied the opportunity to participate in a program model developed to serve their needs, and instead are at the mercy of the whim of native-English populations at their respective schools.

Gómez, Freeman, and Freeman (2005) state that the solution to these potential problems is to ensure that programs are well implemented, that the model fits the social context, and that program establishment is not dependent on the presence of a certain number of native English speakers. This article presents a model for dual language education designed for areas with high numbers of English language learners. It first describes the features of the model. Then it reports test score data from three schools where the model has been implemented. Scores data indicate high levels of academic achievement for DLE students in the schools studied.

The Gómez and Gómez Model of Dual Language Enrichment

Two South Texas elementary schools and one middle school studied in this article implemented the L. Gómez and R. Gómez DLE model, the first school doing so in 1996. Since then, the schools have taken care to implement the model as faithfully as possible, scheduling consistent trainings for staff and administrators alike, informing parents, etc.

The Gómez and Gómez (Gómez, 2000) DLE model provides for dual language enrichment that is especially well-suited for areas with high numbers of English language learners. Since 1996, approximately 100 schools have adopted the Gómez and Gómez DLE model across four states: Texas, Washington, Nevada, and Kansas. The model was developed originally for schools in the Rio Grande Valley, a 100 mile strip on the southern tip of Texas along the United States-Mexico border. The area is predominantly Mexican-American, and districts serve a significant number of limited English proficient students. According to the state's regional service center, in October 2002, 95% of students across the region were Hispanic, 82% were economically disadvantaged and approximately 41% were identified as limited English proficient.

In the three schools reviewed in this article, almost all the students are Latinos. Some are English dominant, some are Spanish dominant, and many are bilingual to some degree. There is not a clear distinction between native English speakers and native Spanish speakers in a region like this. In 1996, the first school in this study implemented a one-way DLE model. Pre-K through first grade students comprised the first DLE cohort group.

Figure 2 graphically depicts the Gómez and Gómez DLE model being utilized at the two elementary schools reviewed in this article. It is a unique school-wide 50-50 model that supports the academic and linguistic development of first and second language learners across elementary grade levels. The model was developed in 1996 and revised in 1999, based on initial results of campus implementation.

The model is unique in that it 1) divides languages by subject rather than time; 2) provides instruction of each subject area, except for language arts, in only one of the two languages; 3) calls for activities that support the L2 learner in the respective subject areas; 4) promotes the development of content biliteracy by the end of fifth grade; 5) requires the use of bilingual learning centers from PreK to first grade and promotes the use of project-based, discovery learning through bilingual resource centers beginning at second grade; and 6) the language for morning announcements, morning activities, storytelling, music, computer lab, physical education, and library time alternates each day. The language that is used alternatively each day is called the language of the day.

Key Academic Features of the DLE Model Implemented at Two Elementary Schools

Unlike many dual language models, the Gómez and Gómez DLE program design does not call for instruction in each subject area in both languages. Instead, it requires that all learners at the two elementary schools, regardless of language background, learn certain subjects only in the minority language (L2) and other subjects only in the majority language (L1). The philosophy underlying the model is that children can indeed learn subject matter effectively in either their L1 or L2, given the use of appropriate instructional strategies and other activities that support, in particular, the L2 learner in the respective subject area. As Cummins (2000) has maintained, content learned in one language transfers to the second language. As a result, in this model, students study each academic content area subject, except for language arts, in just one language.

The underlying premise for subject area instruction in only one language is the need for consistency of vocabulary and conceptual development of that subject in the same language. Using one language for each subject area allows teachers to develop conceptual and linguistic connections. This applies to both an L1 and L2 learner, assuming the subject matter is made comprehensible through sheltered instruction strategies. Consistent teaching of a subject in one language also helps ensure there is no translation or clarification in the L1 during any instruction.

Both elementary schools followed the DLE model design, providing for mathematics instruction in English only for all learners (see the third column of Figure 2). Mathematics was selected to be delivered in English for the following reasons: 1) Mathematics books have more

limited text than science or social studies texts. Choosing math as the subject to be taught in English, therefore, supports the language minority child, traditionally the more disadvantaged of the two, 2) Mathematics is generally a more hands-on subject, with numerous manipulatives available, 3) Mathematics is more universal, and its content cuts across languages, and 4) Generally speaking, Spanish-speaking parents can usually better assist their children in mathematics than in other subject areas due to the strong math education traditionally found in Latin American countries.

Similarly, science and social studies, which require more extensive reading, were selected to be delivered in Spanish only in order to ensure a strong minority language curriculum that would support English language learners. For English-dominant students, this approach would help compensate for the strong societal dominance of the English language. The DLE model is designed to increase the chance of all learners to achieve full content literacy in both languages, but particularly in their minority language, by the end of fifth grade.

Language arts were taught in the students' native language through first grade. Beginning with second grade, all students received language arts in both languages. The time allotted for mathematics was equal to the time for science and social studies combined. The language for all other activities alternated daily (Mondays, Wednesdays, and Fridays in Spanish and Tuesdays and Thursdays in English). As a result, the model is 50/50 in both content area and time.

Conceptual Refinement

The DLE model implemented acknowledges that the primary goal of academic content is conceptual learning, while the secondary goal is linguistic development. For instance, a lesson in science is designed primarily to help students develop academic concepts in science. However, it is also intended to promote language development (in Spanish in this case) in the process of learning that concept. Both these goals can be more readily achieved by students studying in their native language. Therefore, students learning subject matter in their L2 require additional support for at least the first three years.

The activity that supports the comprehension of academic content by L2 learners is described as conceptual refinement (see the last column of Figure 2). During conceptual refinement, L2 learners of math, science, or social studies are homogeneously language-grouped and provided reinforcement for about 15-20 minutes immediately following the end of each lesson. Conceptual refinement is conducted in the same language of instruction as the original lesson, using different examples and working with the L2 learners as a smaller group. For example, in first grade, English-dominant students at the two schools learned science in Spanish and were homogeneously grouped for conceptual refinement that was delivered in Spanish immediately following the science lesson in order to clarify or reinforce the lesson/concept just taught. Conceptual refinement provided additional opportunities for students to understand subject area concepts they studied in their L2. The reverse was true for Spanish-dominant students who were instructed mathematics in English.

Conceptual refinement also promotes content biliteracy in math, science, and social studies for all learners in both languages. Mathematics, science, and social studies are learned in only one language, which is consistent with the DLE goal to begin in second grade to develop content biliteracy in those subject areas and achieve biliteracy by the end of fifth grade. By second grade, most students had developed sufficient fluency in both languages to understand directions and subject area instruction in either language.

Bilingual Learning Centers and Bilingual Resource Centers

Bilingual Learning Centers and Bilingual Resource Centers (see the second column of Figure 2) are interactive subject-based learning activities that support L1 and L2 learners. Bilingual Learning Centers were employed from Pre-K to second grade, while Bilingual Resource Centers were used from third to fifth grade. Both Bilingual Learning Centers and Bilingual Resource Centers contained activities and materials in English and Spanish.

The goal of Bilingual Learning Centers was to engage students working in bilingual pairs in self-directed learning activities for a minimum of 30 minutes per day. Bilingual Learning Centers at the PreK through second grade played an important role in the dual language model. The use of learning centers was intended to accomplish three major objectives. The centers (1) provided opportunities for students to use their first and second language in natural and meaningful contexts, (2) allowed for negotiation of content-area meaning between learners, and (3) provided students opportunities to engage in self-paced independent learning with minimal guidance from the teacher.

Bilingual Learning Centers are bilingual; that is, content activities and materials in the centers were available in both languages. This does not imply that all activities were available or translated in both languages, but simply that students worked together in bilingual pairs and were given opportunities to select activities to complete together in either language. Bilingual Learning Center activities were aligned to themes the class was studying and usually served as previews or extensions of the content objectives related to the themes. Bilingual pairs selected their centers on a weekly basis and rotated through them each week.

Bilingual Resource Centers serve as academic content specific reference areas for bilingual pairs or groups to use in cooperative learning project-based activities. Bilingual Resource Centers at the third through fifth grade levels were used exclusively with lessons during content-area instruction. Beginning in third grade, the model called for a greater emphasis on project-based discovery learning for all content-based instruction. The Bilingual Resource Centers served as content resource areas for students working in their bilingual groups to access for completing their group projects. Bilingual Resource Centers were established in mathematics, science, social studies, and language arts.

Grade Level	Heterogeneous Instructional Grouping	Separation of Languages for Content-Area Instruction	L1 & L2 Computer Support	Instructional Staff	L1/L2 Conceptual Refinement
PK	[Except Language Arts] Content-Area Instruction & Bilingual Learning Center activity conducted in Bilingual Pairs/Groups	Language Arts in Student's Native Language Mathematics (English) Social Studies/Science (Spanish) P. E., S.S.R., Music, Computer Lab & Library (Language of the Day--alternate in English & Spanish) Learning Centers in English and Spanish	Initial Computer Literacy (English/Spanish)	Bilingual Certified and/or ESL Certified Teacher-Aide (recommended)	L2 Content Support English Speakers-SSL: SS or Science Spanish Speakers-ESL: Mathematics
K	[Except Language Arts] Content-Area Instruction & Bilingual Learning Center activity conducted in Bilingual Pairs/Groups	Language Arts in Student's Native Language Mathematics (English) Social Studies/Science (Spanish) P. E., S.S.R., Music, Computer Lab & Library (Language of the Day-- alternate in English & Spanish) Learning Centers in English and Spanish	Support of Linguistic & Cognitive Development via <u>Respective Language of Instruction</u>	Bilingual Certified and/or ESL Certified Teacher-Aide (recommended)	L2 Content Support English Speakers-SSL: SS or Science Spanish Speakers-ESL: Mathematics
1st	[Except Language Arts] Content-Area Instruction & Bilingual Learning Center activity conducted in Bilingual Pairs/Groups	Language Arts in Student's Native Language Mathematics (English) Social Studies/Science (Spanish) P. E., S.S.R., Music, Computer Lab & Library (Language of the Day-- alternate in English & Spanish) Learning Centers in English and Spanish	Support of Linguistic & Cognitive Development via <u>Respective Language of Instruction</u>	Bilingual Certified and/or ESL Certified Teacher-Aide (recommended)	L2 Content Support English Speakers-SSL: SS or Science Spanish Speakers-ESL: Mathematics
2nd	Content-Area Instruction & Bilingual Learning Center activity conducted in Bilingual Pairs/Groups	Language Arts/Mathematics (English) Language Arts/Social Studies/Science (Spanish) P. E., S.S.R., Music, Computer Lab & Library (Language of the Day-- alternate in English & Spanish) Learning Centers in English and Spanish	Support of Linguistic & Cognitive Development via <u>Respective Language of Instruction</u>	Bilingual Certified and/or ESL Certified Teacher-Aide (recommended)	L2 Content Support English Speakers-SSL: SS or Science Spanish Speakers-ESL: Mathematics
3rd	Content-Area Instruction, Enrichment Activities & Resource Centers in Bilingual Pairs/Groups	Language Arts/Mathematics (English) Language Arts/Social Studies/Science (Spanish) P. E., S.S.R., Music, Computer Lab & Library (Language of the Day-- alternate in English & Spanish) Resource Centers in English and Spanish	<i>Specialized Content-Area Vocabulary Enrichment</i> English: SS & Science Spanish: Mathematics	Bilingual Certified and/or ESL Certified	<i>Specialized Content-Area Vocabulary Enrichment</i> English: SS & Science Spanish: Mathematics
4th	Content-Area Instruction, Enrichment Activities & Resource Centers in Bilingual Pairs/Groups	Language Arts/Mathematics (English) Language Arts/Social Studies/Science (Spanish) P. E., S.S.R., Music, Computer Lab & Library (Language of the Day-- alternate in English & Spanish) Resource Centers in English and Spanish	<i>Specialized Content-Area Vocabulary Enrichment</i> English: SS & Science Spanish: Mathematics	Bilingual Certified and/or ESL Certified	<i>Specialized Content-Area Vocabulary Enrichment</i> English: SS & Science Spanish: Mathematics
5th	Content-Area Instruction, Enrichment Activities & Resource Centers in Bilingual Pairs/Groups	Language Arts/Mathematics (English) Language Arts/Social Studies/Science (Spanish) P. E., S.S.R., Music, Computer Lab & Library (Language of the Day-- alternate in English & Spanish) Resource Centers in English and Spanish	<i>Specialized Content-Area Vocabulary Enrichment</i> English: SS & Science Spanish: Mathematics	Bilingual Certified and/or ESL Certified	<i>Specialized Content-Area Vocabulary Enrichment</i> English: SS & Science Spanish: Mathematics

Figure 2: Gómez and Gómez Dual Language Model

Key Linguistic Features of the DLE Model Implemented at Two Elementary Schools

The Gómez and Gómez DLE model implemented by both elementary schools included components and activities that take into account the academic and linguistic developmental growth of children developing their first language and adding a second language. Students developed literacy in their native language while developing academic proficiency in their second language through subject area instruction.

Students received language arts in their native language during Pre-K-first grade, and received language arts in both languages from second to fifth grades. For English-dominant students, mathematics also supported native language development from Pre-K to fifth grade, and similarly, for Spanish-dominant learners, science and social studies supported native language development.

There is a major change in the model as students move from second grade to third grade (indicated with dark black line on Figure 2), based on the need for addressing the greater academic demands of the upper grades and the ongoing biliteracy development of all learners. By the end of second grade, most students had become sufficiently bilingual that the need for second language instructional support was less critical. Students still required instruction that was meaningful and contextually supported. However, students were now bilingual, more confident, and more readily followed directions and content area instruction in the L2. At this point, the model called for greater emphasis on challenging students to use their second language because they now had the capacity to do so.

Bilingual Pairs

A central component of the DLE model implemented was bilingual grouping. Even in One-Way DLE programs, as was the case in these two South Texas elementary schools, virtually all the students were Latinos. However some students were more dominant in English and others more dominant in Spanish. Learners were grouped in bilingual pairs or bilingual groups (composed of two or three bilingual pairs) for all content-area instruction and for participation in bilingual learning centers, resource centers, and enrichment activities. The pairing changed regularly, usually on a weekly or biweekly basis. Throughout the instructional day, English-dominant learners were paired or grouped with Spanish-dominant learners.

Freeman and Freeman (2001) describe a supportive L2 environment as one in which students are motivated and encouraged to collaborate and use different modes of learning. Bilingual grouping facilitated comprehension of content area by the L2 learners, who received linguistic and academic support from their native-speaking partner. For instance, during mathematics instruction, English-dominant learners supported Spanish-dominant learners since mathematics was learned in English. During science and social studies, Spanish-dominant learners supported English-dominant learners since science and social studies were taught in Spanish. Similarly, during other instructional activities, such as bilingual learning centers and enrichment activities, students worked together in bilingual pairs.

Vocabulary Enrichment

All students received vocabulary enrichment (see the last column of Figure 2). During these lessons, the focus was on language rather than conceptual development. The enriched lessons introduced specialized academic language in the students' native language for concepts studied in their second language. For example, second grade specialized science vocabulary that was taught in Spanish was introduced in English to native English speakers during the following week. These enrichment activities were conducted twice a week for approximately 30 minutes. The activities are contextualized, not simply lists of vocabulary items. The vocabulary enrichment activities are designed to help students transfer knowledge already learned in their L1 to their L2, and vice-versa. These enrichment lessons also help ensure that students who study a subject in one language can perform well in a test in that subject in either language.

Language of the Day (LOD)

Both elementary schools accounted for classroom activities and language that was not tied specifically to academic instruction with what is called the "language of the day" (LOD), which alternated daily. The central purposes for this component are to 1) promote bilingualism across the campus and in all uses of language by all school staff, and 2) develop vocabulary in both languages, but primarily for the learners' L2. The language of the day applied to all language used in school by all students and staff other than during mathematics, science, social studies, and language arts instruction (to the extent possible).

Activities such as morning announcements, the pledge of allegiance, daily news, daily calendar activities, physical education, storytelling, library visits, sustained silent reading, music, lunch breaks, water breaks, and end-of-day clean-up were conducted in the language of the day (LOD). The LOD was implemented campus-wide with Mondays, Wednesdays, and Fridays, in Spanish and Tuesdays and Thursdays in English. This system validates both languages and helps students develop both conversational and academic language. The LOD is an important part of the Gómez and Gómez DLE model. Teachers hung a sign outside their classroom doors indicating the LOD. Visitors were asked to adhere to the language of the day to the extent possible.

Academic Results

Two Elementary DLE Schools

Because one of the major goals of the DLE program is for students to achieve biliteracy in both English and Spanish by the end of 5th grade, all 5th grades who received dual language enrichment instruction for *at least three years* were administered the TAKS (Texas academic state assessment—need to spell out the actual acronym) in English rather than the native language (Spanish) of the super majority of students who participated in the program.

As depicted in Figure 3, 94% of participating 5th grade students from the two DLE Texas elementary schools met the **reading standard** set by the State of Texas in 2005. In comparison, the total school district 5th grade rates for meeting the state fixed standards on the 2005 TAKS reading test was 73%--a significant difference in TAKS results of 21 points between the DLE students and the rest of the fifth grades in the district. This difference is made even more

significant since all of the 95 DLE students scores were included in the district's "all" fifth grade scores! No "new" students were brought into the schools other than their naturally zoned population, no change in staffing was undertaken, and no new curriculum was utilized. A major portion of the schools' higher scores can only be explained as a result of using an "enriched" DLE model of education. As explained in the *Program Implementation* section of this article, language arts instruction was provided only in their *native* language pre-kindergarten through 1st grade and in both languages grades 2nd through 5th.

These results are extremely significant and indicate that students are not only on grade level in reading in English, but, having had instruction in their native language for at least three years has resulted in their achievement of one of the ultimate goals of the program--to produce students who are fully proficient and biliterate in both English and Spanish. It is worth noting again that students in the DLE program received language arts instruction exclusively in their native language (Spanish for the great majority) during the formative years between kinder and second grades and added English language arts beginning with second grade.

The TAKS results for the 5th grade **mathematics standards** resulted in similar findings when comparing the two DLE elementary schools to the school district totals (see Figures 4). DLE program students meeting the **mathematics standard** in 2005 were an impressive 93% versus 78% for the district total! This is a 15 point difference in favor of DLE students. Again, it must be noted that all students received mathematics instruction in English in grades PK through 5th grade. Furthermore, DLE students' scores were also included in the district totals!

Middle School Results

The entering 2002-2003 6th grade students at the Middle School were the first middle students to receive dual language instruction in this South Texas school district. These students attended DLE Elementary schools from 1996 to 2002 for at least three years and continued a dual language education at the 6th grade level in 2002-2003. Figure 5 depicts the results of the standardized assessment in reading in **English** for three years (2002-2005) for this cohort group. The TAKS test in English reading was administered for the first time in the spring of 2003; thus this trend analysis is particularly useful. It is also useful to compare the results from this cohort of students with the total Hispanic and total white student populations in Texas for the same years, since virtually all of the students in the cohort group are Hispanic and the white student population is the most successful group in meeting standard on the TAKS assessment. Results indicate that 84% of the DLE cohort successfully met standard on the TAKS reading test in 2003, 83% met it in 2004, and 82% did so in 2005. These rates of meeting standards on the TAKS are comparable to the total Hispanic population for Texas during the 2003 and 2004 school years (83% and 84%) respectively. However, the middle school DLE cohort group shows an advantage over the state Hispanic population for the 2005 school year. The middle school DLE cohort was able to maintain its rate of meeting standard on the English reading TAKS with 82%, but the total state Hispanic student population meeting standard on the eighth grade English reading TAKS dropped to (75%). This significant difference will also surface later in this report when we examine the rates of achieving a score with commendations for each group.

It is also interesting to note the rate of commendations awarded to students from the DLE middle school cohort group as compared to the total Hispanic and white student populations for the state for the three years, 2002-2005. Twenty percent of the DLE middle school cohort group

were awarded commendation for high scores on the reading TAKS in 2003, 25% were in 2004, and 30%--or almost one third of the middle DLE cohort group—were in 2005. This contrasts sharply with the total state Hispanic student population during those same years. This population had commendations of 15% in 2003, 13% in 2004, and 24% in 2005. Still, the rate of commendations for the DLE Middle school cohort group, although better than the comparison total Hispanic group, lags behind the white student population, who received commendations of 37% in 2003, 33% in 2004, and 53% in 2005.

Figure 3: Results of Standardized Assessment in Reading using the Texas Assessment of Knowledge and Skills (TAKS) of 5th Grade Students for 2004-2005

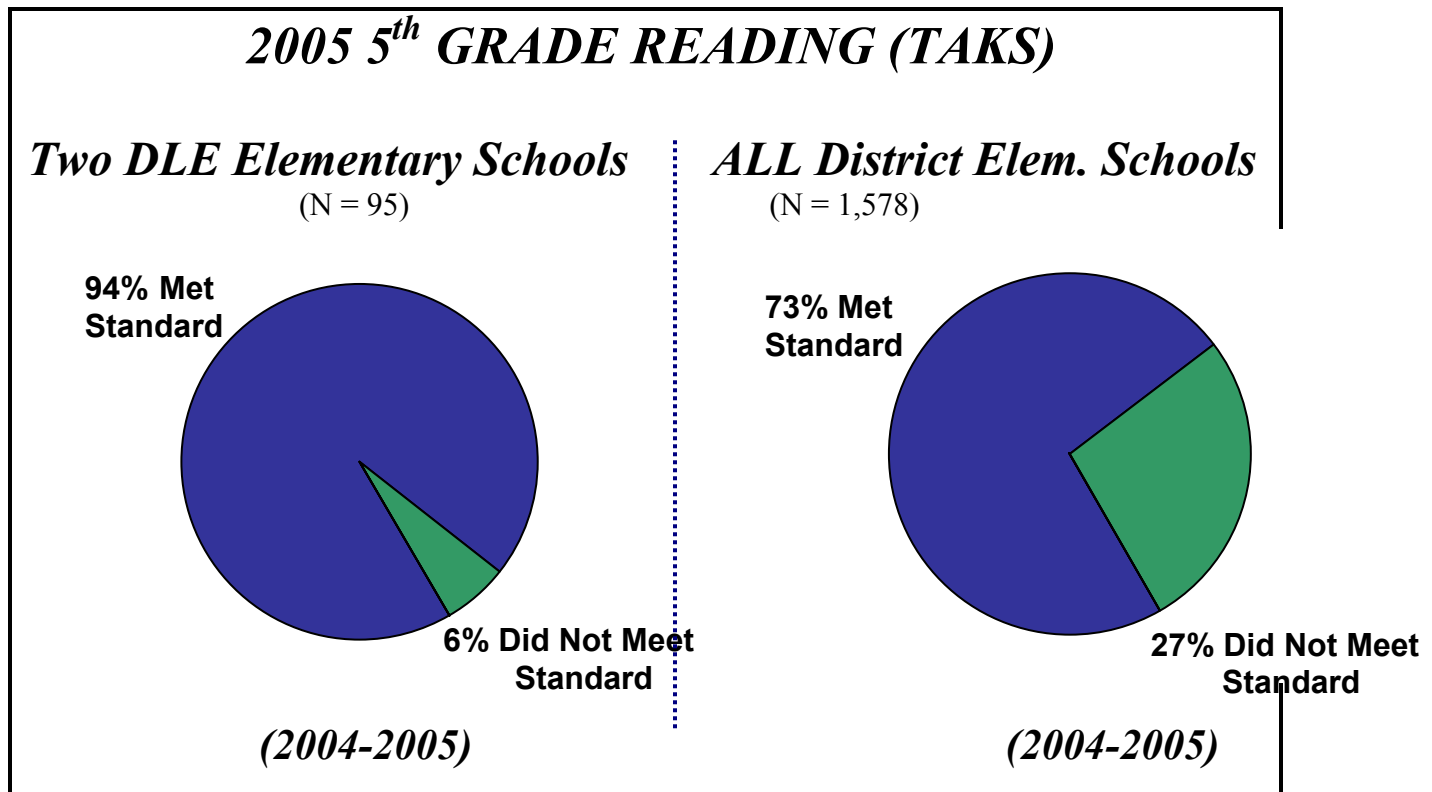
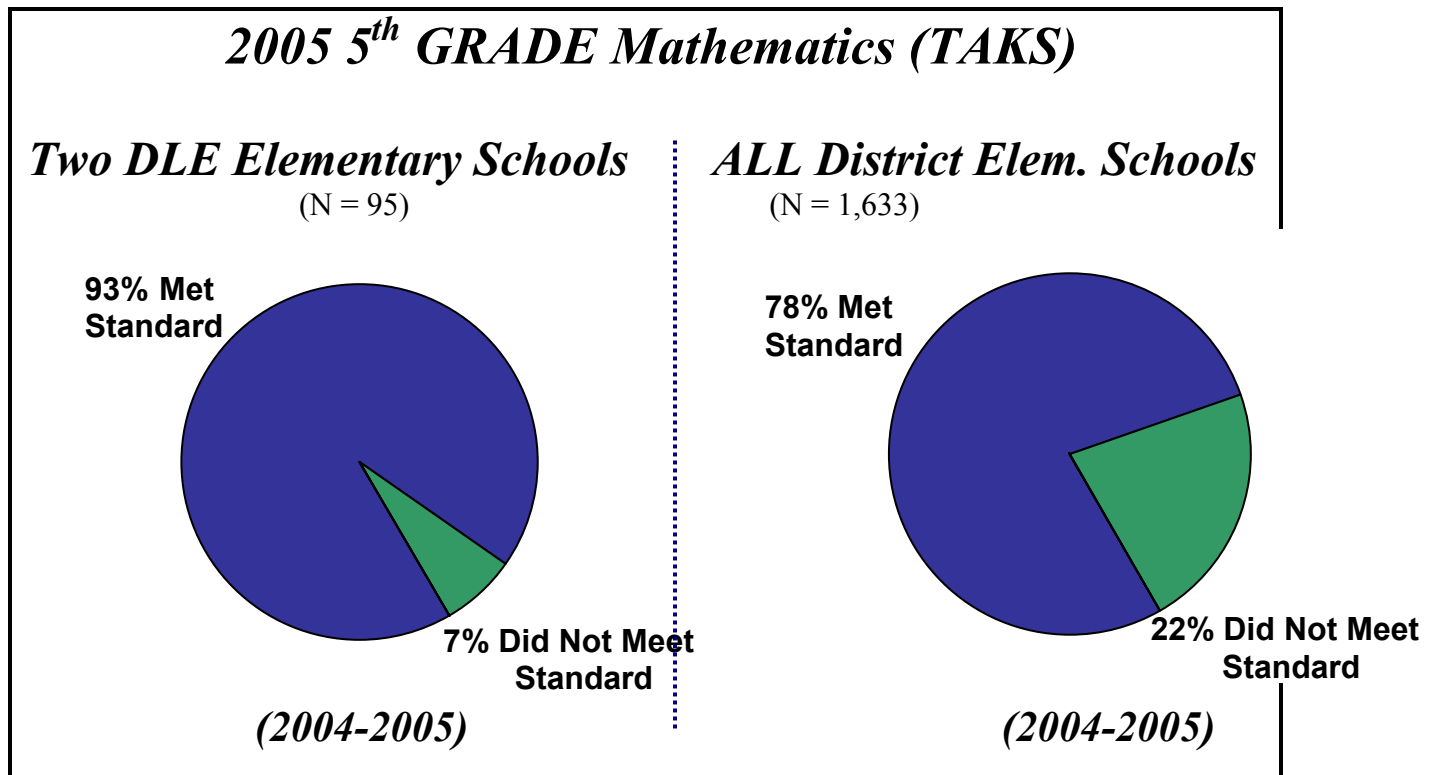
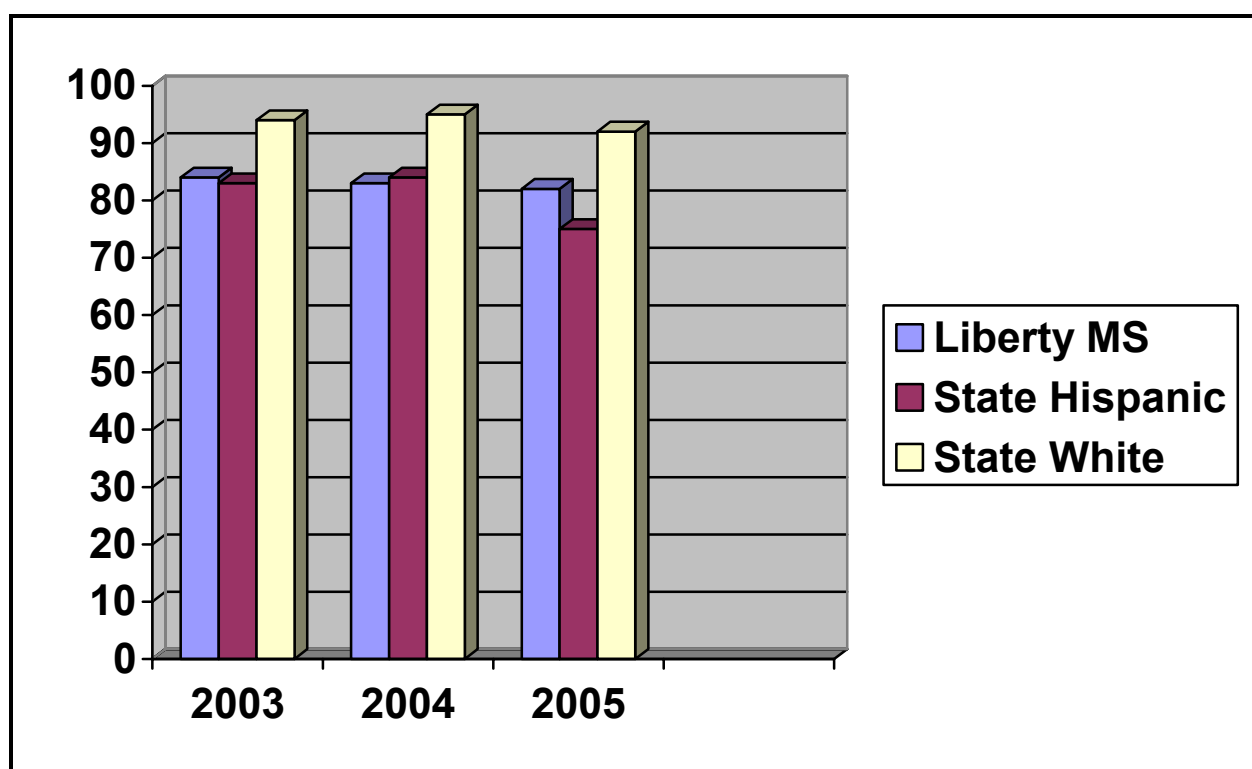


Figure 4: Results of Standardized Assessment in Mathematics using the Texas Assessment of Knowledge and Skills (TAKS) of 5th Grade Students for 2004-2005



This study also compared the rates of meeting standard on the math TAKS test for the DLE middle school cohort group as well as the total Hispanic and white student populations for the same school-years, 2002-2005. The DLE middle school cohort group experienced the same downward trend in the number of students meeting standard on the math TAKS as did the other two groups. However, the DLE middle school cohort group was significantly higher than

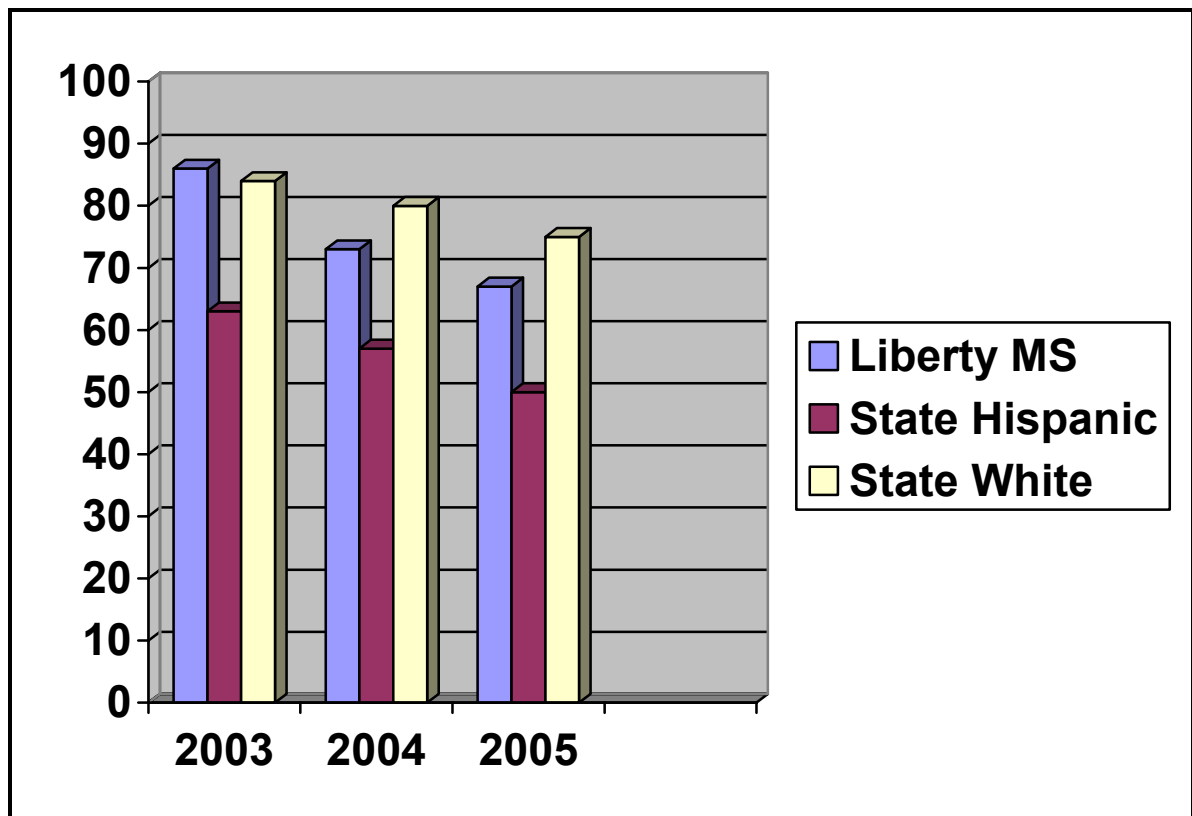
Figure 5: Comparison of 6th – 8th Grade Middle School DLE Cohort versus “Total” 6th – 8th Grade Hispanic and White Students in Texas Who Met or Bettered the Standard in Reading as Measured by the Texas Assessment of Knowledge and Skills (TAKS) from 2002-2005



the total Hispanic group in the number of its students meeting standard on the math TAKS for all three years observed (see Figure 6). The total Hispanic group had 63% meeting the math standard in 2003, 57% in 2004, and 50% in 2005. These numbers compare to the DLE middle school cohort group which had 86% in 2003, 73% in 2004, and 67% in 2005. On average over the three years from 2003-2005, the DLE Middle school cohort group was 18.7 points higher than the total Hispanic student population for the state.

Although the middle school DLE cohort group's rate for meeting the state standard on the math TAKS was not as high as the total white student population from 2002-2005, it nevertheless produced a strong showing (see Figure 6). In the first comparison year 2002-2003,

Figure 6: Comparison of 6th – 8th Grade DLE Middle School Cohort versus “Total” 6th – 8th Grade Hispanic and White Students in Texas Who Met or Bettered the Standard in Math as Measured by the Texas Assessment of Knowledge and Skills (TAKS) from 2002-2005



the middle school DLE cohort group actually performed better than the state's total white student population! That year, 86% of the Liberty cohort met state standard in math versus 84% for the white student population in the state. This advantage disappeared the following two years, 2003-2004 and 2004-2005, with the total white student population meeting the math standard at 80% and 75%, respectively. Still, though trailing the most successful student group in the state, the liberty cohort group lagged only an average of (4.3%) behind over the three-year period. This closing of the gap between the middle school DLE cohort group and the total white student population is even more apparent when we examine the number of students receiving commendations for high scores on the math TAKS. The high performer here is the middle school DLE cohort group! All three student groups examined in this report increased in the number of students receiving commendation on the TAKS math test. However, the middle school DLE cohort group, except for a dip in 2004, posted an average over the three years of 18.7% more students achieving scores of commendation than the total state Hispanic group and 4.3% more commendations than the total white student population. The state Hispanic group received commendations on the math TAKS for 3% in 2003, 6% in 2004, and 9% in 2005. The total white student population received commendations of 10% in 2003, 19% in 2004, and 22% in 2005. The middle school DLE cohort group eclipsed these numbers in two out of the three years observed with 23% in 2003, 7% in 2004, and 35% in 2005.

Direction for Future Study

The academic data from these DLE schools is promising. However, additional research is needed. The TAKS tests provide only a snapshot of student performance. Meeting the TAKS standard only requires a student to answer a little more than half the questions correctly. To ensure that the DLE model is promoting biliteracy and content area knowledge in two languages, Spanish tests should be administered and results analyzed.

Further studies would provide a more in-depth picture of student performance. Studies could include classroom observations and interviews with students, teachers, and parents. Researchers could also examine students' reading ability using running records or miscue analysis. Writing samples would show evidence of students' developing proficiency. Science and social studies projects could be examined to determine how well students can present subject-matter knowledge. In all these areas, data could be collected in both languages to assess how well the program is meeting its goal of promoting content area knowledge and high levels of biliteracy.

Conclusion

Dual Language Enrichment results such as those presented in this article hold promise for a large number of the approximate three million English Language Learners in our country. Research findings as to what practices are more effective in the instruction of ELLs are particularly important to address the "counterintuitive" nature of second language acquisition in academic settings. Common sense for those not familiar with second language acquisition research tugs at many educators and laypersons alike who hold to the old adage that "practice makes perfect." If so, ELL students would do better academically when immersed entirely in English. However, the research consistently finds the opposite to hold true. Elementary level

ELL students immersed in all-day English programs fared the worst on state assessments beginning with their fourth year of academic instruction. On the other hand, ELL students instructed in DLE programs, where at minimum half their academic instruction was delivered in their native language, scored the highest on English written reading and mathematics assessments. It is the academic variable versus the social language that makes all the difference.

References

- Cloud, N., Genesee, F., & Hamayan, E. (2000). *Dual language instruction: A handbook for enriched education*. Boston: Heinle & Heinle.
- Crawford, J. (2004). *Educating English learners*. Los Angeles: Bilingual Education Services.
- Cummins, J. (1991). Interdependence of first and second language proficiency in bilingual children. In E. Bialystok (Ed.), *Language processing in bilingual children* (pp. 70-89). Cambridge, UK: Cambridge University Press.
- Cummins, J. (2000). *Language, power and pedagogy: Bilingual children in the crossfire*. Tonawanda, NY: Multilingual Matters.
- Freeman, D. E., & Freeman, Y. S. (2001). *Between worlds: Access to second language acquisition*, (2nd ed.). Portsmouth, NH: Heinemann.
- Freeman, Y., Freeman, D., & Mercuri, S. (2005). *Dual language essentials for teachers and administrators*. Portsmouth, NH: Heinemann.
- Gómez, L. (2000). Two-way bilingual education: Promoting educational and social change. *The Journal of the Texas Association for Bilingual Education*, 5(1).
- Gómez, L., Freeman, D., & Freeman, Y. (2005). Dual language education: A promising 50-50 model. *Bilingual Research Journal* 29(1), 145-164..
- Howard, E. R., & Christian, D. (2002). Two-way immersion 101: Designing and implementing a two-way immersion education program at the elementary level. Santa Cruz: Center for Research on Education, Diversity & Excellence, University of California, Santa Cruz.
- Lindholm-Leary, K. J. (2001). *Dual language education*. Clevedon: Multilingual Matters.
- Ruíz, R. (1984). Orientations in language planning. *Journal of the National Association of Bilingual Education*, 8, 15-34.
- Soltero, S. W. (2004). *Dual language: Teaching and learning in two languages*. Boston: Pearson.
- Thomas, W. P., & Collier, V. P. (2002). A national study of school effectiveness for language minority students' long-term academic achievement. Retrieved 9/4/02, 02, from www.crede.usc.edu/research/llaa/1.1_es.html
- Valdés, G. (1997). Dual-language immersion programs: A cautionary note concerning the education of language-minority students. *Harvard Educational Review*, 67(3), 391-422.

**Supporting Change in our Schools and Classrooms:
Two Teachers' Journeys towards Additive Bilingual Education**

Deborah K. Palmer, Marta Cancino Johnson, Guadalupe Chavez
University of Texas, Austin

ABSTRACT

This article explores the power of individual teachers in subtractive bilingual school contexts to instigate and drive change within their classrooms and in their schools toward more enriched, additive bilingual programs. Two of the authors are bilingual kindergarten teachers in a large school district in Texas. The article defines additive/subtractive bilingual education, explore the research on the powerful role of the teacher in school reforms, and presents two cases of teachers listening to their students' and families' educational, social, and emotional needs and moving toward change despite sometimes ardent opposition from colleagues. The authors assert that with very young children, the most authentic assessment data available by which to make vital programmatic, curricular, and individual decisions are our observations of students, both one-on-one and as they work and play with peers in the classroom, and their conversations with their parents. Paying attention to these data, teachers will inevitably make good choices.

Contact Information:

Deborah K. Palmer
1 University Station, SZB 440E
Mailcode: D5700
Austin, TX 78712
512-232-4015
debpalmer@mail.utexas.edu

Guadalupe Chavez
auschavez@yahoo.com

Marta Cancino Johnson
martymar20@yahoo.com

Supporting Change in our Schools and Classrooms: Two Teachers' Journeys towards Additive Bilingual Education

One of the most important factors in the success or failure of bilingual children in schools is the way teachers and school leaders view students and their home language/culture. School programs designed to serve bilingual children fall along a spectrum, from those oriented as remedial, subtractive, or deficit to those with a strong enrichment or additive orientation. Deficit-oriented programs, also often referred to as “compensatory” programs, view children who speak a language other than English as lacking important skills (i.e., the ability to speak in English) and therefore in need of remediation; In response, the teachers work to fill in students’ perceived gaps in English, while devoting little or no attention to developing students’ home languages and building on their home cultural experiences. Success in these programs is defined as the acquisition of English literacy, often at the expense of the home language, which languishes or even disappears from students’ repertoires by middle school (Fillmore, 1991). Compensatory programs are found to be less successful at helping bilingual children reach high academic and literacy levels than programs that are oriented as enrichment, which we will term “empowering bilingual programs.” Such programs view children with developing bilingual skills as highly capable due to their ability to learn and perform in two languages (Lindholm-Leary, 2000; Ramirez, 1992; Thomas & Collier, 2002).

Looking at the labels often used to describe the different programs schools offer, one would generally place “ESL” and most “transitional” bilingual programs in the category of compensatory bilingual education, as these two programs hold as their goal students’ acquisition of English. Whether they take advantage of students’ home language to help them achieve this goal or not, such programs do not value students’ home language enough to work to maintain it. Meanwhile, “maintenance,” “dual language,” or “two-way bilingual” programs fall into the category of empowering bilingual education, as their goals include the maintenance and development of bilingualism and biliteracy for all students. But program labels can be misleading; more important than any label is the way teachers and educational leaders within schools view students and their home cultures and languages, and the ways these professionals find to reach, teach, and empower students.

For a transitional bilingual teacher in a more or less subtractive school setting, learning about the differences between compensatory bilingual education and empowering bilingual education can be bewildering. It is often not clear what an individual teacher’s role is or should be in instigating necessary change or increasing awareness of educational inequities at her/his school. (avoid contractions)Moreover, the process of change in schools is challenging, and even a highly motivated and well-respected teacher will not find it easy to transform either her own or her colleagues’ thinking about bilingual children. Where does one teacher begin?

This paper begins to answer this question with two cases. Two of the authors are experienced bilingual educators, teaching kindergarten in traditional transitional bilingual programs. Both, in their own way, came to attempt to transform the orientation of their classrooms from compensatory to empowerment, and through their own classroom practices, to

introduce new ideas about pedagogy and equity to their schools. The paper reconfirms that teachers in their classrooms are the ultimate arbiters of change, while at the same time examining some of the challenges involved for teachers who choose to challenge traditional views of bilingual children and traditional bilingual teaching practices.

After a brief review of the literature on compensatory and empowering orientations toward language minority students and the literature on teacher agency in school reform, the authors will present their two cases and examine the complications each teacher faced (and continues to face) in the process of transformation.

“Enrichment” versus “Subtractive” bilingual education

While state law in Texas mandates bilingual education in any school district that has 20 or more students at a grade level with limited English proficiency from the same language group, the is generally interpreted as being intended for transitional programs. Coming out of federal policy, which placed bilingual education firmly under the jurisdiction of “compensatory education,” (Crawford, 2004), Texas bilingual education policy was intended to help children move quickly and more successfully into English instruction (Blanton, 2005). Yet the law also allows for, but does not fund, the development of more enrichment-oriented “dual language” programs (“Texas education code,” 1995).

Dual language classrooms engage students in two languages--English, and a “target” minority language that is the home language of at least a significant proportion (if not all) of the students in the program. Dual language programs expect all participants to achieve high levels of literacy and academic achievement in both languages. Teachers generally make an effort to present the two languages separately, and to offer students instruction in the “standard” academic registers of each language. There are “balanced” or 50:50 dual language programs, in which instruction occurs half in English and half in the minority or “target” language of the program, and “Minority language dominant” or 90:10 programs in which children begin kindergarten with 90% of their schooling in the “target” language. The percentage of English experienced then increases gradually to 50% by fourth or fifth grade. A special innovation of dual language classrooms known as dual immersion, or two-way immersion, involves English-speaking students learning a minority language alongside language minority students learning English. The English-speaking students, through their desire to learn the minority language, further demonstrate its value. There is a growing body of research that shows dual language education to be an excellent way to empower students to academic excellence (Christian, Lindholm, Montone, & Carranza, 1997; Cummins, 2000; Lindholm-Leary, 2000; Thomas & Collier, 2002). In particular, in her recent study of Latino immigrant and Mexican American students involved in a dual language program in San Antonio, Texas, Bertha Pérez found that for Latino students, an enriching bilingual experience that valued their home variety of Spanish and their rich literate traditions of code switching, along with teaching students to perform in standard varieties of both English and Spanish, allowed all students--both English and Spanish speakers--to excel by a variety of measures (Pérez, 2004).

The mere act of using Spanish in the classroom to teach bilingual children, however, is not enough to empower students. In fact, when Spanish is used selectively in the classroom only

to discipline while English is reserved for academic tasks, or when students' home varieties of Spanish are devalued by the teachers, bilingual education can be a disempowering experience for students (McCollum, 1999). Some argue that since its empowering beginnings in the Chicano Civil Rights movement in the 1960's, modern bilingual education in the U.S. has taken a general turn toward this disempowering, subordinating use of Spanish, giving students the impression that they are incapable or not worthy of instruction in English and therefore must still receive it in Spanish (Grinberg & Saavedra, 2000). In a transitional model of bilingual education, in which students must eventually graduate out of Spanish and into English instruction, it is difficult to escape this remedial orientation. Yet as the most politically feasible form of bilingual education in a strong anti-immigrant, English-only climate, transitional programs have been the preferred model for policymakers at both the national and state levels for over 30 years.

What is a Teacher to Do?

All of this information can be overwhelming to a teacher in a transitional bilingual classroom, trying each day to offer Spanish bilingual children a chance at academic success in an American schooling context. Many of the policy and programmatic decisions that affect the education of their students are out of teachers' hands. State laws and federal educational policy, including recent testing and assessment legislation and language policies, have increasing sway over classroom practices. Districts have become more and more explicit in their curricular dictates, even in some places going so far as to monitor teachers' progress in scripted curricular programs such as Open Court Reading. Teachers are evaluated based almost entirely on their students' performance on state standards-based tests, which in Texas is the TAKS (spell out this acronym), and district- and school-level policies will often dictate the language in which a student is tested.¹

Yet, even with so many policies operating to exert control over teachers in their classrooms, a growing body of research suggests that the teacher's role is pivotal in policy implementation (Coburn, 2001; Darling-Hammond, 1990; Stritikus & Garcia, 2000). Teachers, following their own philosophies of education, developed models of pedagogy, and assessments of children's abilities and needs, have a great deal more power than many of them realize over the success or failure of different policy initiatives. Bringing to bear their own beliefs and methods of data-collection as they spend countless hours with children and families, teachers make sense of often confusing and contradictory policies and ultimately decide for themselves how to make policies a reality in their classrooms for children. They also decide how to explain policies to parents. Therefore, it is vital to the success of any policy initiative intended to improve the education of students to ensure that teachers are afforded the opportunity to develop sophisticated understandings of policy goals and the teacher's roles in implementing them.

¹ While some teachers, at some grade levels, do have input into decisions about their students' language of testing, there is still the necessity to choose; bilingual students do not take the TAKS in both of their languages. This further reinforces the ultimate goal of transitional bilingual education: English success for all students.

In the following two examples, both teachers take their developing understandings of the purposes of bilingual education, their ongoing assessments of and connections with their students, their ongoing communications with parents, and the particular context of their schools, and begin to forge new structures. Change was and is not an easy task for either teacher. However, they looked to these various sources of information to guide their decision-making throughout the process. Perceiving change as an ongoing process rather than as an event, they developed strategies for continuing the implementation process despite obstacles. Because their decisions at every stage were based on the information they gathered from the behavior, performance, and reactions of their very young students, the authors contend that both teachers, in a very real sense, engaged in data-driven decision making.

Case #1: Marta

As a bilingual kindergarten teacher, I am passionate about providing my children with the highest quality education. I feel it is my job to provide them with the strongest base of education in Spanish, while exposing them to English and preparing them for the demands that will be placed on them as they move to higher grades. I feel that though I am their teacher and academics are my business, it is also important to incorporate an appreciation for and various examples of their home culture into their learning and classroom life.

Too often, I have seen students who want to escape their heritage once they have “graduated” from bilingual education. At such a young age, some of my children already view themselves with a deficit attitude. This attitude often also carries on to their view of their parents as well as their peers still “stuck” in bilingual classes. I remember with embarrassment how ashamed I was of my father when I was growing up. His first language was Spanish, he mixed it with English too often for my taste, and he spoke with a heavy accent. I do not want my students to feel the shame I felt. I want them to learn to be proud of who they are and where they came from. Children are not born with attitudes toward societal issues. I have seen in my school that these attitudes, whether they are positive or negative, are learned primarily from parents and teachers.

“My School”

When I was in college, I used to ride the city bus to class. The route would take us right in front of a very old little school. It is a typical little schoolhouse, red brick with red trim. I would daydream about someday working at that little school. It was so cute. It was centrally located, and I always lived in that area. How perfect that would be! It wasn’t until my second year of teaching that I would manage to be hired there.

During my first year of teaching, I remember hearing on the news that “my” cute little school was in danger of being shut down. Its enrollment was way down, and people in the neighborhood--mostly those whose children were attending other schools--were glad this school was going to be closed. After all, “it’s a Spanish school,” claimed several people interviewed for the news story.

This attitude has followed my school, despite its State of Texas Recognized label. I have met parents in the neighborhood whose children are supposed to attend the school but who have chosen to send their children to another school because it “has too many brown faces and too many Spanish speakers.” This statement was made to me, even after this person knew that I teach there.

The school is small, with two classes at each grade level, PK through 4, and with only one 5th grade class. We follow our district’s guidelines and have a transitional bilingual program. At PK through 4 we have one “bilingual” class full of Spanish-dominant children, and one “English” class comprised of English-speaking children and children who have already “transitioned” out of the Spanish bilingual program. In the fifth grade, when nearly all students have “transitioned” into English instruction, one ESL-certified teacher is in charge of the whole group. At every grade level, we are encouraged to “transition” children—to move them into English instruction—as quickly as possible. Children who have managed to make this transition are deemed successful; we are very excited about them. We do not very much celebrate students’ successes in Spanish. Furthermore, “bilingual” and “English” classes do not spend much time together. Except for their “Specials” class (P.E., Music, and Art), they are not in class together, and teachers do not collaborate much. Because of this separation, the two student groups do not play together on the playground, nor do they see one another as friends. It is almost like two separate schools. Overall, despite the often very good intentions of educators, there is a devaluing of Spanish and the cultures of our Spanish-speaking students at the school. To a great extent, we have unwittingly created a segregated society within our little school.

The school is finally changing

However, I believe these attitudes are finally changing. To begin with, there are many exciting things going on at our little school. There is a big push for technology use, several different university student groups work with our children and participate in school-wide activities, and parental involvement has increased by at least twenty percent. We have developed a relationship with IBM to secure volunteers to tutor, mentor, and teach computer classes. Our children, particularly our bilingual children, are experiencing things they are not “supposed” to have any experience with: Outdoor School (a three-day educational camping trip), the symphony, art museums, and much more. We have been able to ease concerns of parents in the neighborhood enough that they are willing to send their children to the school, rather than requesting transfers to nearby schools with larger Anglo populations. However, many people still see us as that “Spanish” school that only has bilingual classes. This attitude infiltrates the school and affects the attitudes and understandings of my students and their parents. It seems to me that we still have some changing to do.

I have spent a great deal of time during the past six months energized and excited about what we are learning in my classes at UT, where I am pursuing a Master’s Degree in Bilingual Education. I have always been passionate about my students and their learning; however, I only recently realized that I did not have a bilingual philosophy. When I first began teaching, being a bilingual teacher simply meant that I had enough Spanish, had taken enough courses, and had passed the necessary tests to be certified a Bilingual teacher. I always fought for what I felt was best for my children, but I was merely going by what my heart was telling me. During the past

semester of study, I have been realizing that I needed to be better prepared with research and theory. I am convinced it is essential for all of us to understand why we do what we do. Unfortunately, I too often feel the need to defend myself and my classroom.

As I have been defining and refining my own bilingual philosophy, I am realizing that my ultimate goal for children at the kindergarten level is for them to work, learn, and play together without seeing a distinction between the kids from the “English” class and the kids from the “Spanish” class. With this in mind, I approached the “English” kindergarten teacher about working together more. We have been taking the risk together. The kindergarten bilingual and monolingual English classes have begun to interact (this interaction is never really described? The nature of the interaction would be important, I think) more on a daily basis and start learning alongside each other. Even the teachers are learning things together, thereby modeling for the children. This has contributed to a feeling of togetherness among the two classrooms. The children in the monolingual English class no longer use the terms “That Spanish boy or girl” or “That brown kid” to refer to one another. They use their classmates’ names! For the first time, the children in both classes seek each other out during recess. I can see a difference now when my children freely talk to the parents of children in my teaming partner’s class, and when in turn the parents of monolingual English speakers acknowledge my children.

The Parents

The racism and bias against bilingual children I see at my school makes me very sad. It also makes me wonder what the parents, both English and Spanish speaking, think is going on in our bilingual classrooms. Do they know the objective of bilingual education?

Spanish-speaking parents have concerns about our program. I have had parents approach me because they do not want their child placed in the bilingual class; they fear their children will be behind academically and excluded socially. Where do these ideas come from? Are other parents conveying this attitude? Are other children making fun of their kids? As difficult as it is to do, I must ask myself if the parents’ concerns are justified, based on our bilingual program as a whole. On the other hand, I have had parents approach me, upset that their child is being transitioned into the monolingual English class. They do not want their child to lose their Spanish. Do these parents think that our bilingual program is a language-maintenance class? Do they want it to be a language maintenance class? Parents from my school want a better future and more opportunities for their children. At the same time, many of them have expressed a desire for their children to maintain their heritage culture. How is that different from what any other parents want for their children?

Too often, I have heard parents of monolingual English children say that they do not want their children playing with the “Spanish” kids or even learning alongside them; they see the bilingual children in a deficit framework--as lacking English--rather than an enriching framework that offers a rich linguistic and cultural heritage. This negative, subtractive attitude often gets passed on to the children and can be harmful out on the playground, in the classroom, and in the lunchroom. I would like to think that the reason for these attitudes is mere ignorance. However, I suspect that there is more to it than that. At least in some instances, I can trace

parents' racist attitudes about bilingual children back to my own colleagues: teachers can be among the worst offenders.

The Teachers

I have been trying to "spread the word" about what we can do to ensure all of our children's success by sharing articles and ideas with my colleagues and bragging about what is going on in the Kindergarten classes. Some teachers wondered where my excitement came from when I announced that my children and the other Kindergarten teacher's children were actually seeking each other out and playing together. Overcome by emotion, I blurted out, "They used to call each other 'that brown girl' or 'that Spanish kid!' Do you know how that made me feel?" I seized the opportunity to make a public statement that I would no longer tolerate this behavior in my classroom, or any other classroom. Ours is a small school; all of us feel a strong sense of responsibility toward each other's students. So the fact that I was no longer going to allow our bilingual children to feel less than adequate, or not on par with kids in the "English classes," now meant that all the teachers were going to have to work with me and learn with me, or be counterproductive to what is best for our children.

I am a strong believer in the idea of reciprocity. I feel that we as teachers have an incredible influence over what our students, as well as their parents, feel and think. What we say and do is noticed by all; we sometimes begin a cycle that resonates throughout our entire school culture. Parents are beginning to notice what we are doing in kindergarten, and this is beginning to break down barriers and build community. I have tried as well to share with my colleagues and to help them see what can be done and impart to them my vision for our school. However, my colleagues have not been as excited as I had hoped. While they are at least happy for me, they do not seem to understand the importance of integrating our children after Kindergarten. I feel that attitude is part of what keeps our classes--English and Spanish--so deeply divided. With half our students bilingual, we need to make an effort to create more of an understanding of our bilingual program among all our teachers. If teachers better understood the power of learning in two languages together, perhaps support for bilingual education and tolerance of the children in bilingual classes would increase.

Case #2: Lupe

I remember the exact moment I realized I understood the English language. I was barely six years old, and a recent immigrant from Mexico. The first grade teacher in my English-only classroom in San Antonio, Texas, was angry with the whole class and said, "You should be glad you have someone to teach you. Your people are lazy and stupid." I learned to be quiet, to try harder and begin to accept that I would never be successful.

Recently in my classroom, a five-year-old English-speaking African American girl nonchalantly translated my Spanish instructions into English for one of her classmates. With surprise and joy in her face, she turned to me with a huge smile and exclaimed, "I can understand you!"

For me, this contrast is why I am teaching in a bilingual classroom.

My school district like many others works with the TBE (Transitional Bilingual Education) model. The majority of the bilingual teachers I know define bilingual classes as places for monolingual Spanish speaking students to learn English; thus, they run transitional classrooms. I have always believed that bilingual education means all students, both English and Spanish speakers, learning two languages together. I have come to make this belief a reality in my own classroom through a gradual process, on a long road of experiences with my students during my eight years of teaching kindergarten, even though my colleagues have continually warned me I was misguided. Although I did not know it as I was developing it, my classroom much more closely resembles a dual language model than a transitional model.

In my kindergarten classroom, some of my goals are to promote challenging academic achievement, English and Spanish language development, and cross-cultural understanding for all the students, English speakers and Spanish speakers alike. English- and Spanish-language learning take place primarily through the content, in particular a literature based, hands-on science curriculum. Academic subjects are taught to all students through both English and Spanish. As we work in my classroom to perform academic tasks, all of my students' bilingual language abilities are developed along with their knowledge of content. The students demonstrate an interest in learning each other's language and make tremendous progress toward that goal by the end of their kinder year. In retrospect, it appears this model was a natural course I took in trying to fulfill my students' needs. Research supports my choice to have a dual-language classroom.

How did I come to be essentially teaching a dual-language classroom in this entirely transitional context? I did not begin teaching with thoughts of any particular kind of bilingual program. My plan was, and still is, to help students develop academic skills while building confidence and respect for each other's culture and language. Some of the reasons were circumstantial. At my school, we have three kindergarten bilingual classes; two classes whose teachers team-teach, separating their students by language group for academic instruction; and my class, which is self-contained--no partner to team with. So from the start, I was on my own to manage a classroom with two language groups. In what follows, I will tell the story of my journey. I hope it may inspire other teachers to take the risk to create for themselves and their students a classroom to be proud of, regardless of their context or situation.

The Beginning of My Journey

Before I became a teacher, I volunteered in a kindergarten classroom at my children's school, where I observed the students' excitement over hands-on science. They demonstrated an interest in reading about the topics they studied, while the science curriculum tapped into their natural curiosity. I knew I wanted to do what this teacher was doing. I was lucky enough to be hired at that very school and assigned that very teacher as my mentor. While she had over 20 years of experience and was one of the authors of the science curriculum I wanted to use, her classroom was English-only. This did not concern me, but some of my bilingual co-workers believed it would pose a problem.

I shared with the bilingual teachers on my team my idea of using the integrated science curriculum I had learned in my own class. They were not happy that I was considering this and offered the following objections: since many of the children had never traveled outside their community, the topics would be foreign and difficult for them to comprehend; teaching in English and Spanish in the classroom would confuse students; hearing both languages would promote code switching; it would impede proper language development; it would persuade Spanish-speaking students to stop using their native language. Their opinion was that a science curriculum could not provide opportunities for literacy skills development, particularly for bilingual students. These beliefs were echoed by many of the bilingual teachers on campus. Yet, how could I avoid exposing my bilingual children to English, when half of their classmates would require English instruction?

As a first-year teacher, wanting to do what is best for my students, I decided to follow the recommendation of my peers and not use the integrated science curriculum with my bilingual students. I taught my two language groups separately: the English group got the exciting, science-based integrated curriculum, while the Spanish group got the “accepted” bilingual curriculum. My teaching was forced and did not feel comfortable at all. I was using mostly English in the class and translating quite often. Quite a bit of instructional time was wasted. The students’ faces reflected their lack of understanding and loss of interest. . My instincts told me I needed to go in a different direction. Incredibly, it would be my students who would push me to change

My Road to Discovery

Here were my data points: although my Spanish-speaking group was doing well, they appeared bored. They were distracted and would not focus on their work because they were too interested to see me working with the English-speaking group. I began to encounter some behavior problems; furthermore, there was a lack of cohesiveness between my students, which I realize now I was encouraging with my classroom setup. The curriculum I used for the Spanish speakers was neither challenging nor enriching. My bilingual group was receiving language instruction for L2 development in isolation. I was segregating my groups from each other in class. They referred to each other as the Spanish kids and the English kids. The native English speakers were not interested in listening to anything in Spanish, let alone learn it. I had a student who would cover his ears every time I began to speak Spanish. The group would constantly interrupt and ask what I was saying. Children with some limited skills in English would try to communicate only in English. The monolingual Spanish speakers seemed to have a prolonged “silent period.” The children would rarely play together during recess, if at all, while interaction was minimal during free choice centers. In a sense, all these data points converged to inform me that change was needed. Finally one day, one of my students refused to work on his assignment and asked, “¿ Por qué no podemos hacer lo que ellos estan haciendo? Yo quiero hacer eso.” (*Why can’t we do what they are doing? I want to do that!*) The rest of the group echoed his sentiment.

I decided to follow my instincts and take the risk. At the last minute, I took the math lesson and used it as a whole group activity. It was a math lesson integrated into the science topic of the week. It was easier than I had expected. During the lesson, I saw students help each other.

When students did not understand what step to take next, they did not think twice about turning to their classmates to ask questions. I was experiencing a most remarkable event. If one student did not know what the other was saying, someone else would jump in and try to interpret or explain it. The students were engaged and actively participating in the math activity; amazingly, language was not a barrier. I worked backward, since I did not want to interrupt the interaction; I took the bilingual group after the lesson and reviewed it. I checked for understanding as they talked me through the steps of the math activity on which they had just worked. I guided them through the lesson while encouraging them to use the correct math vocabulary. Students participated without fear and demonstrated risk-taking abilities. What I did not realize was that I was experiencing the magic of dual immersion: integrating students, learning language through content and using preview/review to support language learning. It was a special thing to observe.

After that day, I was sure of the kind of instruction I wanted for my students. I realized I could provide it and believed the science curriculum could help me do it well. I learn so much from my students, but probably learned more that first year than any other year. This group of five-year-olds pushed me to challenge the norm, as well as guided me toward the class I always wanted.

I slowly began to translate lessons and information, beginning with the little reading books that accompanied each science unit. My bilingual students were ecstatic, but it was not enough. The students demanded more. They kept saying they wanted to be scientists too. I had a student who was truly bilingual, and the other students discovered that if they asked him about the lessons, he could tell them some of what was going on. My Spanish-speaking students demanded equality and equity. They may not have known that is what they were asking, but that is exactly what was happening. My students understood I was working to provide them with something better, and they wanted to make sure it happened. After I completed the teacher-directed portion of my lessons, my bilingual students would question me. They asked if I were going to teach them everything “just like in English.” The children demonstrated a sense of empowerment; they were actively participating in their learning; they were verbal about how and what they wanted to learn.

Things began to really turn around after I made another major decision. I had to find a way to stop my students from thinking of each other in terms of “them” and “us.” I wanted to help them stop seeing language as a divider. On one occasion, as I announced I needed my group for language arts, I overheard one student saying to another student, “**No, not you. She’s calling the Mexican kids.**” I decided to share with them some of my own background. It was a shock to them when I explained that my first language is Spanish. I explained how my family immigrated to the United States when I was only six years old, and settled in Texas. A couple of students shared their families’ backgrounds too. I also shared my expectations with them with regard to the two languages in our classroom and why all languages should be respected. I think we underestimate small children; my students rose to the occasion. I asked the class to help me decide on group names to make it easier on everyone when I called them for group work. We talked about why it was important that sometimes I work with each group separately. I asked the class to come up with some rules for everyone to follow. Although I had a list prepared, I did not need to use it; they came up with a more thorough set of rules than mine. Among their rules: it is ok to answer in English or Spanish; you cannot make fun of or laugh at a student who does not

say something correctly or who mispronounces words; you cannot make fun of Spanish. They became interested in each other.

The next change was more revolutionary than I knew. I decided to take turns alternating English and Spanish for the morning activities on a daily basis, which included calendar, some math, and literacy activities. I informed the class of the change I was considering. Most of the class appeared excited to try something new, but there were a few who were hesitant and afraid they would not understand what was happening. My students agreed to try it “for a while,” and if it did not work we would try something else. The first week was somewhat difficult because no one knew what to expect. The language arts lessons were conducted in two separate groups; the lesson would be conducted in English, then later in Spanish, or vice versa, alternating the group I worked with first on a daily basis so that the students would not feel one was above the other. The students kept such good track of this that there was no chance I would forget. They began to pay attention to each other’s lessons and the activities. They were filled with excitement and anticipation.

Needless to say, my class was constantly changing. I changed my classroom setup five times or more that first year. Our schedule changed at least three times, and the lessons were absolutely different. My students became so used to changes that if there were none in a long period of time, they looked for things we could change. Before every change, however, I would communicate my intentions to the students and give their input consideration. I was very happy to find that with every change my teaching was a better “fit.” The more comfortable I became, the more receptive they became.

The next step was to adjust students’ homework. I sent a letter to the bilingual parents describing the topics we would be studying, and every Thursday’s homework was connected to the unit of the week. It was a way for students to share what they were learning and spend time with their parents. Parents, both English- and Spanish-speaking, began to stop by to let me know how happy they were with their child’s excitement about school and their studies. A couple of parents mentioned that their usually quiet children were constantly talking about what they were studying. They were exploring at home, they wanted to go to the library, and they began to watch educational channels. The children shared at home what they learned at school. They were also using the vocabulary and scientific terms they were learning. One mom came to speak to me because she was so proud of her son. Apparently he had been wanting a specific toy, but when his parents took him to buy it, he found two books that covered topics we had studied and he chose the books over the toy. He wanted to take the books to school and share them with his classmates.

Even as an inexperienced teacher, I knew there was something important happening here, yet bilingual colleagues continued to disapprove. Despite their concern, however, being next door to an all-English class was a good experience for the students as well as the teachers. I approached my neighbor, and mentor, with ideas and she asked questions as she tried to understand what my students needed. This stretched me to look at things from a different perspective. Our two classes bonded during recess. The interaction of the classes facilitated language development between native and non-native speakers.

I noticed that during whole-group activities more and more of my students were participating regardless of the language used for instruction. While I haven't formally assessed my English speakers in Spanish, I have noted bilingual development. Students are more open to participating in both languages and seem to trust that they are safe to try. My students create an environment of excited second language learners. I believe the transformation of my class is the result of my willingness to listen to the students.

A Shining Star

Here is one of many examples of why I am proud to be teaching where and how I am. Last year I had a student who entered my classroom on the first day of school, furious to be in a bilingual classroom, hostile to his Spanish-speaking classmates, and uninterested in his own bilingual heritage. Although his parents had wanted him to learn bilingually, and his own father was from Mexico and spoke limited English, the child's attitude was so negative that his mother tried to move him out of my class during the first week. The principal persuaded her to give it three weeks. At the end of the three weeks, however, his mom informed me that her son had changed his mind: he was adamant that she *not* remove him from my class. She wanted me to know that she believed his change of heart was because of his experience in the classroom. He enjoyed the class and he liked our science units. He was having long conversations with his dad in Spanish. He was looking forward to their Christmas trip to Mexico to visit the family. He kept telling his parents he was going to surprise them with what he had learned and speak Spanish.

Conclusion...But Not the End

I respect my peers as capable professionals with many years of experience. Still, my idea of what should happen in a bilingual classroom differs greatly from theirs. It has been difficult to stand alone for what I believe against their opposition. There have been many days of frustration and self-doubt. I was a new, inexperienced teacher receiving constant criticism. I was regularly told I was doing it wrong and damaging the students. Yet how could what I was doing be wrong when everyone, the students, the parents and the teacher were excited with what was happening?

I recently shared this paper with a bilingual colleague at my school. She confided that she cried as she realized that she too was segregating the students and that she was presenting English as more important. The very next day, she changed her centers so they were bilingual. She was surprised by all the students' excitement. She has begun to ask students for ideas and suggestions for the classroom. Change does not come easily; maybe it will have to happen one teacher at a time. But at my school anyway, the door has been opened and communication has begun.

Discussion: Child-Centered Data

Both teachers, independently, have been developing a goal of dual language and an orientation of enrichment bilingual education, in our kindergarten classrooms. Both school contexts, including peers, supervising principals, and members of the larger community, challenged the new ideas coming out of these classrooms. At the same time, both teachers won

the support of a growing group of parents and we were surprised at the unexpected support that came from some parents and teachers who liked what they saw. Ultimately, both teachers agree that when we are with their children, we know we are right. We have learned so much from our students simply by watching and listening to them. Having spent eight or nine years learning to know our communities and becoming become aware of the spaces available within those communities for change, we are both very thoughtful and serious about our process of change in the classroom and at our schools. We both care deeply about our schools.

While we concede that kindergarten is often afforded more spaces than older grades in the state assessment and accountability system, we are concerned at the direction the state is taking toward ever-more vigilant test-based (i.e., paper-based) standardized accountability for very young children. We agree that we as educators must be accountable to our students, their parents, and our communities to do our very best to provide all students with equitable learning environments, opportunities to excel in all ways, and the best instructional practices. However, with very young children, data come in different forms, and therefore the process of “data-driven decision-making” will look different.

We contend that as kindergarten teachers working to build enrichment bilingual education in our classrooms and changing our schools’ orientations towards bilingual children, we *are* engaged in data-driven decision-making. Understanding that data-driven decision-making generally refers to making decisions about program needs based on test results, we wish to define “data” more broadly, as what might be termed “child-centered data.” In our kindergarten classrooms, we look at students’ motivation and attention, their interactions and participation, their observed comprehension of our content instruction, and the product of their written work. We observe. Seeing our students motivated and engaged in the materials we offer gives us invaluable data—far more helpful than the results of pen-pencil tests. We accept their product in either language, encourage them to experiment and explore in both languages, and celebrate any successes we observe.

How do we reconcile the fact that the state is encouraging us to use “test” data to drive our decision-making? We use what we have. Our students, at five years of age, often teach us more by what they do in our classrooms than by how they perform on assessments, even one-on-one assessments such as Tejas Lee. We use these assessments of course, but as professional educators, we will continue to use all the tools available to us to help us understand and monitor our students’ progress and our teaching.

Conclusion

Our advice, therefore, to teachers interested in developing a new orientation in their classrooms, in instigating change in their schools, and/or in opening spaces for exciting new bilingual programs, is not going to surprise anyone. First of all, take the risk. There is no way to know what is possible until you try. You will likely be surprised at how much welcome you receive! Second, be receptive to your children’s needs, to your community’s response, to the parents, and to your colleagues’ concerns. Third, and seemingly contradictorily, stand firm in your own convictions. Develop a clear but flexible philosophy that helps you understand what you are doing and why, because you will be asked to defend it. Be sure you are able to. Finally,

take things step by step. Real change takes real time. Expect to progress child by child, group by group, teacher by teacher. Expect to feel at times as though you are taking one step forward for every two steps backwards. Expect to engage in many conversations about what you are doing, and expect to be challenged more often than you are commended. You will be making an investment in the future of your students. By taking on the challenge of changing how your school views and teaches bilingual children, you will be investing in a better future for all. It is worth the investment, and the returns will be long-term.

References

- Blanton, C. K. (2005). *The strange career of bilingual education in Texas*. College Station, TX: Texas A&M University Press.
- Christian, D., Lindholm, K., Montone, C., & Carranza, I. (1997). *Profiles in two-way immersion education*. McHenry, IL: Delta Systems, Co. Inc.
- Coburn, C. (2001). Collective sensemaking about reading: How teachers mediate reading policy in their professional communities. *Educational Evaluation and Policy Analysis*, 23(2), 145-170.
- Crawford, J. (2004). *Educating English learners: Language diversity in the classroom* (5 ed.). Los Angeles: Bilingual Education Services.
- Cummins, J. (2000). *Language, power and pedagogy: Bilingual children in the crossfire*. Toronto: Multilingual Matters.
- Darling-Hammond, L. (1990). Instructional policy into practice: "The power of the bottom over the top". *Educational Evaluation and Policy Analysis*, 12(3), 339-347.
- Fillmore, L. W. (1991). When learning a second language means losing the first. *Early Childhood Research Quarterly*, 6, 323-346.
- Grinberg, J., & Saavedra, E. R. (2000). The constitution of bilingual/ESL education as a disciplinary practice: Genealogical explorations. *Review of Educational Research*, 70(4), 419-441.
- Lindholm-Leary, K. (2000). *Dual language education*. Philadelphia: Multilingual Matters.
- McCollum, P. (1999). Learning to value English: Cultural capital in a two-way bilingual program. *Bilingual Research Journal*, 23(2 & 3), 113-133.
- Pérez, B. (2004). *Becoming biliterate: A study of two-way bilingual immersion education*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Ramirez, D. (1992). Executive summary of the longitudinal study of structured English immersion strategy, early-exit and late-exit transitional bilingual education programs for language minority children. *Bilingual Research Journal*, 16, 1-62.
- Stritikus, T., & Garcia, E. (2000). *Education of limited English proficient students in California schools: An assessment of the influence of proposition 227 on selected teachers and classrooms*. Paper presented at the American Education Research Association annual meeting, San Francisco, CA.
- Texas education code, 29.B 051-063 (1995).
- Thomas, W. P., & Collier, V. (2002). National study of school effectiveness for language minority students' long-term academic achievement: Final report. Retrieved January 30, 2006, from http://www.crede.ucsc.edu/research/llaa/1.1_final.html

Utilización de los Mapas Conceptuales como Herramienta Meta-cognitiva Bilingüe

Jaime B. Curts
The University of Texas Pan American

RESUMEN

El presente artículo tiene como objetivo proponer el uso de mapas conceptuales durante el proceso enseñanza-aprendizaje bilingüe como estrategia para investigar el proceso de adquisición del vocablo del segundo idioma que se pretende aprender.

Contact Information:

Dr. Jaime B. Curts
The University of Texas Pan American
jbcurts@utpa.edu

Utilización de los Mapas Conceptuales como Herramienta Meta-cognitiva Bilingüe

En un ensayo publicado en 1993, Cochran-Smith advertía que “para poder enseñar eficazmente en una sociedad que es cada vez más diversa en su cultura y lenguaje, los docentes necesitan oportunidades para examinar mucho de lo que casi nunca se examina en la relación entre el lenguaje, la cultura, y el poder en las escuelas y el proceso educativo”. Estas oportunidades se gestan cuando el alumno bilingüe también participa como el centro activo del proceso de enseñanza-aprendizaje y adquiere –mediante la guía de docentes bilingües calificados- las habilidades para la generación de nuevos conocimientos utilizando tanto su lengua primaria como su cultura.

El poder atrás de ello abre nuevas oportunidades para explorar cómo los individuos inmersos en educación bilingüe adquieren y construyen conocimiento cuando se utilizan herramientas metacognitivas. El objetivo de este manuscrito consiste en promover el uso de mapas conceptuales en el aula bilingüe. El fin es desarrollar actividades y rutinas que permitan investigar el modo en el que los estudiantes bilingües visualizan la articulación de conceptos específicos. Así mismo, se promueve la idea de inquirir sobre la estructura de proposiciones que el alumno bilingüe utiliza para articular conceptos y cómo se desarrollan estrategias de profundización para el fomento y desarrollo de nuevos conocimientos.

El aprendizaje significativo y sus implicaciones en la educación bilingüe

El origen y uso de los mapas conceptuales está unido a la teoría del aprendizaje significativo propuesta por Ausubel (1963, 1968), que plantea que el aprendizaje se caracteriza por la interacción entre los nuevos conocimientos y aquellos específicamente relevantes ya existentes en la estructura cognitiva del sujeto que aprende. Comienza con la observación y reconocimiento de eventos u objetos a través de conceptos entrelazados que el individuo domina. Adquiere significado cuando de manera deliberada, el individuo conecta nueva información (concepto, idea, proposición) con aspectos relevantes de su estructura cognitiva preexistente y los asimila como un esquema mental en la memoria de largo plazo.

De acuerdo a Ausubel la estructura cognitiva se puede describir como un conjunto de conceptos, organizado de forma jerárquica, que representa el conocimiento y las experiencias acumuladas del individuo (Novak y Gowin, 1984, 1988). Sin lugar a duda la lengua primaria del sujeto juega un papel importante en el aprendizaje significativo y en particular, cuando se requiere reconocer eventos y objetos a través de conceptos previamente adquiridos.

Es un hecho que el alumno, al contacto de las exigencias de adaptación al medio bilingüe, utilizará con mayor frecuencia las conductas que le han demostrado ser eficaces en su primer idioma: repeticiones, generalizaciones y/o descomposición en elementos más sencillos para así realizar una mejor adaptación a cada caso particular. Por ello, en el aula bilingüe se

deben estar conciente de los factores emocionales y físicos que afectan el aprendizaje significativo de un segundo idioma; resaltando los siguientes:

1. Asegurar un ambiente seguro de aprendizaje para sus estudiantes.
2. Utilizar la metodología de aprendizaje de colaboración con frecuencia
3. Ofrecer contenido temáticos significativos con opciones de evaluación y aprendizaje
4. Proveer retroalimentación inmediata para todas las actividades.

Por ello se propone que enfatizar en el aula bilingüe el modelo de aprendizaje como un proceso social (constructivista), en donde las percepciones individuales de la realidad ocurren simultáneamente y se proveen la construcción de bloques del conocimiento lingüístico. En particular, este artículo propone que el alumno bilingüe podrá integrar nuevos conocimientos de manera significativa si:

1. Se asegura que la construcción de aprendizaje significativo sea primero utilizando su lengua primaria (materna).
2. Asimila lo que se pretende aprender a un esquema preexistente utilizando su lengua primaria. Lo anterior se lleva a cabo ya sea como asimilación automática y, a veces, inconsciente (fenómenos familiares y/o cotidianos) o bien como asimilación condicionada (adquisiciones menos familiares o nuevas).
3. Elabora esquemas nuevos ante situaciones totalmente extrañas (utilizando la nueva lengua).
4. Realiza el aprendizaje significativo por sí mismo bajo intensa actividad de carácter constructivista.
5. En el aula bilingüe se utilizan materiales de naturaleza general que proporcionen un marco de referencia (lo que el alumno ya conoce en su lengua materna) y el tema a presentar sea potencialmente significativo (relativo a la cultura del alumno).

Dado lo anterior ¿qué herramienta se tiene disponible para que el alumno bilingüe integre conocimientos de manera significativa? Para dar respuesta, aquí se presenta cómo estructurar un mapa conceptual jerárquico (Novak, 1988), su diferencia con los denominados mapas de conocimiento bilingües –*BiK Maps*- (por las siglas en inglés *Bilingual Knowledge Maps*), finalizando con una propuesta de cómo utilizar dichas herramientas para el aprendizaje bilingüe.

Estructura de un mapa conceptual

Un mapa conceptual es un diagrama que representa un conjunto de significados conceptuales incluidos en una estructura de proposiciones explícitas o implícitas. Su función es mostrar la relación lógica y significativa entre los conceptos en forma de proposiciones o frases simplificadas: dos o más conceptos ligados por palabras para formar una unidad semántica y en la que se refleja la estructura del conocimiento que posee un novato u experto en algún campo del conocimiento (Novak y Wandersee, 1990). Una proposición consta de dos o más términos conceptuales unidos por palabras para formar una unidad semántica. En su forma más simple, un

mapa conceptual constaría tan sólo de dos conceptos unidos por una palabra de enlace para formar una proposición; por ejemplo – pájaro—tiene—dos alas -, representaría un mapa conceptual simple que forma una proposición válida referida a los conceptos -pájaro- y -alas-.

El Cuadro 1 describe los elementos básicos de un mapa conceptual: los conceptos, las palabras enlace y las proposiciones. Los conceptos son también llamados nodos que hace referencia a cualquier cosa que puede provocarse o que existe. Según Novak (1988), los conceptos son las imágenes mentales que provocan en los seres humanos las palabras o signos con que expresamos las regularidades. Las palabras enlace unen los conceptos y señalan los tipos de relación existente entre ambos. La proposición es la unidad semántica que une los conceptos.

Cuadro 1

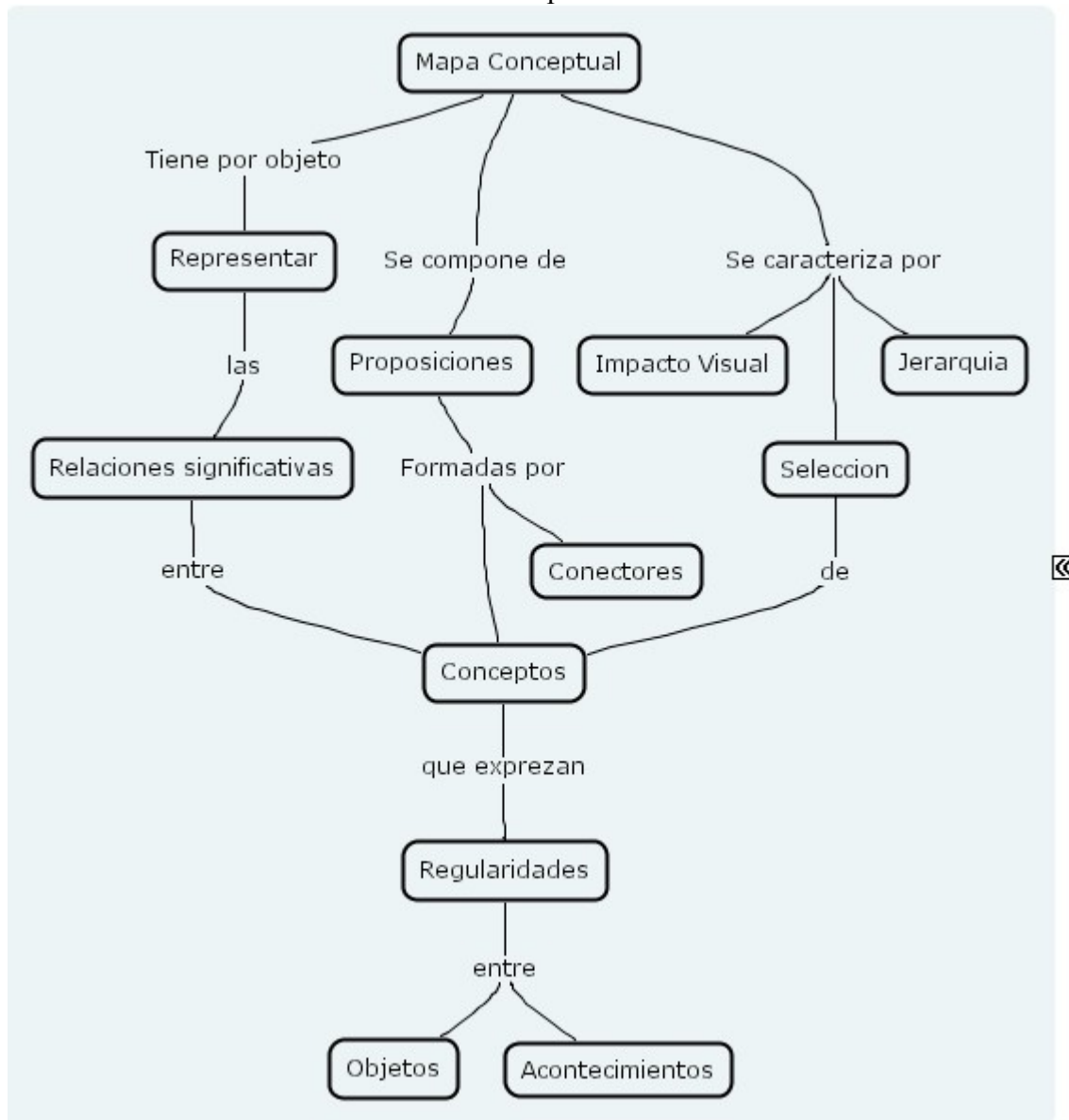
Elementos fundamentales que componen un mapa conceptual

<u>Elemento</u>	<u>Descripción</u>
Concepto	Son las regularidades que se perciben en los hechos u objetos y que se designan mediante una etiqueta o expresión.
Proposición	Compuesta por dos o más conceptos que se encuentran unidos entre sí por palabras de enlace con el objeto de formar una unidad de significado.
Conectores	Palabras-enlace que sirven para unir los conceptos y definir la naturaleza de la relación que se establece entre ellos. Estas palabras pueden ser formas verbales, preposiciones o pequeña frases que aclaran el sentido de la relación entre dos o más conceptos

La Figura 1 ilustra las tres características que distinguen a un mapa conceptual son:

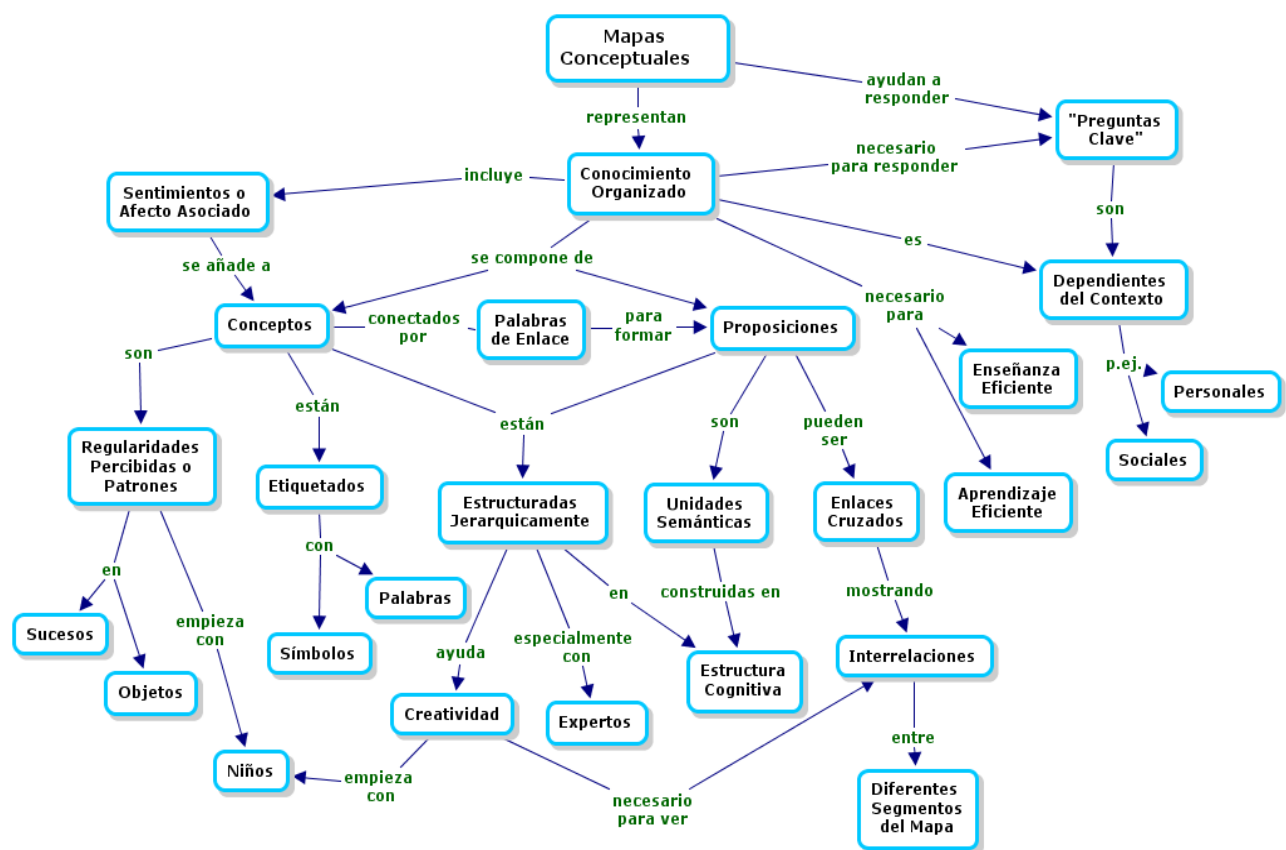
1. Estructura jerárquica: Los conceptos están dispuestos por orden de importancia o de "inclusividad". Solo aparece una vez un mismo concepto. Las líneas de enlace pueden terminar en una flecha para indicar el concepto derivado.
2. Selección: Son una síntesis o resumen que contienen lo más significativo de un tema. Se pueden elaborar sub-mapas, que vayan ampliando diferentes partes o sub-temas del tema principal
3. Impacto Visual: "Un buen mapa conceptual es conciso y muestra las relaciones entre las ideas principales de un modo simple y vistoso, aprovechando la notable capacidad humana para la representación visual."

Figura 1
Mapa conceptual de los elementos básicos que constituyen a un mapa conceptual



La Figura 2 ilustra un mapa conceptual “experto” sobre el significado completo que se tiene sobre “mapa conceptual”. Nótese el lenguaje explícito que se utiliza para mostrar la organización lineal, las relaciones de jerarquía así como las relaciones cruzadas entre grupos de conceptos y proposiciones. Cada red del mapa conceptual representa una proposición deliberadamente elaborada y se interpreta como “unidad de significado” para quien lo construye.

Figura 2
Mapa conceptual “experto” sobre el significado mismo de mapa conceptual



<http://cmap.ihmc.us/> Traducido al español

Utilización del mapa conceptual en el aula bilingüe

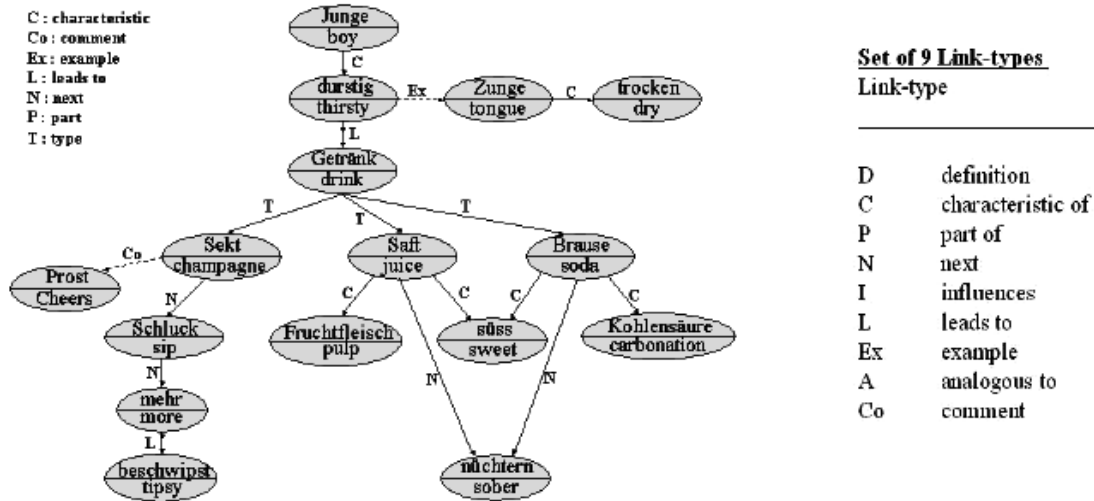
La elaboración de un mapa conceptual es un producto del aprendizaje de quien lo elabora y conlleva un proceso de reflexión donde el dominio del lenguaje juega una pieza fundamental.

Los procesos inherentes a su construcción serán resultado de la discusión, el debate, la apreciación, la comprensión de conceptos básicos –entre otros elementos- que el individuo selecciona en su idioma natal para ilustrar su conocimiento del tema

Esta última sección propone que se experimente con mapas conceptuales en la enseñanza bilingües como estrategia para investigar el proceso de adquisición del vocablo del segundo idioma que se pretende aprender. Nadie se sorprende ver la frustración y fracaso cuando se proporcionan a los alumnos -tanto en aulas monolingües como bilingües- listas para memorizar palabras y entender su significado.

Es indispensable traspasar los métodos tradicionales y emplear procedimientos y técnicas pedagógicas que permitan comprobar, no únicamente la memorización del educando, sino también la capacidad de analizar, sintetizar, deducir, generalizar, evaluar, aplicar y construir conocimientos. Entre los primeros estudios se encuentran los relacionados a la hipótesis de codificación-doble de Paivio y Lambert (1981) que sugiere que las palabras y su significado se aprenden también en función de cómo el vocablo es presentado de manera inicial. De acuerdo a estos autores y otros (Altarriba y Mathis, 1997; Fox, 1996) el aprendizaje de un segundo idioma es capaz de almacenar y asociar imágenes visuales en conjunción con el vocablo que pretende estudiar y elaborar asociaciones léxicas entre las mismas. Estos estudios condujeron a otros investigadores a utilizar los denominados mapas de conocimiento bilingües –BiK maps- (por las siglas en inglés *Bilingual Knowledge Maps*) y estudiar la representación visual y el contexto semántico durante el proceso de aprendizaje de vocabulario (Bahr y Danserau, 2001, 2004). Dichos mapas son representaciones visuales multidimensionales de conocimiento y poseen propiedades similares a las de un mapa conceptual: nodos que encapsulan texto o palabras-pares y conectores (en forma de flechas) para unir los nodos. Los autores de los BiK maps sugieren utilizar la sintaxis nodo-conecto y aplicarlo a textos de lectura, de tal suerte que el lector identifica las ideas unitarias en los nodos y éstos se conectan entre sí a través de los conectores. Argumentan que el mapa provee el contexto semántico sin requerir conocimiento profundo de gramática o del vocabulario de la lengua extranjera. Agregan que las propiedades visuales y espaciales de este tipo de mapas pueden ayudar a percibir la organización del conocimiento. La diferencia con el mapa conceptual es que los tipos de conectores en estos mapas están ya previamente determinados y cada uno de ellos representa una relación semántica (Ver ejemplo Figura 3).

Figura 3
Ejemplo de un Bi-K map.



(Bahr & Danserau, 2004)

Los estudios de Bahr y Danserau reportan diferencias significativas de tipo estadístico cuando se contrastan listas de vocabulario entre grupos experimentales que usan este tipo de mapas y los grupos control. Estos mismos autores han sugerido que el estudiante-novato elabore los mapas bilingües como estrategia de estudio para adquirir el vocablo de la lengua extranjera de interés ya que su construcción conlleva los mismos mecanismos de elaboración cuando se contrastan con aquellos que llevan a cabo los expertos.

En un mapa conceptual bilingüe los conceptos están conectados por palabras enlace para formar proposiciones que representan las unidades semánticas y que en su conjunto forman la estructura cognitiva. Aquí resalta que el nodo-conector (preposición) no está previamente determinado y el alumno construye primero el mapa conceptual (conceptos y proposiciones) en su idioma natal. Posteriormente, se procura que el alumno utilice la segunda lengua para completar el mapa en ambos idiomas. Para generar un ambiente de seguridad, se instruye al alumno que solo anote los conceptos y proposiciones que domine en la segunda lengua. Al evaluar el mapa, no se penaliza si el uso del idioma es parcial.

La figura 4 es un mapa conceptual elaborado por un alumno bilingüe relativo al concepto planta. Al alumno se le pidió que elaborará el mapa escribiendo todo lo que supiera con respecto al tema tanto en inglés como en español. Se le instruyó que si alguna palabra la desconocía en algunos de los dos idiomas que lo señalara con el símbolo de interrogación (?). De un total de 15 conceptos, 13 los pudo escribir en ambos idiomas. Nótese que el alumno tiene algunos

problemas con algunas proposiciones (unidades semánticas). Lo anterior no le impidió mostrar su conocimiento del tema y en lo que requiere apoyo en el segundo idioma. En la experiencia de este autor, el mapa debe ser elaborado de manera individual por cada alumno y posteriormente formar grupos de aprendizaje de colaboración donde los alumnos intercambian ideas y conceptos. La interacción social en este punto es crucial para el aprendizaje del segundo idioma ya que los alumnos intercambian ideas acerca de la composición y la organización jerárquica del mapa y sus elementos. El aprendizaje se facilita a través del uso de esta estrategia meta-cognitiva que permite identificar, monitorear y regular el proceso de adquisición y transición de elementos bilingües.

La escasa literatura sobre el uso de mapas conceptuales bilingües conlleva a proponer que los docentes generen metodologías propias para su implementación siguiendo pautas científicas que permitan recolectar evidencia sobre su efectividad. En lo particular, el autor de este artículo se inclina por utilizar los textos de lectura asignados y entrenar a los estudiantes a elaborar mapas conceptuales sobre el tema de interés.

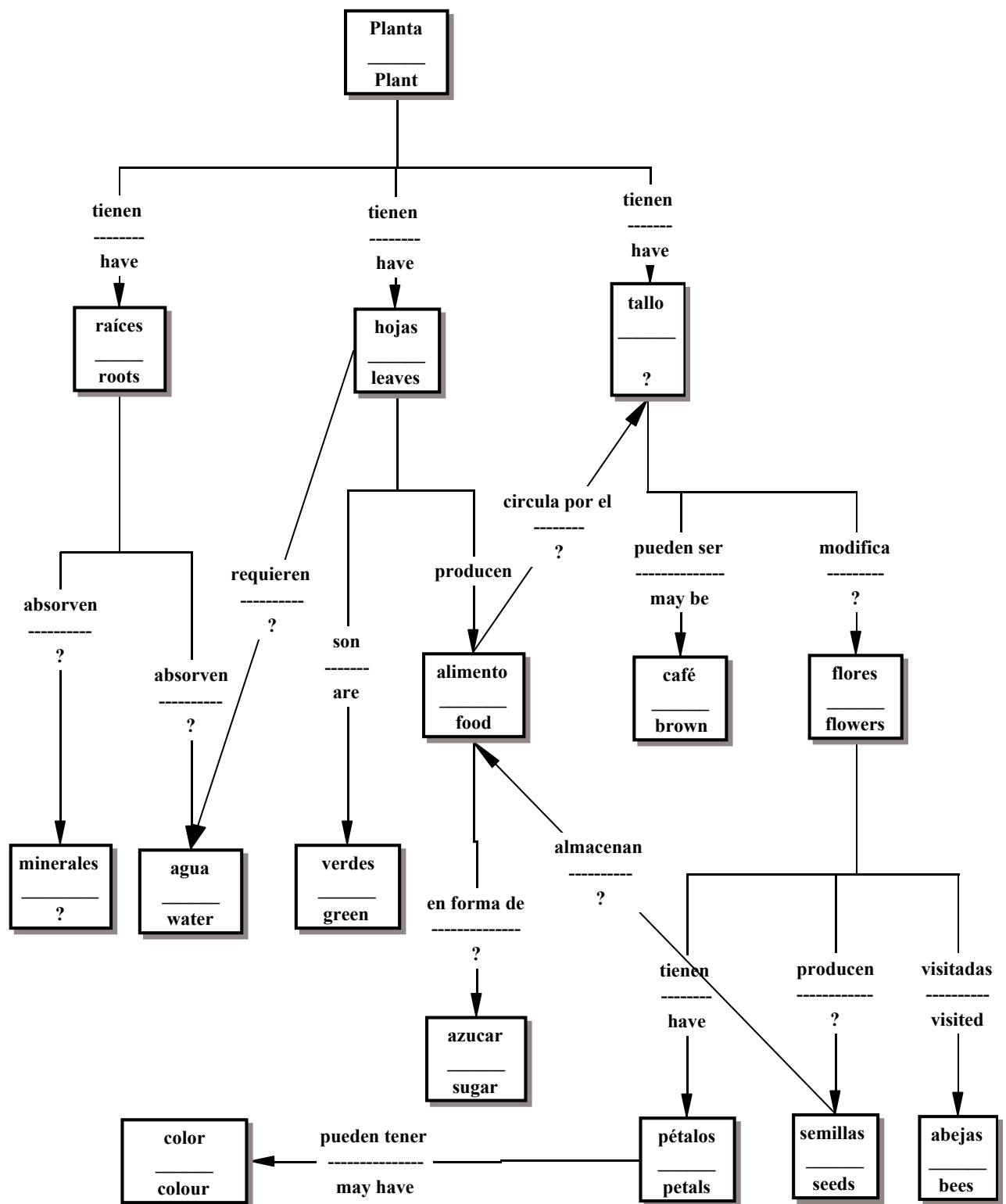


Figura 4

Mapa conceptual elaborado por un alumno bilingüe relativo al concepto planta. Al alumno se le pidió que elaborará el mapa escribiendo todo lo que supiera con respecto al tema tanto en inglés como en español. Se le instruyó que si alguna palabra la desconocía en algunos de los dos idiomas que lo señalara con el símbolo de interrogación (?). De un total de 15 conceptos, 13 los pudo escribir en ambos idiomas. Nótese que el alumno tiene algunos problemas con algunas proposiciones (unidades semánticas). Lo anterior no le impidió mostrar su conocimiento del tema y en lo que requiere apoyo en el segundo idioma.

Reflexión

Impulsar el uso de mapas conceptuales en la enseñanza bilingüe abre las puertas a explorar nuevos caminos del cómo se aprende de manera significativa en dicho ambiente. Es importante recordar que el aprendizaje inteligente implica la construcción de estructuras cognitivas o intelectuales que representan las relaciones entre conceptos y procesos necesarios para adquirir otros *a posteriori* (Novak, 1991). Su estructura cognitiva conlleva una organización mental del contenido de los conceptos dentro de un conjunto de términos correlacionados, al establecer jerarquías conceptuales que prescriben una secuencia descendente: partir de los conceptos más generales e inclusivos hasta llegar a los más específicos, pasando por los conceptos intermedios. Desde su aparición en la literatura (Novak y Gowin, 1984, 1988), los mapas conceptuales se han utilizado como un recurso didáctico para favorecer el aprendizaje significativo así como herramienta de evaluación para explorar la comprensión del estudiante en tópicos específicos.

Ahora es tiempo de estudiar los beneficios que proporciona al estudiante bilingüe la construcción de sus propios mapas, las reflexiones sobre las relaciones entre conceptos y su entendimiento sobre la materia que estén estudiando. Así mismo, será interesante estudiar la utilización de mapas conceptuales “esqueleto” que pudieran desarrollar “expertos bilingües” como andamios para el aprendizaje y soportar la noción de “Zona de Desarrollo Proximal (ZDP)” propuesta por Vigotsky (1988). Pocos estudios existen al respecto (O’Donnell, Dansereau & Hall, 2002), pero sería interesante observar estudiantes bilingües con la misma ZDP en un ambiente de aprendizaje cooperativo utilizando mapas conceptuales “esqueleto” hechos por expertos y observar su progreso en la adquisición del segundo idioma.

Referencias

- Altarriba, J. y Mathis, K.M. (1997). Conceptual and lexical development in second language acquisition. *Journal of Memory and Language*, 36,550-568
- Bahr, G.S. y Danserau, D.F. (2000). Bilingual Knowledge Maps (BiK-Maps):Tools for Second Language Learning, In press.
- Bahr, G.S. y Danserau, D.F. (2001). Bilingual Knowledge Maps (BiK-Maps) in second language vocabulary learning. *Journal of Experimental Education*, 70,5-24
- Bahr, G.S. y Danserau, D.F. (2004). Bilingual Knowledge Maps (BiK-Maps): Study Strategy Effects.En: Cañas, A., Novak,J., González, F. (Eds.) Concept Maps: Theory, Methodology, Technology. *Proceedings of the First International Conference on Concept Mapping*, Pamplona, España.
- Ausubel, D.P (in press) *The acquisition and retention of knowledge*. Dordrecht, The Netherlands: Kluwer.
- Ausubel, D.P. (1968). *Educational psychology: A cognitive view*. New York: Holt, Rinehart and Winston.
- Ausubel, D.P.(1963). *The psychology of meaningful verbal learning*. New York: Grune and Stratton.
- Cochran-Smith, M. (1995). Color blindness and basket making are not the answers: Confronting the dilemmas of race, culture, and language diversity in teacher education, *American Educational Research Journal*, 32(3), 493-522.
- Novak, J. D. (1991). “Ayudar a los alumnos a aprender cómo aprender. La opinión de un profesor-investigador”,*Enseñanza de las Ciencias*, 9, 215 (1991)
- Novak, J.D y Wandersee, J.H. (eds.). (1990). Special Issue: Concept Mapping. *Journal of Research in Science Teaching*, 27(10), 921-1075.
- Novak, J.D. (1990). Concept Maps and Vee Diagrams: Two Metacognitive Tools for Science and Mathematics Education. *Instructional Science* 19, 29-52.
- Novak, J.D. y Gowin, D.B. (1984). *Learning how to learn*. New York: Cambridge University Press.
- Novak, J.D. y Gowin, D.B. (1988). *Aprendiendo a aprender*. Martínez Roca: Barcelona .
- O'Donnell, A., Dansereau, D., & Hall, R. H. (2002). Knowledge maps as scaffolds for cognitive processing. *Educational Psychology Review*, 14, 71-86.
- Paivio, A. y Desrochers, A. (1981). Dual coding and bilingual memory. *Journal of Verbal Learning and Verbal Behavior*, 20, 532-539
- Vygotsky, L. (1988) El desarrollo de los procesos psicológicos superiores, Crítica Grijalbo, México

Teacher Perspectives on the Implementation of a Dual Language Program

Iliana Alanís
The University of Texas at Austin

ABSTRACT

The increase of dual language programs in the last decade has created a reform movement in the field of bilingual education as educators address the cognitive needs of English language learners (ELLs). Despite the increase in dual language education programs and the research identifying the critical features and characteristics of teachers in these programs, little attention has been given to teachers' personal experiences, attitudes, expectations, and professional development needs in such programs. This paper serves to capture early childhood teachers' reflections on the first two years of implementation of a one-way dual language program located along the U.S./Mexico border. Reflections include (1) strengths of the program, consisting of benefits for students and teachers, (2) challenges in implementation, and (3) suggestions and/or advice for new dual language teachers and administrators.

Contact Information:

Iliana Alanís
The University of Texas at Austin
6900 North Loop 1604 West
San Antonio, Texas 78249
210-458-5422
iliana.alanis@utsa.edu

Teacher Perspectives on the Implementation of a Dual Language Program

School enrollment of immigrant non-English speaking students in 18 states throughout mid-America has increased by more than 200 percent since 1990 (U.S. Census, 2005). The fast-growing number of students who speak a language other than English is creating a sea change in language development in schools and is also changing the way teachers help children achieve required reading and math proficiency (in each grade) at all grade levels. With nearly 20% of children and adults in the United States speaking a native language other than English, the need for information regarding language and literacy skills has never been greater (U.S. Census, 2005). Many educators across the country are investigating the implementation of dual language programs at the district or campus level as a means to meet the linguistic, academic, and cognitive demands of this burgeoning population.

The increase of dual language programs in the last decade has created a reform movement in the field of bilingual education as educators address the cognitive needs of English language learners (ELLs). The majority of such programs are in California and Texas, with the total for these two states exceeding the Center for Applied Linguistics (CAL) estimate for all of the other states combined. CAL lists 315 dual language programs in 28 states, including 100 programs in California (the list can be accessed at <http://www.cal.org/twi/directory/>). Data from other sources indicate that Texas has over 194 programs (Texas Two-Way/Dual Language Consortium, n.d.).

The reasons for the increase in dual language programs are many, but essentially reflect a strong desire to improve academic achievement for language minority children while providing strong second language development for language majority children (Lindholm-Leary, 2005). ELLs who have traditionally found ESL or transitional programs ineffective are experiencing phenomenal gains in dual language programs (Lindholm-Leary, 2001; Thomas & Collier, 2002). These children and their families are also experiencing a change in the status of their minority language in many communities.

Despite the increase in dual language education programs and research identifying the critical features and characteristics of teachers in these programs, little attention has been given to teachers' personal experiences, expectations, and professional development needs in such programs. This paper serves to capture prekindergarten through first-grade teachers' reflections on the first two years of implementation of a one-way dual language program located along the U.S./Mexico border. Teachers commented on the strengths of the program, including benefits for students and teachers. They also noted implementation challenges and provided suggestions and/or advice for new dual language teachers and administrators.

Dual Language Education

Dual language education programs integrate language-minority and language-majority students for all or most of the school day and strive to promote bilingualism and biliteracy in addition to grade-level academic achievement for all students (Alanís, 2000; Christian, 1994). Student integration specifically focuses on the need to bring minority and majority students together in academic and social contexts. School districts implementing dual language programs where students are (1) integrated for instruction, (2) challenged academically in both their native and second languages, and (3) focused on developing biliteracy are engaged in educational reform for language minority children.

In dual language education programs, minority children are no longer segregated from their English-speaking peers. Ovando & Collier (1985), suggest that dual language education may be the only way to reduce the language segregation in desegregated schools. The combining of children from two groups is a means in which to end the linguistic isolation in which many minority children find themselves. Dual language education seems to be the only model that places English-speakers in a second language learning environment while stressing linguistic integration in the classroom (Gómez, 2000).

Although dual language programs share common characteristics, they vary in several ways; they involve different languages as well as different student populations. In addition, there are different program models, and these models are implemented in a variety of ways. For instance, two-way programs involve two language groups learning through two languages, while one-way programs are comprised of only one language group learning through two languages (Gómez, Freeman, & Freeman, 2005). One-way dual language programs are found in communities where language minority students are found in high numbers. One-way dual language programs have been found to be just as successful as two-way dual language programs despite their lack of student integration (Thomas & Collier, 2002).

Designing, implementing, and refining dual language education programs that are successful in promoting bilingualism, biliteracy, and multicultural competence requires considerable effort and support from administrators, faculty, and the community (Alanís, 2000). Critical factors in program success include teacher attitudes, consistency in implementation, strategies and techniques used, and possibly a change in teachers' pedagogical beliefs (Lindholm-Leary, 2000).

The Role of Teachers

Given the critical role teachers play in the successful implementation of any school program, it is important to consider teachers' reactions to changes in programs and policies. Fullan (1991) argues that teachers' concerns revolve around four central areas: (a) effectiveness of change on students' learning; (b) clarity of implementation guidelines; (c) personal impact (time, energy, sense of fulfillment generated from the proposed change); and (d) impact on peer interactions. Teachers respond to change in

diverse ways, depending on how they are impacted at these four levels. As the players on the front line of the implementation process, teachers determine to a great extent whether reforms will become meaningful at the school level. Individual characteristics such as beliefs and practices and teacher biography represent key factors in teachers' individual interpretations and implementation of new programs. These are all impacted by the level and degree of professional development.

The Role of Professional Development

Researchers in dual language education have discussed the importance of receiving specialized training in immersion pedagogy and curricula, as well as materials and resources (Cloud et al., 2000; Met & Lorenz, 1997). In language education programs, teachers must provide instruction as any monolingual teacher would, but need to understand how to make the language and content accessible to the varying linguistic and cognitive needs of their students. This experience usually requires considerable in-service and pre-service training, as well as classroom coaching.

To the extent possible, professional development should be curriculum-based to help teachers facilitate their students' mastery of the curriculum at a higher academic level. Additionally, in dual language programs, teachers must be trained in second language and biliteracy development so they understand and incorporate into their teaching knowledge of how languages are learned. Research indicates that effective programs tend to align faculty professional development needs to the goals and strategies of the instructional program (Corallo & McDonald, 2002). The importance of specialized training in language education pedagogy and curriculum, materials and resources (Day & Shapson, 1996; Met & Lorenz, 1997), and assessment (Cloud et al., 2000) cannot be ignored or delayed.

Background of the Study

The school district is the 18th largest district in Texas, serving more than 43,000 students of whom 97.6% are of Mexican origin, 48% are limited English proficient, and 92.8% are economically disadvantaged. The dual language program is currently implemented and studied at five elementary schools. Implementation began in 2001-2002 at the prekindergarten-kindergarten level, adding a grade level every year. At the end of the 2002-2003 academic year, the program was fully implemented through first grade. All five dual language campuses are implementing the 50-50 Content Model.

The 50-50 Content Model is both comprehensive and additive, with activities that take into account the academic and linguistic developmental growth of children who are developing their first language and adding a second language (Gómez, 2000). Students develop literacy in their native language while developing academic proficiency in their second language through subject-area instruction. The model calls for learners to receive language arts in their native language in prekindergarten and kindergarten. Beginning in

first grade, student groups are heterogeneously mixed for language arts instruction so that students receive their language arts instruction in both their native and their second languages. Mathematics is taught in English to all students using the same structure, and science and social studies are taught in Spanish for all students from prekindergarten to fifth grade (see Gómez, Freeman, & Freeman, 2005 for a complete description of the model).

A major focus of the dual language program is to provide comprehensive professional development to the program's teachers and paraprofessionals from the five campuses. The professional development program consisted of six days of workshops that focused on the following areas:

1. L1 and L2 acquisition theory,
2. The 50-50 dual language instructional model and its components,
3. Biliteracy and cognitive development,
4. Bilingual *learning centers*,
5. Cooperative learning in a dual language classroom, and
6. Authentic, interactive, and challenging instruction such as problem- based learning.

Training was conducted by Title III professional staff and educational consultants. Follow-up to the workshops included a monthly two-hour session called *Celebrations* as well as classroom observations by educational consultants from the local university who provided constructive feedback on program implementation and instructional strategies. In addition to the professional development, the dual language coordinator met with dual language teachers on a regular basis to discuss issues such as curriculum, instructional techniques, assessment, and student progress.

This dual language program serves as a catalyst to permanently impact the educational outcomes of participating students and replicate successes across districts in the area so that all students have an opportunity to become *biliterate* in English and Spanish. The program is committed to systemic educational reform across all grade levels as teachers change the way in which Spanish-dominant students view themselves as learners. Throughout the five-year implementation period, the dual language education program will impact a total of 2,200 students and educate approximately 100-200 teachers and administrators at participating campuses and across the district.

Method

Participants

The selected sample consisted of 30 Prek-1st grade teachers from all five dual language schools. Participants are overwhelmingly Mexican American or Mexican (25). With regard to native language, 19 indicated Spanish as their native language; seven indicated they were bilingual, and four indicated English as their native language. All 30

teachers held bilingual and/or ESL certification, with 16 holding master's degrees or working toward a master's degree.

Modes of Inquiry

Two sources of data were used for this study: (a) staff development evaluation forms and (b) an open-ended questionnaire.

Evaluation forms

Evaluation forms were provided by the district in an effort to evaluate content, applicability, and future needs. In addition to rating the training received, at each session teachers were asked to provide comments regarding additional training needs as well as program concerns.

Questionnaire

All participating teachers completed an open-ended questionnaire asking them to elaborate on their experiences during the first two years of implementation of the dual language program. The questionnaire consisted of two sections. Section A of the survey contained items that requested demographic information about the school site, teacher background (teaching experience, educational background, language proficiency, ethnicity), and training. Section B comprised questions that were divided into four categories of teacher perceptions regarding the dual language program. Questions focused on Fullan's (1991) four central areas: (a) effectiveness of change on students' learning, (b) impact on peer interactions, (c) personal impact (time, energy, sense of fulfillment generated from the proposed change), and (d) clarity of implementation guidelines. For the purpose of identifying themes, these four areas were then categorized into two broad categories of program benefits and challenges. A descriptive analysis was conducted of the survey data. Documents were coded manually to generate meaning for analysis. As delineated by Huberman and Miles (1983), the data analysis proceeded from noting patterns and themes to arriving at comparisons and contrasts to determining conceptual explanations.

Results and Discussion

Teacher Background

All 30 teachers in this study were certified in bilingual education. Additionally, five held ESL certification and more than half were at a master's level or working toward a master's degree. The majority of teachers indicated Spanish as their native language or a strong level of bilingualism. Appropriate teaching certificates or credentials for staff in dual language programs is crucial, as teachers from these fields are likely to have the

preparation that would help them develop students' proficiency in two languages, to advance students' knowledge in important subject matter, and to assist students in becoming members of a culturally diverse community (Cloud, Genesee, & Hamayan, 2000). Montecel and Cortez (2002) found that fully credentialed bilingual and ESL teachers continuously acquired knowledge regarding best practices in bilingual education and ESL and other best practices in curriculum and instruction. Similarly, Lindholm-Leary (2001) found that teachers with both bilingual and ESL credentials had more positive ratings of language instruction, classroom environment, and their teaching efficacy.

Teachers' Reflections on Program Benefits

Overall, participants evaluated the professional development they received positively, with over 98% stating that sessions were effective and useful. The overall analysis of professional development sessions as assessed by session participants indicates a high level of satisfaction with presenters and their topics' practical relevance and implementation in the classroom. Findings, related to Fullan's (1991) four central areas, are presented below.

Effectiveness of change on students' learning.

All 30 participating teachers commented on the "difference" this type of education is making in their instructional approaches, as well as on students' levels of learning. Teachers discussed the impact the training had on their instruction and expectations as they began to see their young children in a different light, "For the first time I am expecting my pre-k students to write and they are. Our language scores reflect that progress."

Effective dual language education programs also require additional teaching and staff development characteristics (Cloud et al., 2000; Day & Shapson, 1996; Met & Lorenz, 1997; Montecel & Cortez, 2002). As dual language education teachers work on integrating language and content objectives in every lesson, they must be mindful of ways to make the content comprehensible to the nonnative speakers in their classrooms, while still making the lessons stimulating and challenging to the native speakers (Howard & Loeb, 1998). Eighty-three percent of the participating teachers commented on the engaging, interactive and authentic lessons and the impact these experiences had on their students. As one first grade teacher expressed, "I've noticed higher vocabulary development in both, their native and their second language." Others expressed the development of cognition in both languages: "Students are developing cognitive abilities in both languages though challenging activities that develop true understanding of concepts."

A primary tenet in dual language education is the use of the native language as a vehicle for learning while acquiring a second language. More than half of the teachers (57%) repeatedly described how students were responding to the use of their native

language in the classroom, as exemplified by the following comment: “The Spanish language is being valued as part of instruction. Students feel like leaders when their native language is the language of the day.” Another wrote, “Both languages are being used, which allows the students to feel empowered in their language, so they are learning more.” Approximately 66% of the teachers commented on the development of both languages as a result of the dual language program, as reflected in the following statement, “Our Language Assessment Scores (LAS) scores are higher than other years and my Pk students are writing more!” And finally, one kindergarten teacher summed up program impacts with the phrase, “more brain power!”

Impact on peer interactions

Teachers also wrote about the changes they witnessed in students’ attitudes. “The students’ perception of Spanish language has changed,” commented one first grade teacher. Another wrote, “Students have opportunities to express themselves in their native language which leads to higher self-esteem.” The majority of teachers (57%) expressed the sense of ownership they saw in their native Spanish speakers who now felt proud to know and function in two languages. As one teacher wrote, “Students discover that both languages are valuable for their future. They really are excited about the program.” A few teachers (6) were also surprised at how quickly their native English speakers acquired Spanish skills. As one teacher commented, “my English speakers are really trying to learn Spanish.”

In addition to second language acquisition strategies, teachers in dual language education programs should be well versed in cooperative learning and sheltered instruction. These teacher characteristics have been linked to higher student outcomes (Darling-Hammond, 2000; Montecel & Cortez, 2002). The majority of teachers (57%) commented on how the cooperative learning opportunities through bilingual pairs resulted in greater participation, as students learned both languages. According to one Prekindergarten teacher, “By the end of the year, my pre-k students are talking in both languages because they feel free to speak in their small groups.” Another wrote, “Students are learning both languages so they are communicating better.” Teachers felt that cooperative learning was significant and the “key” to developing language as students interacted with each other: “I hear them talking in their learning centers. They are using both languages and communicating well.”

A small percentage (0.4%) of teachers also commented on the professional benefits of implementing their dual language program. Professional benefits for teachers included quality staff development, an increase in Spanish materials, opportunity for teaming and collaboration, and financial incentives for graduate education. Teachers enjoyed the monthly celebrations that were held to discuss program-specific issues and program successes and which allowed for collaborative reflection opportunities.

Teachers’ Reflections on Program Challenges

Despite the many benefits, teachers also noted initial challenges in their first two years of implementation. Personal challenges centered around the three broad areas as found in the literature (Fullan, 1991): (1) personal impact; (2) clarity of implementation guidelines; and (3) perceived support by administration and parents.

Personal impact.

Although staff development was ongoing and connected to the dual language model and state standards, 67% of teacher responses included requests for specific training in the daily operation of a dual language classroom at their specific grade level. Most teachers requested opportunities to visit and observe established dual language classrooms and have time to dialogue with experienced dual language teachers in other school districts and even on their own campus.

Most of the training was conducted in late summer, and teachers were expected to begin implementation immediately in the fall. Consequently, the majority of teachers felt rushed. Teachers overwhelmingly requested time for implementation, to process new information, and to collaborate with colleagues. One teacher noted the following:

All the information that was given to me with the in-services was great, but I need time in my classroom to get ready. A lot of times I feel like I am getting bombarded with new information, strategies, ideas, etc. but what I really need is just time to absorb everything and see how I can implement it.

As in many traditional bilingual programs, Spanish resources were scarce. Although there were textbooks in Spanish for science and social studies, there were rarely enough for every child. Teachers requested more literature in Spanish and time to search on-line for quality Spanish teaching materials. The majority of teachers (72%) requested “make and take” sessions to develop materials for learning centers and to collaborate on ideas for developing problem-based learning.

Although the majority of teachers in this study were native Spanish speakers, their educational training was conducted in English both at the university level and as inservice teachers. Consequently, they struggled with academic Spanish in the specialized areas of science and social studies. Guerrero & Sloan (2001) report that teachers need professional development in Spanish to develop higher levels of proficiency. Teachers did request more training in Spanish, with one suggesting the use of teachers from Mexico as educational consultants. However, only a small percentage (0.4%) of teachers in this study agreed that more professional development in Spanish would facilitate their work.

Clarity of implementation guidelines

As with any program, the level of consistency in implementation affects program and student outcomes. A strong component of dual language education is the separation of languages for instruction. Forty-three percent of teachers reported struggling with the separation of languages as they tried to avoid code-switching between languages and translating during instruction. Many responses reflected this comment from a kindergarten teacher: “It was difficult to stick to the language of the day at first.” This was by far the greatest challenge for new dual language teachers. However, teachers did acknowledge that “it got easier as the year went on.”

Given the proximity to the border, the majority of students were native Spanish speakers. Like any traditional bilingual program, this model calls for specific strategies to facilitate comprehension for second language learners. Although all teachers held bilingual certifications, their comments reflect the difficulty teachers had in helping students understand certain information in their second language for mathematics instruction and language of the day. This difficulty was particularly true for prekindergarten and kindergarten teachers whose students had been in the program a relatively short amount of time. As one teacher noted, “Instruction in English was a challenge because most of my students only know Spanish.”

First grade teachers asked for more training to outline the differences between the two languages for reading instruction, as children are heterogeneously mixed for literacy instruction at first grade. The majority of questions centered on the theory of transfer from one language to another and the length of time needed in the native language to fully develop literacy. The majority of first grade teachers felt that introducing reading in the second language at first grade was too soon for their students.

Administrative and parental support

The majority of parents supported dual language education for their children, as indicated by district surveys. All teachers however, noted a challenge in elevating the status of Spanish when working with parents and/or administrators. Teacher comments indicate there were a few parents who did not fully understand the goals of dual language education. One first grade teacher stated, “I had a parent that liked the idea of dual language except for Science. She was worried her child would not get the vocabulary in English. I explained but she was still worried.” The majority of these fears dissipated as children progressed through the program, as reflected in one kindergarten teacher’s comment:

At the beginning it was difficult to make some parents understand that the dual language instruction was going to help their children learn two languages at the same time. After I explained the way it was going to work and how we are going to implement it, they like[sic] it. By the end of the school year, parents saw the result of dual language instruction and there were very pleased with the program and the way it was implemented.

The biggest concern among the teachers was the lack of administrative commitment at the campus level, as reflected in the following teacher comment: “Administration does not support us 100%. Sometimes we have to explain why we are speaking Spanish!” Another teacher lamented, “Administrators do not understand that by promoting literacy, there must be a lot of talking in the classroom. We still have administrators who dock you for having a noisy class.” Many teachers (53%) commented on the lack of administrator support, as typified by the following statement:

Administration blocks the implementation of the whole dual language. They won’t do the announcements in Spanish, because the rest of the grades are not participating. Some parents of other grades do not want their children to hear Spanish spoken at school.

Although principals allowed teachers to implement the program and in many cases requested the program at their campus, they were consistently absent in staff development, did not thoroughly understand the principles of dual language education, and often times refused to provide flexibility in curriculum decisions.

Teacher Suggestions and/or Advice

The final section of the open-ended questionnaire allowed teachers to provide suggestions for administrators and new dual language teachers. Teachers’ suggestions for administrators centered on more parent orientations explaining the program at the campus level, continuous staff development, paraprofessionals who are trained in dual language education, and general support for early childhood education. Additionally, teachers commented on the need for Spanish materials and collaboration among colleagues.

Suggestions for new dual language teachers included, “Be positive and adjust to new situations” and “Provide vocabulary lists in both languages.” The importance of grade-level collaboration was highlighted, as was the necessity to communicate needs to administrators and parents. With regard to instruction, teachers focused on the requirement of consistency in language of instruction, utilizing bilingual pairs, and color coding language materials. Finally, teachers commented on the anxiety new dual language teachers face at initial implementation. As one teacher expressed, “It takes time to get into the rhythm.” Another noted, “Don’t panic!”

Teacher Misconceptions

Research on dual language education indicates that it is critical to program success to have staff who possess a strong understanding of second language acquisition theory as well as a strong commitment to the program’s philosophy and goals (Lindholm-Leary, 2005). The lack of teacher commitment to program implementation and misconceptions about dual language immersion are critical challenges when working with dual language implementation.

Teacher responses indicated that a small percentage of teachers (27%) held misconceptions regarding dual language education and implementation. Misconceptions ranged from the components of the dual language model—such as language of the day—and language of instruction for content areas to confusion over how to implement bilingual learning centers.

But more importantly, there were misconceptions about the level of language mastery for students in the early stages of dual language immersion. Many first grade dual language teachers, who were certified in bilingual education, felt that Spanish-dominant students needed more English reading instruction even though students were receiving reading instruction in their native language. This is clearly a misunderstanding of the theory of transfer in bilingual education. Dual language models remain true to research in second language acquisition, ensuring that students gain Cognitive Academic Language Proficiency (CALP) and learning strategies in their first language before transfer to their second language is expected of them. Consequently, a strong foundation in their native language will facilitate their acquisition of English development (Cummins, 1981). When teachers do not have background in bilingual theory, they risk making poor curriculum and instructional strategy choices that can lead to low student performance and the perception that bilingual education does not work (Clark, Flores, Riojas-Cortez, & Smith, 2002).

Conclusion

Research on teacher attitudes and beliefs in language education programs is critical, given the consistent findings that teacher attitudes and expectations influence student achievement (Byrnes, Kiger, & Manning, 1997). Teacher attitudes are affected by teacher background, program implementation effectiveness, and perceptions of support by administration, other staff, and parents. Among the dual language teachers, the implementation of their dual language program generated great excitement as participating staff began to see themselves as “truly implementing bilingual education.” Program administrators indicated, for example, that “The program has stimulated interest across the district and many see this initiative as a step in the right direction to support the districts dual language philosophy.” One particular belief that emerged was the notion that there are no “limited” children, but rather only children with different languages and possibly different cultures that are all equally valid. In general, this belief has changed expectations by teachers and is beginning to empower children, particularly children who in the past were considered deficient because they spoke a language other than English. As one teacher states, “teachers now value both languages so that students’ perception of Spanish is changing. I see a change in their attitude and reading levels.”

Implications for Practice

Fullan (1991) lists three components at stake in teachers' successful implementation of any school reform: (a) the possible use of new materials, (b) use of new teaching strategies, and (c) a change in pedagogical beliefs. Quality and timely professional development is critical to all three areas. In many cases dual language teachers are undergoing a shift in philosophical understanding as they move from transitional bilingual education, where native language is viewed as a deficit, to dual language immersion, where children's languages are viewed as resources. Changes in beliefs about what and how to teach are the most difficult to achieve, since they challenge educators' core beliefs about the goals of education. This shift in philosophical understanding requires staff development that allows for discussion, collaborative reflection, and planning as well as time for the creation of Spanish language materials and challenging authentic lessons for second language learners. Creating such materials and authentic lessons involves professional development related to the definition of the dual language education model, theories and philosophies underlying the model (Lindholm-Leary, 2005) and, in this case, information regarding the process of developing biliteracy.

Learning takes place when novices and experts work together to solve a common problem or produce a common product (Tharp & Gallimore, 1988). Given that teachers' voices are often ignored or omitted, questions about how to prepare teachers to work in dual language settings are best answered by teachers themselves. It is important to continue the dialogue (between who and who?) in a way that targets the specific demands of dual language teachers so they are not only involved in the development and maintenance of the dual language program, but also crucial to its success.

References

- Alanís, I. (2000). A Texas two-way bilingual program: Its effects on linguistic and academic achievement. *Bilingual Research Journal* 24 (3). Pp 225-248.
- Brauer, J. Z. (1997). *Learning strategies of native-English speaking fourth grade students in a two-way bilingual education program*. Unpublished manuscript, Boston University School of Education.
- Byrnes, D. A., Kiger, G., & Manning, M. L. (1997). Teachers' attitudes about language diversity. *Teaching and Teacher Education*, 13 (6), 637-644.
- Center for Applied Linguistics (2005). The directory of two-way bilingual immersion programs in the United States. Retrieved August 29, 2005 from <http://www.cal.org/twi/directory/>
- Christian, D. (1994). Two-way bilingual education. Students learning through two languages (Educational Practice Report 12). Santa Cruz, CA and Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning.
- Clark, E. R., Flores, B. B., Riojas-Cortez, M., & Smith, H. (2002). You can't have a rainbow without a tormenta: A description of an IHE's response to a community need for a dual-language school. *Bilingual Research Journal* 26.
- Cloud, N., Genesse, F., & Hamayan, E. (2000). *Dual language instruction: A handbook for enriched education*. Boston: Heinle & Heinle.
- Corallo, C., & McDonald, D. H. (2002). *What works with low-performing schools: A review of research*. Charleston, WV: AEL, Regional Educational Laboratory, Region IV Comprehensive Center.
- Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In J. Cummins (Ed.) *Schooling and language minority students: A theoretical framework* (pp. 3-49). Los Angeles: Evaluation, Dissemination, and Assessment Center, California State University.
- Day, E. M. & Shapson, S. M. (1996). *Studies in immersion education*. Clevedon STATE?: Multilingual Matters.
- Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives* 8, 1-50.
- Fullan, M. G. (1991). *The new meaning of educational change*. New York: Teachers College Press.
- Gómez, L. (2000). Two-way bilingual education: Promoting educational and social change. *The Journal of the Texas Association for Bilingual Education*, 5 (1), 43-54.
- Gómez, L., Freeman, D. & Freeman, Y. (2005). Dual language education: A promising 50-50 model. *Bilingual Research Journal*, 29: 1 Spring 2005
- Guerrero, M., & Sloan, K. (2001). A descriptive analysis of four exemplary K-3 Spanish reading programs in Texas: Are they really exemplary? *Bilingual Research Journal* 25, 253-280.
- Howard, E. R. & Loeb, M. I. (1998). In their own words: Two-way immersion teachers talk about their professional experiences. ERIC Digest accessed March 23, 2001 at <http://www.cal.org/ericll/digest/intheriownwords.html>

- Lindholm-Leary, K. (2005). Review of research and best practices on effective features of dual language education programs. Retrieved August 29, 2005 from http://www.lindholm-leary.com/resources/review_research.pdf
- Lindholm-Leary, K. (2001) *Dual language education*. Clevedon, STATE?: Multilingual Matters.
- Met, M., & Lorenz, E. B. (1997). Lessons from U.S. immersion programs: Two decades of experience. In R. K. Johnson & M. Swain (Eds.), *Immersion Education: International Perspectives* (pp. 243-264). Cambridge: Cambridge University Press.
- Montecel, M. R., & Cortez, J. D. (2002). Successful bilingual education programs: Development and the dissemination of criteria to identify promising and exemplary practices in bilingual education at the national level. *Bilingual Research Journal* 26.
- Ovando, C. J. & Collier, V. P. (1985). *Bilingual and ESL classrooms: Teaching in multicultural contexts*. New York: McGraw-Hill.
- Texas Two-Way/Dual Language Consortium. (n.d.) *Texas two-way dual language education*. Retrieved August 16, 2005, from <http://texastwoway.org/>
- Thomas, W. P., & Collier, V. P. (2002). *A national study of school effectiveness for language minority students' long-term academic achievement*. Retrieved August 16, 2005, from http://www.crede.org/research/llaa/1.1_final.html
- Tharp, R. G. & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context*. New York: Cambridge University Press.
- U. S. Census Bureau (2005). Retrieved September 20, 2005, from <http://www.census.gov/>

The Role of Spanish as Perceived by Future Bilingual Teachers

Alma Dolores Rodríguez

University of Texas at Brownsville / Texas Southmost College

ABSTRACT

This article describes the results of a pilot study to identify the perceptions of prospective bilingual teachers regarding the importance of learning and teaching Spanish. The study examined teachers' perceptions concerning the role that Spanish would play in their future effectiveness as bilingual teachers as well as the role(s) of Spanish instruction as part of their teacher preparation programs. The study also examined the experiences that future bilingual teachers have had with learning and teaching that utilized Spanish throughout their education. The results of this study show that future bilingual teachers are, in general, deprived of academic instruction in Spanish at both the elementary and secondary levels. However, they are receiving academic Spanish instruction at the university level. Prospective bilingual teachers feel their future students will benefit from academic instruction in Spanish, so they are confident that the instruction they are receiving at the university level will be very useful to them once they start teaching.

Contact Information:

Alma Dolores Rodríguez, Ed. D.
80 Fort Brown
Brownsville, TX 78520
Alma.Rodriguez@utb.edu
(956) 882-7657

The Role of Spanish as Perceived by Future Bilingual Teachers

“Nothing is distributed evenly across the United States” (Hodgkinson, 2003, p. 349). This statement certainly holds true for the distribution of Hispanic students. Although we know that the Hispanic population is on the rise nationwide, we also know that diversity is more evident in some states than others. Over the next two decades, about three fifths of the nationwide increase in diverse populations will be concentrated in California, Texas, and Florida (Hodgkinson, 2003). This varied distribution of Hispanic students has an inevitable effect on our school systems: the U.S. has increasing numbers of minority students to educate overall, but some states have far larger numbers. We commonly refer to Hispanics as a minority group. However, Hispanics are becoming the numerical majority in some areas. According to the Texas Education Agency (2005), 44.7% of the total student population in the State of Texas is Hispanic, 37.7% is white, 14.2% is African American, and 3.4% is of other ethnic backgrounds. Therefore, the percentage of students in Texas are Hispanic. But even within Texas, there is uneven distribution of Hispanic students among the state’s different regions. In the Southern Tip of Texas region, 96% of the student population is Hispanic and 36% of the total student population is composed of English language learners (ELLs) (Texas Education Agency, 2003). This translates to an urgent need to create effective educational programs that meet the needs of these Hispanic students.

What Research Says

Extensive research has been conducted to determine the most effective educational programs for ELLs. Studies have shown that instruction in the students’ native language brings positive academic results for ELLs (Collier, 1992; Greene, 1997; Ramirez, Yuen, & Ramey, 1991; Rolstand, Mahoney, & Glass, 2005; Thomas & Collier, 2002). Ramirez, *et al.* (1991) and Thomas and Collier (2002) found that students who received native language instruction acquired English successfully and performed better in content area instruction than students who did not receive native language instruction. Collier (1992) reviewed studies conducted on different types of bilingual education programs and found that native language instruction helped to narrow the achievement gap between ELLs and English-dominant students. Greene (1997) and Thomas and Collier (2002) found that native language instruction had positive effects on the English achievement of ELLs. In other words, the more formal native language instruction students received, the higher their achievement in English. Moreover, Rolstand, *et al.* (2005) concluded from their meta-analysis of program effectiveness that bilingual education is superior to all-English instruction. ELLs who received long-term bilingual education performed better than those who received short-term transitional bilingual instruction or English-only instruction. Dual language or two-way bilingual programs provide ELLs with long-term instruction in their native language and English. Although Krashen (2004) states that “research has not yet demonstrated that they [dual language] are the best possible program” (p.13), he acknowledges that dual language programs show “promising results” (p.13). In addition, Gómez, Freeman, and Freeman (2005) analyzed the effect of dual language instruction on the academic performance of students in the Southern Tip of Texas. They concluded that “students in schools where the model has been implemented seem to be developing the knowledge and skills they need to succeed in

school and society” (p.163). Therefore, a case can be made to promote long-term native language instruction, particularly dual language instruction, to educate ELLs.

Lindholm and Molina (2000) have identified the critical features of dual language programs. Dual language or two-way bilingual programs allow English-dominant students and English language learners to learn side-by-side in the same classroom. Both groups of students receive instruction in two languages (e.g., English and Spanish). These languages are clearly separated for instruction either by subject, day, or time of day. The goals of dual language programs are for all students to become bilingual and to achieve grade-appropriate academic performance in both languages. In order for a dual language program to be effective, students must “receive their instruction from certified teachers who have native or native-like ability in either or both of the language(s) in which they are instructing” (p. 165).

In Need of Teachers

In order to provide high-quality, long-term native language instruction, well-prepared teachers are needed. In the particular case of the Southern Tip of Texas, Spanish/English bilingual teachers are needed since the great majority of ELLs are Spanish speakers.

There is a bilingual teacher shortage in Texas. In the 1996-97 school year, 1,038 bilingual teachers and 1,348 ESL teachers were not certified in these areas, but were working on permits. In addition, there were 74 school districts that applied for an exemption to the requirement of providing bilingual education for their elementary school students. These school districts were lacking 2,000 bilingual educators to provide adequate instruction. Although universities are graduating more bilingual teachers than in the past, the graduation rate does not keep pace with the growing rate of English language learners in the state (Texas Education Agency, 2006). These alarming statistics make it obvious that a great number of ELLs are not being served by well-prepared and certified teachers.

In addition to teacher shortage, there is another factor that affects the quality of instruction that ELLs receive. Unfortunately, many teachers who hold proper bilingual certification have not received the necessary preparation to provide long-term native language instruction. As previously mentioned, the native language of the majority of ELLs in Texas is Spanish, and many bilingual teachers have had limited formal instruction in Spanish. There are few universities that offer bilingual methods or reading courses in Spanish. Most teacher preparation programs provide prospective bilingual teachers with methodology and reading instruction in English. Future teachers are then asked to apply these instructional techniques in Spanish once they start teaching (Escamilla, 2000). This situation is obviously not the ideal. Bilingual teachers need instruction in Spanish if they are to teach in Spanish.

As if the lack of bilingual teacher preparation in Spanish were not bad enough, there is a deeper problem that affects the quality of instruction that ELLs receive. Guerrero (1997) explains that a great number of prospective bilingual teachers “have been shortchanged in terms of Spanish language development experiences” (p.66) even before entering their teacher preparation programs. Most prospective bilingual teachers enter the university having only

developed an “oral ability in the Spanish language” (Guerrero, 1997, p. 71). The logical impact of limited schooling in Spanish is a limited ability to use the language for academic purposes. Nevertheless, these future bilingual teachers are expected to impart academic instruction in Spanish.

Conversational Language

As noted, a great number of prospective bilingual teachers have had limited instruction in Spanish, so they have just developed conversational Spanish. Ovando, Combs, and Collier (2006) refer to this language dimension as “social language” that consists of what Cummins first referred to as basic interpersonal communicative skills or BICS. Conversational language develops naturally through everyday interaction. An individual will usually develop conversational language within two or three years if the necessary conditions are present. Such conditions include interactions with speakers of the target language “and a social setting that encourages natural interaction” (p. 128). Conversational language is characterized by being context-embedded, which means that communication is facilitated via gestures, body language or other types of “contextual cues” (p. 128). Ovando, Combs, and Collier (2006) point out that conversational language does not just include the ability to understand and speak the language. It also includes the ability to read and write in informal, everyday situations. Freeman and Freeman (2006) explain that conversational language is used in nonacademic situations. With that in mind, if there is an authentic concern with providing ELLs with the most appropriate instruction, it is not sufficient for bilingual teachers to only possess conversational Spanish. Effective bilingual teachers must possess an appropriate level of academic Spanish as well.

Academic Language

Freeman and Freeman (2006) explain that academic language is the language of schooling. Cummins (1999) refers to academic language as cognitive academic language proficiency or CALP, and points out that academic language is a distinct dimension from conversational language, but not a separate one. Ovando, Combs, and Collier (2006) argue that academic language develops as students are exposed to language in situations that are limited in the amount of clues that clarify meaning. It evolves as students are exposed to more “cognitively demanding uses of language” (Ovando, Combs, & Collier, 2006, p. 129) throughout their schooling. Freeman and Freeman (2006) explain that “students need to be able to think, act, comprehend, speak, read and write using language appropriate to the context” (para. 2). Due to the complex nature of academic language, it takes longer than conversational language to develop. The development of academic language may take anywhere from four to ten years. Since many bilingual teachers did not receive formal instruction in Spanish for that long as they were growing up, their academic Spanish is not developed. As a result, it becomes very hard for them to teach or model for their students the dimension of Spanish that research has shown would benefit ELLs; the teachers do not possess those skills themselves.

Variations of Language

It is important to distinguish academic language from standard language. Standard language can be defined as a “fixed, and correct form of a language against which we can measure a given sample of that language” or as “the language of the group in power” (Lessow-Hurley, 2005, p. 35). Yet, language is ever-changing. It evolves with time as individuals use it to satisfy their communicative needs. Languages reflect the lifestyles and history of individuals from a particular region. They also reflect the lifestyles of individuals from a particular social class. These regional and social language variations are known as dialects (Lessow-Hurley, 2005).

In border communities, like the one in which this study takes place, individuals often code-switch. Code-switching is “the alternate use of two languages from sentence to sentence, or even within one sentence” (Lessow-Hurley, 2005, p. 38). Individuals living on the U.S./Mexico border often code-switch between English and Spanish within a conversation. In the Southern Tip of Texas, this dialect is locally referred to as Spanglish or TexMex. Many future bilingual teachers in the area have grown up listening to or speaking this dialect. Lessow-Hurley (2005) points out that monolingual individuals often disparage code-switching. Yet, linguists state that it “is a systematic and rule-governed language behavior” (Lessow-Hurley, 2005, p. 38).

University professors are unable to retroactively address or change the experiences that prospective bilingual teachers had with Spanish before arriving in the college classroom. However, it is important to be aware of such experiences in order to more adequately meet the needs of these future bilingual teachers. It is also important to find out the attitudes that these university students have toward Spanish so that a connection can be made between their perceptions and the reality that they will face as bilingual educators.

Purpose and Questions

The purpose of this article is to present the results of a pilot study that was conducted in an attempt to identify the perceptions of prospective bilingual teachers regarding the importance of teaching and learning Spanish. The study examined the perceptions of future bilingual teachers concerning the roles that Spanish would play in their careers once they finished their education and began teaching in a bilingual setting. The study also looked at future bilingual teachers’ perceptions of the importance of receiving Spanish instruction as part of their teacher preparation program. Finally, the study examined the experiences that these future bilingual teachers have had with the Spanish language throughout their education. The following research questions were addressed by the study:

- 1) What are the perceptions of prospective bilingual teachers regarding the role of Spanish in their future performance as bilingual educators?
- 2) What are the perceptions of prospective bilingual teachers regarding the role of Spanish in their bilingual teacher preparation program?
- 3) What is the nature of the experiences that prospective bilingual teachers have had with the Spanish language?

Methodology

Instrumentation

A survey was designed to identify the perceptions of prospective bilingual teachers toward the Spanish language. The survey was based on an instrument designed by Sutterby and Ayala (in press). The survey contained three demographic questions, six Likert-type questions, ten questions that combined a closed multiple choice response with an open-ended justification for their choice, and six open-ended questions.

The items in the survey were organized according to the three research questions. Converse and Presser (1986) state that the order in which questions are asked has an impact on the responses obtained. In addition, preceding questions have an impact on subsequent ones. Therefore, all items in the survey that addressed a particular research question were grouped together.

The instrument contained both open-ended and closed questions. The closed questions were designed to measure participants' perceptions about academic language versus conversational language. Keeping the questions closed allowed the researcher to provide all respondents with the same frame of reference (Converse & Presser, 1986). However, the researcher decided to provide respondents with an opportunity to justify their responses in order to obtain a better understanding of participants' perceptions. The instrument also contained open-ended questions designed to determine the nature of the experiences that prospective bilingual teachers have had with Spanish. The qualitative nature of the desired responses called for an open-ended format for that set of questions (Gall, Borg, & Gall, 1996).

Data Analysis

Survey responses were analyzed by themes. In other words, the responses to items that addressed a particular research question were examined together. In addition the researcher looked for patterns in the open-ended responses and grouped similar responses together. This grouping allowed the researcher to calculate the percentage of participants who selected the same response for closed items and the percentage of participants who provided a similar response for the open-ended survey items (Gay & Airasian, 1992).

Participants

This pilot study was conducted at a university located in the Southern Tip of Texas, situated on the border with Mexico. The geographical location of the institution allows it to serve students from both sides of the border. The community surrounding the university is predominantly Hispanic, and so is the university student population. Residents from both sides of the border "go across" routinely to dine, shop, or for leisure. Bilingualism is very common in the area (Sutterby & Ayala, in press). Nevertheless, the levels of English and Spanish proficiency vary greatly among community residents. Standard English and Spanish are heard as often as TexMex or Spanglish. Spanish is used as much as English for conducting business and daily routines in the Southern Tip of Texas. The local newspaper issues English and Spanish

versions on a daily basis. There are numerous Spanish television and radio stations that entertain and inform the community (Sutterby & Ayala, in press).

Many students who attend this university do not fit the typical American college student profile. A large number of them are older than the average college student. Shin (2005) describes the traditional college student as being under 25 years old. The Office of Data Management and Reporting (2006) of the institution where this study was conducted reported that 39.2% of the student population is 26 years of age or older. Moreover, most of the students are married and have children (Sutterby, Ayala, & Murillo, 2005). Therefore, a great number of students work full-time jobs to support their families while they pursue a college education.

The survey was piloted with 24 juniors and seniors pursuing a degree in bilingual education. The participants will become certified by the State of Texas to teach early childhood to fourth grade in bilingual settings. All participants were Hispanic. Two males and twenty-two females participated in the study. Their ages ranged from 21 to 42 years of age. Half of the participants were in their early twenties, while four were in their late twenties. Seven participants were in their thirties, and one was 42 years old.

The participants were enrolled in the first in a series of three bilingual methods courses required in their program of study. This course is conducted entirely in Spanish. In contrast to what Guerrero (1997) describes as the norm, this university provides bilingual teacher training in Spanish. Future bilingual teachers take three bilingual methods courses from the Department of Curriculum and Instruction that are taught entirely in Spanish. All lectures, class discussions, reading and writing assignments are in Spanish. In addition, these students are required to take other Spanish courses from the department of Modern Languages. The requirement is designed in an attempt to provide future bilingual teachers with the most adequate teacher preparation to serve the children of the area.

Limitations

The study had several limitations. First, it was a pilot study conducted to test a newly designed survey. This was the first administration of the instrument, and although very interesting results were obtained, the researcher identified areas of the instrument in need of improvement. Second, this pilot study was conducted with a very small sample—only 24 participants. Third, the survey was completed anonymously. This was a limitation because it did not allow the researcher to conduct follow-ups interviews or ask participants to further explain their responses (Gall, Borg, & Gall, 1996). Finally, this pilot study was conducted in a very unique (i.e., non-representative) area of the United States. The results obtained from this study cannot be generalized to other areas of the country or of Texas unless those areas are predominantly Hispanic communities located on the border with Mexico.

Findings

Research Question One

The first research question addressed by this pilot study aimed to determine the perceptions of prospective bilingual teachers regarding the role of Spanish in their future performance as bilingual educators. To obtain an answer to this question, the participants were asked about the levels of language that bilingual teachers should possess. They were also asked about the dimensions of language that they feel they will need to communicate with their future students, with their students' parents, and with colleagues and administrators in the school setting.

All (100%) of the participants stated that a bilingual teacher should possess equal levels of English and Spanish. They provided justification for their responses, stating, for example, that "if a teacher is going to teach both languages then he or she should be able to teach them equally." That is, a bilingual educator should be equally confident and effective when teaching in English as when teaching in Spanish. Another participant stated that it is important to have equal levels of English and Spanish "to be of more assistance to their students and their parents." In addition, another participant stated that equal language proficiency on the part of bilingual teachers is necessary because "the curriculum should be taught equally in English and Spanish." In other words, both languages should be given equal status in a bilingual setting. This idea agrees with the principles of dual language instruction. Finally, a participant explained her opinion about this issue in Spanish:

Es muy importante que la maestra este preparada para su carrera, y si es bilingue [sic] tiene que dominar a perfeccion [sic] los 2 idiomas. (It is very important that the teacher be prepared for her career, and if she is bilingual she must dominate both languages to perfection).

This quote clearly displays the high standards that these future bilingual teachers set for themselves.

The participants were asked about the dimensions of language that they felt they would need to use with their future students. Fifty-eight percent of the participants stated that they would have to use both academic and conversational English and Spanish with their students, while 17% stated that they would only need to use academic English and Spanish. An additional 4% (one participant) thought that only academic Spanish would be required in the classroom. The other 21% was comprised of other combinations: 13% of participants felt they would use only academic English and Spanish with their students, while 8% stated that they would use academic Spanish and conversational English in the bilingual classroom.

Table 1

Perceived Language Dimensions Required for Future Performance as Bilingual Teachers

Language Dimensions	With Students	With Parents	With Colleagues
---------------------	---------------	--------------	-----------------

Academic and Conversational English and Spanish	58%	68%	33%
Academic English and Spanish	17%	16%	33%
Conversational English and Spanish	--	--	--
Academic English	--	--	25%
Academic Spanish	4%	8%	--
Other combinations	21%	8%	8%

As can be surmised from Table 1, more than half of the participants understand that bilingual education requires the teacher to model conversational and academic language both in English and Spanish for their students so that they can advance in the continuum referred to by Ovando, Combs, and Collier (2006), and eventually achieve grade-appropriate levels of academic English and Spanish. As one of the participants put it, “our culture has a conversational language, and children need to know about this language as well. On the other hand, academic English and Spanish is [sic] helpful to be successful in school.” Another participant included the following comment:

There is always the aspect of a teacher being knowledgeable and therefore academic English and Spanish should be used to teach. Conversational English and Spanish should be acceptable because teacher[s] sometimes need to get down to the level of students in order to reach them.

It can be deduced from this quote that the participants understand the concepts of modeling and scaffolding instruction, and they applied those concepts well to language exposure for English language learners.

Participants were asked about the dimensions of language they felt they would need to use with the parents of their future students. Table 1 shows that 68% of the participants stated that they would be required to use both academic and conversational English and Spanish when communicating with their future students' parents. Sixteen percent stated that they would only need academic English and Spanish, while eight percent (two participants) stated that they would only need academic Spanish when talking to parents. The great majority of the participants are aware of the varying degrees of language development that they will encounter among their future students' parents. One participant explained that "parents will be in all varieties, therefore teacher[s] should be ready to communicate with everyone." The participants also understand the importance of keeping open channels of communication between school and home when stating that it is important "that the parents feel comfortable sharing their experiences and their child's progress."

The last item relating to the first research question asked participants to express their opinion about the dimensions of language that they feel they will need to communicate with their colleagues and school administrators. As noted in Table 1, the distribution and nature of responses were different for this item than for the previous ones. Thirty-three percent of the participants stated that they would only need academic English and Spanish when communicating with other educators. An equal number of participants said they would use both academic and conversational English and Spanish. In addition, 25% of the participants expressed that they would probably just need academic English to communicate with teachers and administrators. As can be seen, there was a shift in these responses from academic and conversational language to just academic language. The participants justified their responses by stating, as one put it, that "in the schools teachers should use only academic English and Spanish with colleagues and administrators because they are setting the example and have to be professional." A participant stated, "I believe we should be able to understand all the educational terminology. We need to be able to express our ideas in a very educated way." In addition, there was also a shift from using both English and Spanish to communicate with students and parents to using just English to communicate with colleagues. It can be inferred that at least 25% of the participants are assigning a higher status to English than to Spanish with regard to communicating with professional colleagues.

Research Question Two

The second research question addressed by this pilot study aimed to determine the perceptions of prospective bilingual teachers regarding the role of Spanish in their bilingual teacher education program. To obtain an answer to this question, the participants were asked to state the amount of time that Spanish should be used in bilingual education courses at the university level for lecture and discussion, for reading assignments, for writing assignments, and for assessments. The participants were also asked to state their expectations from courses taught entirely in Spanish.

Table 2 summarizes the results obtained for the second research question. Participants' responses that expressed that Spanish should be used in bilingual education courses more than

50% of the time were grouped. Likewise, participants' responses that expressed that Spanish should be used in bilingual education courses less than 50% of the time were grouped.

Table 2

Perceived Appropriate Amount of Spanish Instruction in Bilingual Education Courses

Type of Activity	More than 50% of the time	Less than 50% of the time
Lecture and Discussion	66%	33%
Reading Assignments	79%	21%
Writing Assignments	75%	25%
Assessments	74%	26%

As previously mentioned, participants were asked to state the amount of time they felt Spanish should be used for lecture and discussion in bilingual education courses at the university level. Thirty-three percent of the participants stated that more than 75% of the lecture and discussion time should be in Spanish. Another 33% stated that Spanish should be used 50-75% of the time. However, 25% of the participants stated that lecture and discussions should be held in Spanish 25-50% of the time, while only one participant stated that it should be reduced to less than 25% of the time. One participant did not respond to this item. As can be noted in Table 2, the majority of participants (66%) favored the use of Spanish for lecture and discussion. The participants justified their opinions by stating that "the professor will help the students [sic] acquisition of proper or new vocabulary" by lecturing in Spanish. In addition, they favored holding class discussions in Spanish since "practicing and speaking Spanish leads to perfection." Again, future bilingual teachers have an obvious desire to improve their Spanish skills.

Participants were also asked to state the amount of time they felt Spanish should be used for reading assignments in bilingual education courses at the university level. Forty-six percent of the participants stated that Spanish should be used for reading assignments 50-75% of the time. Thirty-three percent of participants stated that reading assignments should be in Spanish more than 75% of the time. Thirteen percent of the participants expressed that reading assignments should be in Spanish 25-50% of the time. One participant stated that Spanish should be used for reading assignments less than 25% of the time, one did not respond to this item. Again, Table 2 shows that a large majority of students (79% percent) favored the use of Spanish for reading assignments. The participants felt that reading would help "improve [their] Spanish." They also expressed that reading is an effective way in which their "Spanish

vocabulary enriches.” And, once more, participants displayed their high standards by stating that reading can “make [their] Spanish if not perfect, a very good one.”

In addition, participants were asked to state the amount of time they felt Spanish should be used for writing assignments in bilingual education courses at the university level. Forty-six percent of the participants stated that writing assignments should be held in Spanish 50-75% of the time. Twenty-nine percent of participants felt that they should write in Spanish more than 75% of the time. Twenty-one percent of participants stated that writing assignments should only be completed in Spanish 25-50% of the time. Four percent (one participant) felt that Spanish writing should take place less than 25 % of the time. As shown in Table 2, the majority of the participants (78%) favored writing in Spanish. One participant stated, “Spanish can be easy to speak but sometimes as students we have difficulty writing in Spanish.” Another participant stated, “A lot of us have trouble in ascetos [sic].” In general, the participants feel more comfortable speaking Spanish than writing it. Both speaking and writing are forms of language production. Research has shown that language production is not a requirement for language acquisition (Krashen, 1998). Nevertheless, these future teachers felt that opportunities to write in Spanish in their college courses would help them improve their Spanish writing skills.

The participants were also asked to state the amount of time they felt Spanish should be used for assessment purposes in bilingual education courses at the university level. Forty-one percent of the participants stated that assessments should be conducted in Spanish 50-75% of the time. Thirty-three percent stated that assessments should be conducted in Spanish more than 75% of the time. Thirteen percent of the participants felt that assessment should be conducted in Spanish 25-50 % of the time, while 13% felt that they should only be assessed in Spanish less than 25% of the time. Once again, Table 2 shows that a large majority of participants (74%) favored assessments in Spanish.

Finally, participants were asked to state their expectations from courses taken in Spanish at the university level. Their responses fit into four different categories. Some participants expressed a desire to learn how to teach in Spanish. Others stated that they wanted to improve their Spanish-speaking skills, while others expressed an interest in improving their writing skills. The last category of responses was composed of those participants who expressed a desire to master the Spanish language in general. It is important to note that some of the responses fit into two categories since they expressed two different expectations. One participant stated, for example, “I expect to learn proper techniques to use when writing and speaking Spanish in the correct form. I want to feel more comfortable in speaking in front of groups in Spanish.” Another participant expressed, “I expect to gain more knowledge on how to teach and write the correct way in the Spanish language.” It is important to note that most of the responses had an embedded desire to develop a more standard form of Spanish. The following quote is clearer in the desire to develop competence in standard Spanish: “[I expect] to better my Spanish language and drop words that are not in the dictionary.”

Research Question Three

The third research question addressed by this pilot study aimed to examine the experiences that prospective bilingual teachers had as they were growing up and through their schooling. To obtain answers to this question, the participants were asked to share their childhood experiences learning Spanish at home. They were also asked to share their experiences learning Spanish at the elementary, the secondary, and university levels. The responses were analyzed to form categories based on identified patterns (Fowler, 1995).

The participants' childhood experiences learning Spanish at home were organized into five different categories. Forty-six percent of the participants described Spanish as their first language, as represented in this statement: "At home I have learned a lot of Spanish. My first language is Spanish." A participant stated, "My mom and I only speak Spanish at home. It is very fluent." Another participant stated, "Yo vengo de una familia mexicana, así que no he tenido problema con el español. (I come from a Mexican family so I haven't had any problems with Spanish.)" Twenty-five percent of participants reported having only used conversational Spanish at home: "Spanish was the main language that was taught to me in my childhood, but the sad part was that they never had time to read to us." These participants did not have experiences with the Spanish language at home that would start developing academic language, which would prepare them for school. Thirteen percent of participants considered the type of experiences they had with the Spanish at home to be negative. One participant stated, "My learning experience, due to that I was raised in a 'barrio' just within a mile from the border, was Spanglish and slang. Not a good thing." Eight percent of the participants reported having more exposure to English than to Spanish as they were growing up. One participant described her experiences as "very bad – both parents spoke more a lot more English. This deprived me of understanding and learning my native language – what should have been my native language." Finally, only one participant (four percent) reported having equal exposure to English and Spanish at home as a child, while another participant did not respond to this item.

The participants' experiences with Spanish at the elementary level ranged from receiving all Spanish instruction to not receiving any at all. Forty-six percent of the participants reported no experiences with Spanish at the elementary level. One participant shared a very sad experience:

When I came to USA, in my classroom I was the only that did not speak English and the kids would make fun of me or ignore me . . . including the teacher, she only spoke English, did not want to bother with me.

Several of these participants mentioned that they were not allowed to speak Spanish in the classroom, but that they spoke Spanish with their friends in the playground. Thirty-three percent of the participants received Spanish instruction only for a very short period of time: "I was in Bilingual Ed. Pre-K and Kinder. I learned English very quickly." Only one participant (4%) reported receiving Spanish instruction throughout elementary school. She stated, "from grade 1-6 have always had Spanish classes. That also included some history of Mexico." Although the participant did not specify where she received this type of instruction, more than likely she

attended elementary school in Mexico. Unfortunately, four participants did not respond to this question.

Participants had very similar experiences with Spanish at the secondary level. They reported either not having any Spanish instruction, or receiving very basic Spanish instruction through a foreign language course. The following participants' responses better illustrate these experiences: "At the secondary level all I would speak is the English language." "Rarely spoke Spanish. It was not common in our school." "In the secondary level I only took 2 Spanish courses. The courses were very broad and basic." "I didn't learn much in secondary." In addition, participants reported that during that time their Spanish proficiency decreased: "I spoke more English than Spanish. My Spanish faded."

Finally, participants were asked to share their experiences with Spanish at the university level. All participants coincided in that they had received high quality Spanish instruction at the university level. Participants' responses were organized into three categories. Fifty-four percent of participants reported having excellent experiences in their Spanish courses. One participant stated, "I liked learning Spanish at the university because it was a growing experience. Even though I knew Spanish, I learned so much more." Another participant described her experiences as "extremely important. [I] have learned a lot from classmates and professors." One more participant stated: "My experiences at the university have been very helpful – extremely helpful. I have probably learned everything ever about Spanish." Students have been exposed to Spanish more at the university level than during their public school years. One participant stated, "I have spoken more Spanish here than my school years. I have learned a lot and would love to learn more." Seventeen percent of participants reported neutral experiences with Spanish at the university. Although 29% of the participants acknowledged that the Spanish instruction they were receiving was very good, they reported experiencing difficulty. One participant stated that her experiences with Spanish at the university "have been good, but [she is] not that comfortable with speaking and writing it still." Another participant shared his experiences as follows: "It has been somewhat of a challenge because of my incorrect Spanish that I grew up speaking. However, I really appreciate the correct way of speaking Spanish." One last participant stated that Spanish at the university level was "very academic, which was very hard, but [she] learned a lot."

Discussion

Research Question One

Evidently, future bilingual teachers were aware that, in order to be effective teachers of English language learners, they would be required to use both English and Spanish on a regular basis. They were also aware that they would have to make use of both conversational and academic language dimensions, especially with their students, in order to model the type of language that they want their students to develop. Unfortunately, a considerable number of participants still gave English a higher status since they felt that English was the appropriate language to communicate with colleagues and school administrators. Not surprisingly, those prospective teachers shared negative experiences during their childhood that were directly linked to speaking Spanish.

Research Question Two

Prospective bilingual teachers were generally welcoming about the amount of Spanish that was required in their teacher preparation program. They valued the opportunity to “improve” their Spanish skills as they felt that they would become better bilingual teachers. Evidently, those who reported lack of Spanish instruction throughout their schooling also reported experiencing difficulty with the high academic level of Spanish that was expected of them at the university level. Consequently, those college students with lower levels of academic Spanish stated they would prefer a lower percentage of Spanish in their university coursework.

Research Question Three

The experiences that future bilingual teachers had with Spanish as they were growing up have shaped their perceptions of their future role as bilingual teachers and their performance in their teacher preparation program. The attitudes of their parents toward Spanish shaped the amount of exposure to Spanish that they experienced. This is exemplified by the participant who now regrets having been denied the opportunity to acquire Spanish as a young child. In turn, participants’ childhood experiences are now shaping the amount of Spanish that they are exposing their children to. One of the participants shared the following scenario: “At home, I am the only one that speaks Spanish fluently. All my children speak English. (I had a bad experience when I started to learn English. Children can be cruel.)” These experiences will undoubtedly shape the amount of Spanish that these teachers will expose their students to in the future. In addition, the lack of academic experiences with Spanish throughout their education was having an effect on their performance at the university level. Nevertheless, all of the participants were grateful for the opportunity to refine their level of academic Spanish.

Overall, it is important to note that many participants used terms such as “proper” and “correct” to refer to the type of Spanish they wished to acquire. They also devalued Spanglish, “incorrect” speech, and “words that are not in the dictionary.” Therefore, they viewed standard Spanish as a superior language variety than their home dialect. It also appeared that the difference between standard and academic language was blurry for some participants.

Conclusions and Implications

Research has shown that the most effective method to educate English Language Learners is providing them with native language instruction (Collier, 1992; Greene, 1997; Ramirez, Yuen, & Ramey, 1991; Rolstand, Mahoney, & Glass, 2005; Thomas & Collier, 2002). Although additional research is necessary, dual language education has been identified by researchers as a promising method of instruction for ELLs (Gómez, Freeman, & Freeman, 2005; Krashen, 2004). This type of instruction cannot be provided without well-prepared teachers who are fully proficient both in English and in Spanish. The only way dual language programs can contribute to student academic achievement is if they are taught by teachers who possess the

levels of academic English and Spanish necessary to impart academic instruction in all content areas. Therefore, the preparation of bilingual teachers both in English and Spanish is critical.

The results of this pilot study showed that future bilingual teachers, in general, had had limited academic instruction in Spanish at the elementary and secondary levels. However, these prospective bilingual teachers were receiving high quality academic Spanish instruction at the university level. These college students were very receptive to the opportunities they encountered at the university level to continue developing their Spanish proficiency. Although for some of these future teachers, the level of academic Spanish used at the university level was challenging and difficult to master, they enjoyed and valued the learning experience. Finally, prospective bilingual teachers felt that their future students would benefit from academic instruction in Spanish, so they believed that the instruction that they were receiving at the university would be very useful to them once they started teaching.

In general, participants in this pilot study expressed a desire to “improve” their Spanish proficiency through their college courses, since they felt it would be necessary for an adequate performance as future bilingual educators. The following quote from one of the participants summarizes their overall sentiment:

I expect to learn how to properly speak the Spanish language and hope I can also learn how to write it too. My accomplishment would have to be for me to become very fluent (in the proper way) so I can then transfer that ability to my future students.

As can be noted, the participants expressed a desire to adopt a standard form of Spanish and to model it for their students. This, in addition to a few disparaging comments about the dialect of Spanish they speak, showed that work needs to be done at the university level to validate their language identities and those of their future students. It is important for future teachers to understand that although standard forms of language are highly valued and recognized, dialects are valid and complex forms of communication. Moreover, future bilingual educators must understand the difference between standard and academic language. It is also important for university professors to stress the importance of academic language development, which is the language register that allows individuals to succeed in academic settings.

Prospective teachers must feel equipped with the necessary skills to positively impact student learning. Effective bilingual teachers in the Southern Tip of Texas must possess adequate levels of academic English and Spanish to ensure student achievement in all content areas. These future bilingual teachers are, to a great extent, dependent on their university coursework to increase their level of academic Spanish. Therefore, it is important for professors of bilingual education to be aware of their students’ perceptions of, as well as of their experiences with academic Spanish before entering the university. In that fashion, bilingual methods courses can address the language needs of university students to positively impact their future performance as bilingual teachers, and consequently, the achievement level of the children with which they will work.

Additional research about the topic is being conducted with a revised form of the instrument piloted in this study. The survey was modified to learn more about where future

bilingual teachers received their education (e.g., United States v. Mexico). Such research will attempt to answer these three research questions with a larger sample including both prospective bilingual and ESL (English as a Second Language) teachers.

References

- Collier, V. P. (1992). A synthesis of studies examining long-term language minority student data on academic achievement. *Bilingual Research Journal*, 16, 187-212.
- Converse, J. M., & Presser, S. (1986). *Survey questions: Handcrafting the standardized questionnaire: Vol. 63. Quantitative applications in the social sciences series*. Newbury Park: Sage Publications.
- Cummins, J. (1999). BICS and CALP: Clarifying the distinction. (ERIC Document Reproduction Service No. ED 438 551)
- Escamilla, K. (2000). Teaching literacy in Spanish. In J. V. Tinajero & R. A. DeVillar (Eds.), *The power of two languages 2000: Effective dual-language use across the curriculum* (pp. 126-141). New York: McGraw-Hill School Division.
- Fowler, F. J., Jr. (1995). *Improving survey questions: Design and evaluation: Vol. 38. Applied social research methods series*. Thousand Oakes, CA: Sage Publications.
- Freeman, D., & Freeman, Y. (2006, May). *Developing academic language for school success*. Paper presented at the International Reading Association conference, Chicago, IL.
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction* (6th ed.). White Plains, NY: Longman.
- Gay, L. R., & Airasian, P. (1992). *Educational research: Competencies for analysis and applications* (7th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.
- Gómez, L., Freeman, D., & Freeman, Y. (2005). Dual language education: A successful 50/50 model. *Bilingual Research Journal*, 29, 145-164. Retrieved April 26, 2006 from <http://brj.asu.edu/abstracts.html>
- Greene, J. P. (1997). A meta-analysis of the Rossell and Baker review of bilingual education research. *Bilingual Research Journal*, 21, 103-122.
- Guerrero, M. D. (1997). Spanish academic language proficiency: The case of bilingual education teachers in the U.S. *Bilingual Research Journal*, 21, 65-84.
- Hodgkinson, H. L. (2003). Educational demographics: What teachers should know. In A. C. Ornestein, L. S. Behar-Horenstein, & E. F. Pajak (Eds.), *Contemporary issues in curriculum* (pp.349-353). Boston: Allyn and Bacon.
- Krashen, S. (1998). Comprehensible output. *System* 26, 175-182. Retrieved April 26, 2006 from <http://www.sdkrashen.com>
- Krashen, S. (2004). *The acquisition of academic English by children in two-way programs: What does research say?* Paper presented at the National Association for Bilingual Education conference, Albuquerque, NM. Retrieved April 26, 2005 from <http://www.sdkrashen.com>
- Lessow-Hurley, J. (2005). *The foundations of dual language instruction*. Boston: Allyn and Bacon.
- Lindholm, K., & Molina, R. (2000). Two-way bilingual education: The power of two languages in promoting educational success. In J. V. Tinajero & R. A. DeVillar (Eds.), *The power of two languages 2000: Effective dual-language use across the curriculum* (pages 163-174). New York: McGraw-Hill School Division.
- Office of Data Management and Reporting (2006). *Institutional Profile: UTB/TSC Profile Spring 2003*. Retrieved July 19, 2006, from The University of Texas at Brownsville and Texas Southmost College Web site: <http://blue.utb.edu/dmr/dmr/profsp03.pdf>

- Ovando, C. J., Combs, M. C., & Collier, V. P. (2006). *Bilingual & ESL classrooms: Teaching in multicultural contexts* (4th ed.). Boston: McGraw Hill.
- Ramirez, J. D., Yuen, S. D., & Ramey, D. R. (1991). *Executive summary of final report: Longitudinal study of structured immersion strategy, early-exit and late-exit transitional bilingual education programs for language-minority children*. San Mateo, CA: Aguirre International.
- Rolstand, K., Mahoney, K., & Glass, G. V. (2005). The big picture: A meta-analysis of program effectiveness research on English language learners. *Educational Policy*, 19, 572-594.
- Shin, H. (2005). *School Enrollment – Social and Economic Characteristics of Students: October 2003*. Retrieved July 20, 2006, from U.S. Census Bureau Web site:
<http://www.census.gov/prod/2005pubs/p20-554.pdf>
- Sutterby, J. A., & Ayala, J. (in press). Border teacher Spanish language proficiency: 21st century bilingual educators. *TABE Journal*.
- Sutterby, J. A., Ayala, J., & Murillo, S. (in press). El sendero torcido al español: The development of bilingual teachers' Spanish language proficiency. *Bilingual Research Journal*, 29(2), 435 – 452.
- Texas Education Agency (2003). *Snapshot 2003 summary tables: Education Service Center Region: ESC Region 01 Edinburg*. Retrieved February 9, 2006, from
<http://www.tea.state.tx.us/perfreport/snapshot/2003/>
- Texas Education Agency (2005). *Pocket edition: 2004-05 Texas Public School statistics*. Retrieved February 9, 2006, from
<http://www.tea.state.tx.us/perfreport/pocket/2005/pocied0405.pdf>
- Texas Education Agency (2006). *Teacher preparation issues*. Retrieved February 9, 2006, from
<http://www.tea.state.tx.us/research/prr10/greenpg29.html>
- Thomas, W. P., & Collier, V. P. (2002). Executive summary of final report: A national study of school effectiveness for language minority students' long-term academic achievement. *Center for Research on Education, Diversity and Excellence*. Retrieved June 13, 2002, from <http://www.crede.ucsc.edu>

TABE JOURNAL
Winter 2006/07, Volume 9, Number 2
Call for Manuscripts

Editors:
Dr. Josefina Villamil Tinajero & Dr. Judith Hope Munter
The University of Texas at El Paso

The TABE (Texas Association for Bilingual Education) Journal, a peer-reviewed publication, is distributed by TABE for the purpose of improving practice and advancing the knowledge base in bilingual education.

The Journal seeks articles that examine policies, theoretical constructs, cultural issues or practices impacting bilingual teaching and learning. Review of books and other media and descriptions of successful classroom practices will also be considered.

The TABE Journal will publish articles written in either English or Spanish. The Editorial Board will consider clarity of presentation and timeliness of the content in judging the quality of the manuscripts.

Focus: This issue invites researchers and practitioners to submit articles and essays on bilingual education with a special focus on high stakes testing's impacts on bilingual education. Qualitative and quantitative studies that can contribute to the growing knowledge base of bilingual education models and best practices are especially welcome. Other issues to be addressed include assessment and evaluation, social justice concerns, and the challenges of bilingual education in the context of high stakes accountability.

Who Should Submit: Higher education faculty, graduate students and staff with experience planning/designing/implementing and conducting research on bilingual education programs; K-12 teachers and administrators with bilingual education knowledge and experience.

Procedure, Requirements, Deadlines and Editing Policy: Manuscripts are to be submitted electronically as a Word Document. Send e-mail attachment, MS-Word-doc-file type, to tinajero@utep.edu with copy to jmunter@utep.edu, and tabe@sbcglobal.net. We do not accept zipped or compressed files. To ensure reviews are "blind," the author(s) must include a separate MS-Word-doc-file with name(s), address, telephone number, E-mail address and institutional affiliation. E-mail will be our way to communicate with you.

It is further requested that a brief abstract of no more than 150 words describing the essence of the article be included.

Manuscripts are due by October 15, 2006. Early submission is encouraged to facilitate the journal's double-blind-peer reviewed process.

Format and Style Requirements: Authors should follow APA (5th edition) guidelines for citations and references. Manuscripts accepted for the publication are subject to editing. Manuscripts should be between 15-25 pages, double-spaced, standard 12" font, one-inch margins. It is the author's responsibility to ensure that any stylist and grammatical errors are corrected prior to publication.

Papers accepted for publication in TABE Journal become the copyright of the Texas Association for Bilingual Education. Manuscripts will be accepted with the understanding that they are the originals and not, in any way, in breach of copyright. Manuscripts for possible publication in the TABE Journal should be sent to: TABE Editors: tinajero@utep.edu and jmunter@utep.edu with copy to tabe@sbcglobal.net.