Introduction

Welcome to TABE Journal, Volume 9 #2.

In this issue of the TABE Journal, critical issues relating to high quality instruction for English language learners are addressed by scholars writing in two languages, Spanish and English, from a variety of perspectives. In the first section, research on science and mathematics lessons is documented in articles by Anderson/Escalante and in Cuellar/de la Colina/Cmijdalka. These authors describe some of the challenges and successes encountered in designing and implementing high quality instruction in mathematics and science in bilingual classrooms. Their research studies document key outcomes for children who participated in programmatic innovations. Almaguer's article provides a descriptive account of effective learning centers in bilingual/multilingual preschool classrooms. Her discussion of this instructional approach includes an in-depth examination of a two-way dual language preschool classroom in the Rio Grande Valley.

Several of the authors in this issue expand on current research examining the preparation and retention of high quality teachers who are well prepared to work with ELLs. Nava/Garza present qualitative and quantitative data from their study of elementary teachers' attitudes/beliefs about children's code-switching. In their analysis of these findings, the authors discuss implications for instruction and pupil achievement. Sarmiento's article highlights the critical shortage of teachers who are well prepared to work with ELLs. Her study explores the challenges that students teachers face as they prepare for future careers in bilingual education. Guadarrama's continues this thread, examining critical issues that bilingual students face in teacher preparation programs. Her study provides key recommendations for teacher educators/university administators' consideration in relation to the organization and the curriculum of pre-service education. An action research project described by de la Piedra further illustrates the ways in which curricular change in coursework for pre-service teachers played a critical role in supporting quality education. Her course integrated a "funds of knowledge" approach to teaching and learning, including parental involvement, native language literacy, service-learning, and reflection. Another response to the need for increasing numbers of well-prepared bilingual teachers is presented by Morales, who focuses on the small but steadily increasing numbers of Latino/a paraeducators and other nontraditional students who are completing college degrees/teacher certification requirements and moving into the nation's teaching force.

Scholars from three different universities in Texas, Perez Gabriel/Irby/Lara-Alecio examine some of the legal issues that raise critical questions about equity for all learners in our nation's schools, with a specific focus on ELLs who are also gifted/talented (G/T) in Texas.

Another TABE Journal issue on bilingual education research and practice will go to press once again in the fall of 2008. 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 in this public

Que Tristeza, Que Lastima y Que Pena Me Da

Lilia Martinez
Canutillo Independent School District
En Memoria de mi abuelita Micaela

Qué tristeza me da
> que padres que hablan, leen, y escriben en dos idiomas quieran que sus hijos aprenden nada más inglés.

Qué tristeza me da
> que las canciones, trabalenguas y rimas tales como "Naranja Dulce, Limón Partido", que fueron la base de la educación de estos padres, jamás serán parte de la vida de estos niños.

Qué lástima me da
> que los juegos, como el "Mamaleche", el "Chinchilagua", que estos padres jugaron en su niñez se van a perder para siempre y totalmente.

Qué lástima me da
> que padres que crecieron en dos culturas, festejando fiestas y celebraciones llenas de alegría y gusto, estos niños no conocerán ni las van a disfrutar.

Qué pena me da
> que estos padres fueron entretenidos por las historias, cuentos y leyendas que contaban sus padres y abuelos y ahora sus hijos no van a comprender ni apreciar con el mismo interés.

Qué pena me da
> que las conversaciones, pláticas y consejos que estos padres escucharon de sus padres, abuelitos, y tíos amados, no van a tener el mismo significado porque al traducir muchas veces se pierde el mensaje.

Qué tristeza me da
> que la poesía de Neruda y de Alma Flor Ada nunca la van escuchar, menos darle valor y admiración.

Qué tristeza me da
        que los murales de Rivera y dibujos de Kahlo estos niños nunca los reconocerán como
        tesoros nacionales.

Qué lástima me da
        que bailes y canciones que bailaron y escucharon estos padres a la luz de las estrellas
        nunca les van a llegar al corazón a sus hijos para darles el orgullo de ser lo que son.

Pero más tristeza, lástima y pena me da
     al pensar que a estos niños les va a faltar conocer sus raíces, tradiciones y su comprensión de
     quiénes son, de dónde vienen y a dónde van.

forum. Please see the Call for Papers for TABE v.9 #3 and consider submitting a manuscript for that issue.

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

Acknowledgements

TEXAS ASSOCIATION FOR BILINGUAL EDUCATION
TABE JOURNAL

The TABE Journal

Hispanic Fourth Grade English Language Learners and Mathematical Problem-solving Process Skills: Which Process Skills Serve as Predictors to Arriving at Correct Final Answers to Subtraction Problems?

Roxane Cuellar, Maria G. De La Colina, and Sandy Cmajdalka
Texas State University-San Marcos and University of Houston-Downtown

ABSTRACT

This study investigated the performance of 74 English Language Learners in fourth grade bilingual classrooms on problem-solving process skills involving routine three-digit subtraction word problems with regrouping. The purpose of the study was to examine the relationship between each of five problem-solving process skills and arriving at the correct final answer to a subtraction problem. The five problem-solving process skills include explaining the problem, estimating the final answer, representing the problem, solving the representation, and explaining the final answer. The aforementioned process skills are commonly cited in the literature for problem solving.

A discriminant analysis using an all-possible subsets approach was used to determine the relationship between the variables within the function. Results of the study indicated that the only process skills significantly related to arriving at the correct final answer to a subtraction problem were process 3 (representing the problem) and process 4 (solving the representation).

Key Words: bilingual education, mathematical problem solving, process skills, subtraction,
English Language Learner

Contact Information:

Roxane Cuellar, Ph.D.
Texas State University-San Marcos
ra17@txstate.edu
(512) 245-7486

Maria G. De La Colina, Ph.D.
Texas State University-San Marcos
md26@txstate.edu
(512) 245-2299

Sandy Cmajdalka, Ph.D.
University of Houston-Downtown
cmajdalkas@uhd.edu

Fourth Grade English Language Learners and Problem-Solving Process Skills: Which Process Skills Serve as Predictors to Arriving at Correct Final Answers?

Introduction

The National Council of Teachers of Mathematics (NCTM) developed the *Curriculum and Evaluation Standards for School Mathematics* which state, "Problem solving should be the central focus of the mathematics curriculum" (National Council of Teachers of Mathematics [NCTM], 1989a, p.1). The mathematics education community for reform in mathematics education developed these standards as a response to earlier published demands (National Commission on Excellence in Education, 1983; National Science Foundation, 1983; National Science Foundation, 1982). NCTM later developed the *Principles and Standards of School Mathematics*. This revised document makes clear the basic premise of the original *Standards* (Goldsmith & Mark, 1999; NCTM, 2006; 1999; 1989a). The *Standards* and *Principles and Standards* are endorsed by professionals in the mathematical sciences for the direction of school mathematics at a national level (Goldsmith & Mark, 1999; Ladson-Billings, 1997; NCTM, 2006; 1999; 1995; 1991; 1989b).

Similarly, in Texas, problem solving has also been given a high priority in mathematics education. As mandated by the *Texas Essential Knowledge and Skills (TEKS)*, all kindergarten through twelfth grade teachers in the State of Texas are required to teach specified elements of problem solving and are held accountable for their students' performance in these areas (Texas Education Agency [TEA], 2006a). Also, the *Texas Assessment of Knowledge and Skills (TAKS)* mathematics test, which begins testing children statewide at grade three, emphasizes student performance in problem solving (TEA, 2006a).

Hispanics and Academic Achievement

The following table depicts that the majority of students attending public schools in Texas is Hispanic.

Texas Students by Ethnicity

Ethnicity	African American	Hispanic	White	Other
Number of Students	621,999	1,961,549	1,653,008	147,315
Percentage	14.2%	44.7%	37.7%	3.4%

(Source: Texas Public School Statistics [2004-2005], TEA 2005)

It is important to note that out of 1,961,549 Hispanic students in Texas, the total identified number of second language learners is 631,534, or 32.2% (TEA, 2005). The number of second language learners across the nation is also escalating (National Clearinghouse for English Language Acquisition [NCELA], 2003; U.S. Census, 2000). The dramatic increase of Hispanic students across the nation, and specifically in Texas, places an even greater importance to address the academic needs of this population.

Unfortunately, a large number of the Hispanics who are of school age are underachieving in academic school subjects, especially in mathematics. Specifically, it is problem-solving scores

that need to improve (National Center for Education Statistics [NCES], 1999; TEA, 2006a; 2006b).

Over the past 25 years, Hispanic students have consistently been out-performed in mathematics achievement by their Anglo counterparts (Carpenter, Corbitt, Kepner, Lindquist, & Reys, 1981; Croom, 1997; De La Rosa & Maw, 1990; Grossman, 1995; Licon-Khisty, 1995; Mickelson, 2003; Mullis et al., 1994; Tate, 1997). At the same time, teachers and administrators are under increasing pressure to have their students perform well on standardized tests and other measures of academic achievement. This pressure is especially acute in Texas, where individual schools are evaluated by the Texas Education Agency on the basis of student attendance and student scores on the *TAKS*, which is administered annually to students to assess their academic achievement in reading, writing, and mathematics (TEA, 2006a). In 2006, Hispanic students scored lower than their Anglo peers in mathematics at every grade level tested on the *TAKS* (TEA, 2006b).

Problem Solving and Process Skills

A student's ability in problem solving cannot be adequately determined based solely on arriving at the correct final answer. There are several different thought processes that occur while one is undertaking and solving a problem. As with the definition of "problem solving," researchers have not reached agreement as to the exact form and number of processes that exist. However, researchers do agree that these problem-solving processes exist.

Oftentimes, students are taught that the purpose of solving problems is to arrive at the correct final answer. It is rarely stressed that the processes and strategies used by the students are just as important as arriving at a correct final answer (Kulm, 1994). It is important to focus on each specific problem-solving process used during the course of solving the problem, because when teachers focus on correct and incorrect answers, the wrong conclusions can be reached (Heuzel-Panhuizen & Gravemeijer, 1993; Kulm, 1990a).

It appears advantageous to determine student sources of error at a precise level. Knowing more specifically where errors occur can lead to a better understanding of where the student is having problems (Marshall, 1986; NCTM, 1995; 2006). Depending on the specific error source, appropriate instruction can be planned (NCTM, 1995; 2006). Arriving at an incorrect answer does not give enough information as to where the student is having problems or how to best proceed with instruction (NCTM, 1995; 2006). Therefore, identifying and analyzing the specific processes used to solve the problem is notably important.

It is important to note that problem solving involves several unique processes. Presently, there are at least five processes that are commonly cited in the literature (Marshall, 1986; Clarke, Clarke, & Lovitt, 1990; Kulm 1990a, 1990b; Lester & Kroll, 1990; Ge & Land, 2001; Timmerman, 2003): (1) explaining the problem, in which the student should be able to identify what the problem is asking him/her to do or find out; (2) estimating the final answer, where the student needs to give an educated guess or estimation of the final answer to the problem; (3) representing the problem, in which the student needs to set up the problem in an appropriate

format; (4) solving the representation, where the student actually solves the problem; and (5) explaining the final answer, where the student explains the meaning of the final answer.

The Problem

Historically, Hispanic students have typically been outperformed academically by their Anglo counterparts. This disparity is a serious problem, considering the rapid and continuous increase in the Hispanic population across Texas and the United States. In fact, the results of a variety of tests, which include the *Texas Assessment of Knowledge and Skills (TAKS),* illustrate that the largest areas of underachievement for Hispanic students are mathematics and problem solving.

Because problem solving includes several unique processes, the processes that cause the most difficulties for these students must be identified. If specific difficulties can be identified, it will be possible to improve instruction in order to assist Hispanic English Language Learners to increase levels in mathematical problem solving as well as other academic areas.

Purpose of the Study

The purpose of this study involved examining the relationship between each of five processes of mathematical problem solving and the ability of a Hispanic student identified as an English Language Learner to arrive at the correct final answer to a three-digit subtraction word problem with regrouping. The five processes include (1) explaining the problem, (2) estimating the final answer, (3) representing the problem, (4) solving the representation, and (5) explaining the final answer. This information will be helpful to educators as they work to develop effective teaching strategies for mathematics to help all students succeed.

The performance of students on state and national assessments is increasingly important. This is partly because of *No Child Left Behind (NCLB)* legislation, which stresses that school districts be held accountable for the academic achievement of all students (U.S. Department of Education, 2001). Therefore, it is necessary for teachers to find ways that students can improve their performance on these examinations. Improving student performance can be done by focusing on problem-solving methods and/or processes that will in turn lead students to consistently arrive at the correct final answer on mathematics problems. Thus, an answer to the following research question was sought:

Which of the following problem-solving process skills serve as predictors for students being able to arrive at the correct final answer when solving three-digit subtraction word problems with regrouping: (1) explaining the problem, (2) estimating the final answer, (3) representing the problem, (4) solving the representation, and (5) explaining the final answer?

Methodology

The following section will discuss the methods and procedures used to collect and analyze data, examining the relationship between each of five processes of mathematical problem solving and the ability of a Hispanic 4th grade English Language Learner to arrive at the correct final answer to a three-digit subtraction word problem with regrouping. Specifically, this

section contains a description of the subjects, instrument, data gathering procedures, data analysis, and results.

Subjects

The subjects included 74 Hispanic English Language Learners in four bilingual fourth grade classrooms in three inner- city schools in two Texas school districts. Two of the schools were located in one school district in the Brazos Valley. The third was located in a school district in the Gulf Coast region. The first school district, located in the Brazos Valley, serves a population of 14,104 students of which 38% are Hispanic and 11% are identified as English Language Learners. The second school district, located in the Gulf Coast region, serves a population of 56,127 students of which 58% are Hispanic and 23% are identified as English Language Learners (TEA, 2004).

Students participating in the study were classified as English Language Learners based on state guidelines in which a language other than English was listed as the child's first language on the Home Language Survey (a state-mandated document filed for all public school children). Fourth graders were selected, as they had one year left of instruction in the elementary school before moving on to middle school where mathematics problem solving becomes more challenging.

Procedure and Instrumentation

All students participating in the study were assessed using *the Mathematical Problem-Solving Process Assessment (MPSPA)* to score performance on two pre-selected subtraction word problems with regrouping involving five problem-solving processes. The problems are identical in form, content, and difficulty to those used by the Texas Education Agency (TEA) in the *TAKS* math test and in both districts' state-adopted mathematics textbooks.

The five problem-solving processes that were examined by the *MPSPA* are that the student (1) explains the problem, (2) estimates the final answer, (3) represents the problem, (4) solves representation, and (5) explains the final answer. Each of these five thinking processes was assigned an individual score based on the student's performance. The processes were scored using a five-point Likert scale of 0, 1, 2, 3, and 4 as the possible sub-scores, with 0 indicating the lowest level of performance and 4 indicating the highest level of performance. A score of 3 or 4 was considered as representing student achievement of the minimum expectations on the thinking process assessed. Any score below a 3 was considered to be below expectations.

At the time the research was conducted, there was not another valid and reliable assessment instrument available to classify children as proficient or not proficient with regard to specific problem-solving process skills. The *MPSPA* is based on research detailing the thinking processes involved in problem solving (Clarke et al., 1990; Kulm, 1990a, 1990b; Lester & Kroll, 1990; Timmerman, 2003). Each thinking process on the assessment tool is accompanied by prompts or questions that the administrator may pose to the student when needed. The *MPSPA* also includes a scoring guide that describes how to accurately assign sub-scores for each of the five thinking processes.

All students were provided with a copy of the mathematics word problems in both English and Spanish and were allowed to use the language of their choice. Also, any and all prompts or questions posed by the test administrator were given in either English or Spanish as requested or needed by the students. The students were asked to solve the three-digit subtraction word problems as outlined by the *MPSPA* assessment guidelines and were asked to show their answers as well as verbally explain how they arrived at their answers.

Analysis and Results

For the purpose of this study, an answer to the following research question was sought:

Which of the following problem-solving process skills serve as predictors for students being able to arrive at the correct final answer when solving three-digit subtraction word problems with regrouping: (1) explaining the problem, (2) estimating the final answer, (3) representing the problem, (4) solving the representation, or (5) explaining the final answer?

To answer this question, a discriminant analysis using an all-possible subsets approach was used to determine the relationship between the variables within the function (Huberty, 1994; Johnson, 1998). For this study, the independent variable was identified as the proficiency scores received by each student for each process skill for the two subtraction problem scenarios. The dependent variable was identified as the correctness of the final answer given by the student for each of the two problem scenarios. Final answers were deemed either correct or incorrect. No partial credit was given in this area.

All-Possible Subsets for Subtraction Problem A: One Variable

Tables 1-5 show results from the analysis with all possible subsets (one variable) for Problem A.

Table 1

Cross-Validation Results for Subtraction Problem A: Process 1 – Explaining the Problem

			Predicted Group Membership		
		Final Answer	Correct	Incorrect	Total
Original	Count	Correct	23	25	48
		Incorrect	14	12	26
	%	Correct	47.9	52.1	100.0
		Incorrect	53.8	46.2	100.0
Cross-Validated	Count	Correct	23	25	48
		Incorrect	15	11	26
	%	Correct	47.9	52.1	100.0
		Incorrect	57.7	42.3	100.0

Note: 47.3% of original grouped cases correctly classified.
45.9% of cross-validated grouped cases correctly classified.

Table 2

Cross-Validation Results for Subtraction Problem A: Process 2 –
Estimating the Final Answer

			Predicted Group Membership		
		Final Answer	Correct	Incorrect	Total
Original	Count	Correct	25	23	48
		Incorrect	9	17	26
	%	Correct	52.1	47.9	100.0
		Incorrect	34.6	65.4	100.0
Cross-Validated	Count	Correct	25	23	48
		Incorrect	9	17	26
	%	Correct	52.1	47.9	100.0
		Incorrect	34.6	65.4	100.0

Note: 56.8% of original grouped cases correctly classified.
56.8% of cross-validated grouped cases correctly classified.

Table 3

Cross-Validation Results for Subtraction Problem A: Process 3 –
Representing the Problem

| | Final Answer | Predicted Grp. Membership | | Total |
		Correct	Incorrect	
Original	Count			
		Correct		
		46	2	48
		Incorrect		
		15	11	26
	%			
		Correct		
		95.8	4.2	100.0
		Incorrect		
		57.7	42.3	100.0
Cross-Validated	Count			
		Correct		
		46	2	48
		Incorrect		
		15	11	26
	%			
		Correct		
		95.8	4.2	100.0
		Incorrect		
		57.7	42.3	100.0

Note: 77.0% of original grouped cases correctly classified.
77.0% of cross-validated grouped cases correctly classified.

Table 4

Cross-Validation Results for Subtraction Problem A: Process 4 – Solving the Representation

		Final Answer	Predicted Grp. Membership		Total
			Correct	Incorrect	
Original	Count	Correct	48	0	48
		Incorrect	4	22	26
	%	Correct	100.0	0.0	100.0
		Incorrect	15.4	84.6	100.0
Cross-Validated	Count	Correct	48	0	48
		Incorrect	4	22	26
	%	Correct	100.0	0.0	100.0
		Incorrect	15.4	84.6	100.0

Note: 94.6 % of original grouped cases correctly classified.
　　　94.6% of cross-validated grouped cases correctly classified.

Table 5
Cross-Validation Results for Subtraction Problem A: Process 5 – Explaining
the Final Answer

| | | | Predicted Grp. Membership | | |
	Final Answer		Correct	Incorrect	Total
Original	Count	Correct	25	23	48
		Incorrect	11	15	26
	%	Correct	52.1	47.9	100.0
		Incorrect	42.3	57.7	100.0
Cross-Validated	Count	Correct	25	23	48
		Incorrect	11	15	26
	%	Correct	52.1	47.9	100.0
		Incorrect	42.3	57.7	100.0

Note: 54.1% of original grouped cases correctly classified.
54.1% of cross-validated grouped cases correctly classified.

Table 3 shows that 77.0% of original and cross-validated grouped cases were correctly classified when process 3 (representing the problem) was used as the predictor for arriving at the correct final answer to a multi-digit subtraction word problem. Table 4 shows that 94.6% of original and cross-validated grouped cases were correctly classified when process 4 (solving the representation) was used as the predictor for arriving at the correct final answer to a multi-digit subtraction word problem.

In summary, Tables 1-5 show that of the five problem-solving process skills, process 4 (solving the representation) was the best predictor of arriving at the correct final answer to a multi-digit subtraction word problem for a Hispanic fourth grader identified as an English Language Learner. The second-best predictor of arriving at the correct final answer was process 3 (representing the problem).

All-Possible Subsets for Subtraction Problem A: Two Variables

When using two variables as predictors for arriving at the correct final answer to a multi-digit subtraction word problem with Hispanic fourth grade students identified as English Language Learners, analyzing processes 1, 2, or 5 together with process 4 (solving the representation) resulted in the highest reliable predictability percentage, with 94.6% in each case. However, when process 4 is analyzed alone, the predictability percentage is also 94.6%. Therefore, processes 1, 2, or 5, analyzed together with process 4 neither increased nor decreased the predictability found in process 4 alone. This is also true when adding processes 1, 2, or 5, to process 3 (representing the problem). When process 3 is analyzed with processes 1, 2, or 5, the predictability percentage is 77.0%, which is identical to the predictability found in process 3 alone. It is interesting to note that predictability of original and cross-validated grouped cases increases when process 3 and 4 are analyzed together.

All-Possible Subsets for Subtraction Problem A: Three Variables

When analyzing subsets of three process skills, the highest reliable predictability percentage was 94.6% of original and cross-validated grouped cases using the subsets of processes 1, 2, and 4; 1, 4, and 5; and 2, 4, and 5. However, the predictability percentage for process 4 alone was also 94.6%. Hence, adding additional variables of processes 1 and 2, 1 and 5, or 2 and 5 to the subsets also containing process 4 neither increased nor decreased the predictability found in using process 4 alone. This is also true of process 3. When processes 1 and 2, 1 and 5 or 2 and 5 were added to process 3, the reliable predictability percentage was 77.0%, which is identical to analyzing process 3 alone. It is interesting to note that when processes 3 and 4 were paired with processes 1, 2, or 5, predictability increased in most cases.

All-Possible Subsets for Subtraction Problem A: Four Variables

When analyzing subsets of four process skills, cross-validation reliability could not be established for any of the five subsets. However, the highest predictability percentage was 100% of original grouped cases and 94.6% of cross-validated grouped cases using the subset of processes 2, 3, 4, and 5. The predictability percentage for the subset of process 4 alone was 94.6%. So, adding the additional variables of 2, 3, and 5 increased predictability of the original grouped cases and neither increased nor decreased the predictability of the cross-validated grouped cases. The predictability percentage for processes 3 and 4 was 100% of original grouped cases and 95.9% of the cross-validated grouped cases. Hence, adding the two additional variables of 2 and 5 neither increased nor decreased the predictability percentage of the original grouped cases in using processes 3 and 4 alone. Adding these variables did decrease the predictability of the cross-validated grouped cases by 1.3 percentage points.

All-Possible Subsets for Subtraction Problem A: Five Variables

Analyzing all five process skills together resulted in correctly classifying 97.3% of the original grouped cases and 95.9% of the cross validated grouped cases. Using the subset of all five processes does not increase predictability over using the subset of processes 3 and 4. In fact, it decreases the predictability percentage of the original grouped cases by 2.7 percentage points and neither increases nor decreases the predictability percentage of the cross-validated grouped cases. Using all five processes does increase the predictability of analyzing process 4 alone. However, cross-validation reliability was not established when analyzing all five processes or when analyzing processes 3 and 4 as it was when analyzing process 4 alone.

In conclusion, for problem A, the best reliable predictor for arriving at the correct final answer to a multi-digit subtraction word problem with Hispanic fourth grade English Language Learners is to analyze process 4 (solving the representation). The second-best predictor for arriving at the correct final answer was to analyze process 3 (representing the problem). Similar results were found for subtraction problem B.

Discussion of Results

Results for process 3 indicate that there is a significant positive relationship between representing the problem and arriving at the correct final answer. This is expected, as a student who cannot correctly represent a problem will not likely subtract the numbers correctly.

FIGURE 1. *Distribution of Subtraction Problem Scores for Meeting Minimum Expectations (MME) or Not (NO) for Process Skill 3: Representing the Problem*

_____

	Final Answer			
	Correct	Incorrect		
MME	103	29	132	89%
NO	0	16	16	11%
	103	45		
	70%	30%		

n = 148 student responses (74 for each problem)

Of the 16 responses that did not meet minimum expectations for the process skill of representing the problem, not one was paired with arriving at the correct final answer. Most responses failing to meet minimum expectations were due to students setting up the numbers as an addition problem instead of as a subtraction problem. Therefore, it is important to work with those students who need help identifying the appropriate operation to use when working with addition and subtraction problems. Although meeting minimum expectations for process skill 3 does not guarantee a correct final answer, not meeting minimum expectations does indicate the likelihood of arriving at an incorrect final answer.

Solving the representation was also found to have a significant relation to the correctness of the final answer. A student who is not able to do the mechanical operations of subtraction for a three-digit problem is unlikely to arrive at the correct numerical answer.

FIGURE 2. Distribution of Subtraction Problem Scores for Meeting Minimum Expectations (MME) or Not (NO) for Process Skill 4: Solving the Representation

	Final Answer			
	Correct	Incorrect		
MME	103	32	135	91%
NO	0	13	13	9%
	103	45		
	70%	30%		

n = 148 student responses (74 for each problem)

Although meeting minimum expectations does not guarantee a correct final answer, not meeting minimum expectations does indicate an incorrect final answer. Also, the 32 responses classified as meeting minimum expectations that failed to arrive at a correct final answer were mostly due to difficulty with regrouping. For teachers, this highlights the critical importance of working on this process skill with those students who do not meet minimum expectations and focusing on the importance of regrouping in subtraction.

Limitations of the Study

This study was limited to Hispanic fourth grade students identified as English Language Learners receiving bilingual education in two unique school districts in the State of Texas. As different teachers have different methods of teaching in the classroom, there is possibly a limit to which results from this study may be generalized to other second language learners.

Conclusions and Recommendations

The findings in this study showed that the process skills of representing the problem and solving the representation were the only two process skills found to be significantly related to arriving at the correct final answer to a problem when using routine word problems involving multi-digit subtraction. This result is not meant to suggest that these two process skills are the *only* two that have importance in mathematical problem solving. It simply indicates that to improve achievement scores on this type of simple routine word problem in subtraction, the processes of representing the problem and solving the representation are the two processes to emphasize. It is likely that the other process skills will have more importance as the difficulty of the problem increases, as the word problem becomes non-routine, or as the basic operation changes. Further research into such types of problems is recommended as state and national assessment instruments attempt to assess performance on a variety of problem types.

Significance of the Study

The number of second language learners across the nation and in Texas continues to increase at an alarming rate (TEA, 2005; US Census, 2000). The dramatic increase of Hispanic students across the nation, and specifically in Texas, places an even greater importance to address the academic needs of this population.

Unfortunately, a large number of the Hispanics that are of school age are underachieving in academic school subjects, especially in mathematics. Specifically, it is problem-solving scores that need to improve (National Center for Education Statistics [NCES], 1999; TEA, 2006a; 2006b).

Presently, there is limited research that identifies difficulties in problem-solving process skills for this particular population of students (Cmajdalka, 1999). If the difficulties can be identified through research, then it will be possible to improve instruction and assist Hispanic English Language Learners in increasing achievement levels in mathematical problem solving. This will in turn lead to better performance for these students on state and national assessments which continue to gain importance partly because of *No Child Left Behind (NCLB)* legislation (U.S. Department of Education, 2001).

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El aprendizaje para el descubrimiento y la enseñanza inquisitiva: Expandiendo los horizontes de las ciencias para los estudiantes bilingües

María Guadalupe Arreguín-Anderson y José Agustín Ruiz-Escalante
La Universidad de Texas – Pan Americana

RESUMEN

La enseñanza científica representa un reto para la mayoría de maestros de las escuelas primarias especialmente cuando tienen que enseñar el contenido y al mismo tiempo desarrollar un segundo idioma. El aprendizaje para el descubrimiento y la enseñanza inquisitiva constituyen el enfoque central del presente artículo, en el cual se sugiere que los alumnos bilingües resultan beneficiados cuando la instrucción en el área de las ciencias mantiene un balance entre el desarrollo cognitivo, lingüístico y académico de los estudiantes. Este tipo de enseñanza puede disminuir la brecha académica existente entre los alumnos monolingües y los estudiantes bilingües.

Contact Information:

María Guadalupe Arreguín-Anderson
La Universidad de Texas – Pan Americana

José Agustín Ruiz-Escalante
La Universidad de Texas – Pan Americana
ruizj@utpa.edu

El aprendizaje para el descubrimiento y la enseñanza inquisitiva: Expandiendo los horizontes de las ciencias para los estudiantes bilingües

Los maestros que muestran entusiasmo, interés y que hablan del poder y la belleza de las ciencias, transmiten a sus estudiantes algunas de estas actitudes. (National Research Council, 1996)

A medida que los avances científicos y la diversidad lingüística se entretejen en la fibra de la sociedad americana, el poder y la belleza de las ciencias se verbalizan en un número cada vez mayor de idiomas en las escuelas públicas. El reto, para los maestros, consiste en mantener un balance entre la enseñanza del contenido científico y las estrategias para el desarrollo del lenguaje dirigidas a los estudiantes bilingües.

Este artículo propone que los estudiantes bilingües se benefician más de aquellos programas que inicialmente reducen las demandas lingüísticas y que modifican la instrucción científica empleando métodos inquisitivos, estrategias de descubrimiento y actividades manuales. Este tipo de enseñanza brinda mucho apoyo contextual y promueve el desarrollo del lenguaje académico (Chamot & O'Malley, 1994). Los estándares nacionales de la pedagogía científica del Concilio Nacional de Investigación recomiendan la instrucción inquisitiva como una estrategia central para la enseñanza de las ciencias y sugieren la exploración de preguntas auténticas generadas a partir de las experiencias de los estudiantes.

En el año académico 2004-2005 había más de cinco millones de estudiantes con un primer idioma otro que el inglés en las escuelas públicas de los Estados Unidos. La gran mayoría de ellos, más del 66%, tenían el español como lengua materna. Un total de once estados, Tennessee, Georgia, Alabama, Nebraska, Carolina del Sur y otros, tuvieron un crecimiento del más del 200% de estudiantes bilingües en un período de diez años, de 1994 al 2004 (National Clearinghouse for English Language Acquisition, 2005).

La ley federal de educación del 2002, *No Child Left Behind* (NCLB), contiene requisitos que han obligado a los distritos escolares de los Estados Unidos a que demuestren anualmente los logros académicos de todos los estudiantes usando una batería de exámenes. Una de las áreas que se examinan es la ciencia. Por muchos años las escuelas primarias no le dieron importancia a la enseñanza de las ciencias; pero ahora que ya es un requisito administrar un examen en esta área, las escuelas están buscando formas de cómo impartir instrucción científica de alta calidad sin bajar el contenido del plan de estudios a todos los estudiantes y especialmente a los estudiantes bilingües.

Thomas y Collier (1997) declararon que los programas de educación bilingüe correctivos, cuya meta principal es la adquisición de habilidades lingüísticas en inglés, impiden los logros académicos de los estudiantes bilingües en las áreas de matemáticas, estudios sociales y ciencias. Ese énfasis exclusivo en el desarrollo lingüístico agranda las diferencias académicas entre estudiantes bilingües y los estudiantes monolingües. August y Hakuta (1997) explican que, en la educación superior, esta diferencia académica es más evidente en los campos relacionados con las ciencias, donde los estudiantes minoritarios tienen una representación casi invisible.

Descubrimiento e Inquisición en la Enseñanza de las Ciencias a Estudiantes Bilingües

Bruner (1960) postuló una filosofía de descubrimiento, la cual sostiene que todo aprendizaje debe ser activo y que el plan de estudios debe inculcar el desarrollo de habilidades para resolver problemas usando estrategias inquisitivas y de descubrimiento. Las estrategias inquisitivas en la enseñanza y aprendizaje de las ciencias sitúan a los maestros y estudiantes como socios en el proceso de descubrimiento. Siguiendo esta perspectiva, el proceso inquisitivo es conducido de tal forma que los estudiantes manipulan los conceptos llevando a cabo actividades manuales y eventualmente descubren conocimientos que son nuevos para ellos (Jarolimek, Foster, & Kellough, 2005).

El proceso inquisitivo científico requiere que los estudiantes reúnan e interpreten información, evalúen los resultados y saquen conclusiones válidas en el ambiente donde el apoyo contextual esté siempre presente. Seguir este proceso inquisitivo ayuda a los estudiantes bilingües sin tener que sacrificar el contenido de las ciencias para concentrarse en el desarrollo del inglés. Los estudiantes bilingües adquieren lenguaje y contenido académico cuando se utiliza el aprendizaje gradual guiado (conocido en inglés como scaffolding) con ayuda contextual y lingüística en cada lección (Cummins, 2000).

Se puede hacer una distinción entre el aprendizaje inquisitivo y el descubrimiento; dicha distinción se hace basada en quién identifica el problema que se ha de estudiar y el porcentaje de decisiones hechas por los estudiantes (Jarolimek, Foster, & Kellough, 2005). Los maestros generalmente guían el proceso inquisitivo usando el método socrático que consiste en enseñar una lección guiando a los estudiantes a nuevos conocimientos solamente haciendo preguntas. Las preguntas socráticas planeadas cuidadosamente tienen una meta muy específica: promover el pensamiento divergente, independiente y reflexivo. Los maestros de aulas inquisitivas regularmente animan a los estudiantes a que utilicen los conocimientos poseídos junto con operaciones mentales complejas para poder descubrir nuevos conceptos (Hammer, 1997). Una vez que los estudiantes comiencen a construir nuevos conocimientos, la próxima etapa es la de estructurar las investigaciones utilizando actividades de descubrimiento científicas mas sofisticadas y auténticas en las cuales se siguen los pasos del método científico (Chamot & O'Malley, 1994). Según Reid, Zhang y Chen (2003), la efectividad del aprendizaje científico de descubrimiento se determina por tres condiciones:

1. Lo significativo del proceso de descubrimiento: Los estudiantes necesitan activar sus conocimientos previos y usar ese conocimiento en el problema que se estudie.
2. Lo sistemático y lógico de las actividades de descubrimiento: El aprendizaje de descubrimiento efectivo incluye razonamiento científico apropiado, la manipulación sistemática de las variables estudiadas y el diseño e implementación correcta de los experimentos.
3. Las generalizaciones reflexivas del proceso de descubrimiento, que significan el control personal del proceso de descubrimiento y la abstracción e integración reflexiva de las reglas y principios descubiertos.

Fases de la Enseñanza Inquisitiva

Carin, Bass y Contant (2005) recomiendan la implementación de una forma de enseñanza utilizando el modelo 5-E. Este modelo requiere que los estudiantes activamente participen en las siguientes cinco etapas: enlazar, explorar, explicar, elaborar y evaluar. Estas etapas establecen altas expectativas en los estudiantes cuando progresan gradualmente de una etapa donde hacen preguntas a una etapa final en la cual ellos planean investigaciones futuras.

Enlazar

En esta etapa los docentes involucran a los estudiantes capturando su atención desde el inicio de la instrucción. Existen dos que ingredientes son de suma importancia para la introducción exitosa de un nuevo concepto. Bruner (1960) elocuentemente afirmó: "La mejor manera de crear interés en una materia es creer que vale la pena saberlo" (p. 31). Enlazar los conceptos con los conocimientos previos de los estudiantes es esencial cuando se modifica la instrucción para satisfacer las necesidades de los estudiantes bilingües (Echevarría & Graves, 2003). Las actividades que son contextualizadas en la instrucción establecen la relevancia del concepto y una razón para aprenderlo. Starko (2005) escribió "Al menos que los estudiantes vean conexiones entre lo que ellos hacen en las clase de ciencias y sus suposiciones de cómo el mundo opera, es fácil para ellos rechazar las actividades científicas como una serie de cosas extrañas que sólo suceden en la clase" (p. 156). Estas son algunas sugerencias de actividades para enlazar activamente a los estudiantes:

- El análisis de un organizador gráfico: Los diagramas de Venn, las líneas cronológicas, los mapas conceptuales, los organigramas, y otros organizadores gráficos contienen información que puede ser usada para obtener y organizar el conocimiento previo de los estudiantes. Una lección en la cual se introduce el concepto de la tensión superficial puede comenzar con una actividad donde el docente utiliza un diagrama de Venn para escribir las respuestas de los estudiantes cuando comparen y contrasten las semejanzas y diferencias entre el agua y el aceite. Posteriormente, durante el proceso de exploración, la inquisición guiada permitirá que los estudiantes manipulen y experimenten con ambos líquidos para poder "descubrir" que el agua y el aceite son diferentes en uno o más de los aspectos incluidos en la tensión superficial.
- Una actividad muy breve que presente la discrepancia, un evento desconcertante o algo que despierte la curiosidad de los estudiantes. Cuando se presenta el tema de la tensión superficial o los estados de la materia, el maestro puede usar experimentos emocionantes como los que son muy populares en la televisión y el *internet*. Uno de estos experimentos consiste en vaciar en una botella de dos litros de soda de dieta un rollo de Mentos el cual produce una descarga inesperada de gas. Después de conducir el experimento el docente puede hacer preguntas tales como: ¿Qué sucedió? ¿Qué te preguntas? ¿Hay algo que te sorprenda? ¿De qué manera se relaciona esta actividad con el concepto que estudiaremos?
- Pide y anima a los estudiantes para que hagan preguntas. El acto más simple de preguntar acerca del mundo para poder entenderlo es un paso esencial en el aprendizaje enfocado en el descubrimiento. Los maestros pueden modelar la curiosidad y pensar en

voz alta cuando examinen, piensen y reflexionen acerca de las cosas sencillas como una piedra, una flor o hasta una gota de agua. Starko (2005) considera que es imposible que los estudiantes investiguen, reten o sueñen sin preguntas. Starko propone cinco estrategias para animar a que los estudiantes hagan preguntas:

1. Los maestros tienen que enseñar a los estudiantes la diferencia entre las preguntas cuyas respuestas pueden ser encontradas en los libros y las preguntas que salen de uno mismo y para las cuales no hay una sola respuesta.
2. Los docentes deben modelar cómo se hacen las preguntas. Hacer preguntas relacionadas a los eventos diarios tales como: "Me pregunto ¿por qué no tienen verduras frescas en la cafetería escolar?" Durante la instrucción las preguntas de los docentes pueden estar relacionadas directamente con el contenido. Una lección inquisitiva de los cinco sentidos puede comenzar con declaraciones o preguntas provocativas incluyendo: "Me pregunto ¿qué sucedería si no tuviéramos el sentido del gusto?" Y "¿Te has preguntado cuantas especies de animales dependen del sentido de oído para poder sobrevivir?"
3. Los maestros enseñan a los estudiantes a que hagan preguntas. La práctica de hacer preguntas debe tener un objetivo útil. El uso de lecciones cortas y ejercicios sencillos pueden servir para que los estudiantes aprendan a hacer preguntas. Los maestros pueden llevar a los estudiantes a una caminata y enfocarse en objetos pequeños como una hierba pequeña y pedirle a los estudiantes que formulen preguntas.
4. Los docentes tienen que responder a las preguntas de los estudiantes con respeto. Los niños poseen una curiosidad natural y no es siempre fácil para los maestros encontrar conexiones entre los comentarios y preguntas de los estudiantes y el enfoque de la lección. Los estudiantes bilingües puede tener dificultades al formular preguntas en su segundo idioma. Es crucial permitirles que formulen preguntas en su lengua natal.
5. Los maestros deben enseñar las habilidades inquisitivas de la disciplina. En las ciencias, las habilidades del proceso científico incluyen observación, estimación, clasificación, sacar conclusiones, medir, reunir datos y tomar notas. Todas esas actividades son dirigidas para contestar las preguntas que incitan la curiosidad de los estudiantes.

Explorar

Una vez que la relevancia de la lección haya sido establecida y los estudiantes tengan una razón valida para explorar las diferentes rutas que los llevarán a las posibles respuestas, es el momento indicado para facilitar el proceso ayudando a los estudiantes a desarrollar las habilidades relacionadas con una inquisición científica más estructurada. Se debe brindar la oportunidad a los estudiantes para que planeen su propia investigación y que usen las herramientas apropiadas para llevar a cabo sus planes (National Research Council, 1996). Algunas de las actividades que se llevan a cabo durante la exploración incluyen:

1. Realizar una investigación. En los años de la primaria, los niños avanzan de una investigación descriptiva sencilla a una investigación experimental la cual incluye la formulación de un problema, estableciendo una hipótesis, escribiendo las observaciones, recabando datos y sacando conclusiones lógicas.

2. Ayudar a los estudiantes a usar las herramientas científicas. La experiencia directa con instrumentos sencillos y sofisticados presentan una doble ventaja para los estudiantes bilingües (véase Tabla 1). Ellos no sólo adquieren un entendimiento de conceptos científicos sino que también aumentan su vocabulario académico. Verbos tales como vaciar, medir, detener, cambiar, tirar, levantar y escribir son fácilmente asimilados cuando se usan en el contexto de tareas auténticas.

Cuadro 1
Herramientas que se deben usar por los niños de las escuelas primarias durante la inquisición científica

Año escolar	Herramientas científicas
Zinder	Lupas, tazones, tazas y computadoras
1er Año	Lupas, relojes, computadoras, termómetros y básculas
2^{ndo} Año	Reglas, metros, tazas de medir, relojes, lupas, computadora, termómetros y básculas
3er Año	Calculadoras, microscopios, cámaras, lentes de seguridad, grabadoras de sonido, computadoras, lupas, reglas, termómetros, metros, cronómetros, básculas y brújulas o compases
4to Año	Calculadoras, microscopios, cámaras, lentes de seguridad, grabadoras de sonido, computadoras, lupas, reglas, termómetros, metros, cronómetros, básculas y brújulas o compases
5to Año	Calculadoras, microscopios, cámaras, lentes de seguridad, grabadoras de sonido, computadoras, lupas, reglas, termómetros, metros, cronómetros, básculas, brújulas o compases, platos calientes, imanes y redes

Nota: Texas Education Agency. (1997). Conocimientos y destrezas esenciales en Texas (TEKS) para las ciencias. Austin, TX.

Explicar

La enseñanza inquisitiva requiere que los estudiantes utilicen información existente y las observaciones que se llevaron a cabo durante la etapa de la exploración y el enlace para sacar conclusiones, inferir, interpretar y explicar sus resultados y observaciones. Carin, Bass y Contant (2005) recomiendan llevar a cabo una discusión de los resultados haciendo hincapié en los comentarios iniciales de los estudiantes y las generalizaciones a las que se llegan en base a un contraste directo con la realidad. Carin et al. (2005) sugieren las siguientes actividades:

- Proporcionar el vocabulario y terminología necesaria. Tanto los estudiantes de habla inglesa como los estudiantes bilingües tienen dificultades con el extenso número de términos científicos que se encuentran tanto en la instrucción como en los textos (Chamot & O'Malley, 1994). Mientras Echevarría y Graves (2003) recomiendan la enseñanza explícita del vocabulario al inicio de la instrucción, Carin et al. (2005) consideran que la introducción de la terminología y el vocabulario se debe llevar a cabo durante la fase de la explicación, una vez que los estudiantes han tenido la oportunidad de experimentar y explorar el fenómeno en el cual se enfoca el objetivo de la lección.
- Llevar a cabo explicaciones directas. La enseñanza directa por parte del docente es una estrategia apropiada cuando representa sólo uno de los métodos utilizados durante la

enseñanza inquisitiva. Una planeación cuidadosa de la forma y contenido de dichas lecciones es vital cuando los estudiantes bilingües forman parte del grupo. La finalidad de tal planeación es evitar que aspectos lingüísticos interfieran con la comprensión del concepto. En tal caso, es importante enfatizar solamente el vocabulario clave, introduciendo solamente aquellas palabras o terminología nueva sin la cual el concepto sería incomprensible. Otro aspecto a tomar en cuenta es la pronunciación natural y más desacelerada del discurso pedagógico. Echevarría y Graves (2003) recomiendan la utilización de múltiples recursos audiovisuales, líneas cronológicas, gráficas y mapas conceptuales como complemento de la explicación por parte del maestro.

Elaborar

Esta fase de la enseñanza inquisitiva tiene una relación directa con la creatividad. Se espera que los estudiantes resuelvan problemas nuevos y que contesten preguntas generadas a partir de las observaciones, exploración y explicación que recién se han llevado a cabo. Durante la elaboración, los estudiantes aplican conceptos científicos y vocabulario a situaciones recién surgidas o planeadas. Una vez que los estudiantes se han visto inmersos en contextos de aprendizaje auténticos, el siguiente paso es tomar decisiones informadas mientras expanden la base de su conocimiento.

La elaboración incluye actividades tales como:

- La planeación de investigaciones dentro y fuera del aula de clases. La inquisición científica puede llevarse a cabo en una variedad de lugares. Es importante animar a los estudiantes para que se involucren en investigaciones en las que se requiera un periodo prolongado, tanto en la escuela, en la casa, así como en la comunidad. A menos que los maestros aconsejen a los estudiantes y los guíen en la planeación de experimentos relacionados con la vida real, es muy probable que los estudiantes perciban el estudio de las ciencias como una materia insípida e insignificante en la que solamente se lee un libro y se contestan preguntas a nivel de conocimiento.
- La incorporación del vocabulario clave y los conceptos aprendidos a situaciones nuevas. Los estudiantes bilingües adquieren lenguaje académico prácticamente sin esfuerzo cuando se les involucra en actividades en las que se escribe, lee, escucha y habla dentro de un contexto académico. La producción de lenguaje escrito y oral en un ambiente interactivo es un indicador claro del nivel lingüístico y cognitivo logrado por los estudiantes (Cummins, 2000). Las fases de exploración y elaboración facilitan el aprendizaje de un segundo idioma ya que proporcionan la oportunidad de clarificar dudas, repetir información y recibir retroalimentación.

Evaluar

El salón de clases es un ambiente que se presta, no sólo para la exploración por parte del estudiante, sino para la exploración activa por parte del maestro respecto a las actividades de los estudiantes (Hammer, 1977). Durante la enseñanza inquisitiva, los maestros constantemente evalúan los niveles de comprensión y reúnen la información necesaria para modificar la enseñanza y satisfacer las necesidades lingüísticas y académicas de todos los estudiantes. De

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igual manera la evaluación se extiende a los productos resultantes del proceso inquisitivo. Dichos productos pueden evaluarse durante presentaciones ante audiencias reales, entre las que se pueden incluir los compañeros, los padres, los miembros de la comunidad, o profesionales de una rama específica de la ciencia. Carin et al. (2005) proponen evaluaciones basadas en la demostración de la habilidad o una aplicación directa del concepto aprendido. Esto permite que los maestros tengan una percepción clara no sólo de lo "que" los estudiantes saben, sino "como" demuestran lo que aprendieron. Jarolimek, Foster y Kellough (2005) recomiendan seguir tres pasos durante la planeación de las evaluaciones basadas en la demostración o aplicación:

1. Indicar claramente el objetivo y el resultado anticipado del aprendizaje.
2. Indicar específicamente las condiciones bajo las cuáles se llevará a cabo dicha evaluación.
3. Establecer los estándares o criterios que servirán de base para la evaluación (listas de chequeo o rúbricas).
4. Preparar instrucciones por escrito y los pasos esenciales con los que se guiarán a los estudiantes.
5. Compartir el procedimiento con un colega para pedir retroalimentación antes de utilizarlo con los estudiantes.

El propósito de las evaluaciones basadas en la demostración es cerciorarse de que los estudiantes tienen la habilidad de hacer preguntas, formular hipótesis, recolectar información, sacar conclusiones, generalizar, y comunicar resultados. Los exámenes basados en hojas de trabajo que miden habilidades mecánicas y conocimientos básicos no siempre son compatibles con un método didáctico basado en la curiosidad y las preguntas inquisitivas.

Las evaluaciones basadas en la demostración les permiten a los maestros medir el progreso en términos del contenido y los conceptos más que en la adquisición del segundo idioma. Echevarría y Graves (2003) sugieren la creación de un portafolio en el que se mantenga una evaluación cronológica de los productos de los estudiantes incluyendo los resultados de sus experimentos y otras muestras de trabajo. El objetivo es involucrar a los estudiantes en una auto-evaluación.

Las estrategias didácticas varían en los diferentes salones de clase. Lo que los estudiantes aprenden se encuentra influenciado por las estrategias utilizadas por el maestro. Las decisiones acerca del contenido, las actividades que se eligen, las interacciones entre los estudiantes, el tipo de evaluaciones que se implementan, los hábitos mentales que los maestros modelan e impulsan entre los estudiantes, representan factores que influyen en el conocimiento, la comprensión, y las actitudes que los estudiantes desarrollan respecto a la ciencia (Nacional Research Council, 1996).

Características de los Salones de Clase que Estimulan la Curiosidad e Implementan la Enseñanza Inquisitiva.

Generalmente, los salones de clase donde se implementa un enfoque inquisitivo se caracterizan por la abundancia del discurso estudiantil, grupos cooperativos, y el aprendizaje gradual asistido (Carin et al. 2005):

1. El discurso. El nivel de adquisición de un segundo idioma está íntimamente relacionado con la calidad del discurso que se planea en el aula de clases. (Gibbons, 2002). Los enfoques didácticos basados en una pedagogía tradicional centrada en el maestro impiden el crecimiento lingüístico y académico de los estudiantes bilingües. De acuerdo con Cummins (2000) existe el peligro de que tanto la lengua materna como el segundo idioma del estudiante permanezcan en niveles superficiales y pasivos a menos que se establezca un ambiente conversacional activo. La calidad de las conversaciones entre los estudiantes en las cuales se discuten diferentes aspectos del experimento, es un indicador claro de un ambiente que impulsa la curiosidad. Resulta esencial que el maestro planee cuidadosamente situaciones en las que se requiera una conexión entre sus experiencias previas con el concepto de la nueva lección por medio de escritura y la producción oral.

2. Grupos cooperativos. La naturaleza dinámica del aprendizaje inquisitivo en el área de las ciencias facilita la interacción y representa una ventaja afectiva y emocional para los estudiantes bilingües. Los estudiantes cuyo avance lingüístico en su segundo idioma se encuentra en los niveles de principiantes e intermedios tienden a tomar más riesgos en actividades donde es posible trabajar en grupos pequeños (Gibbons, 2002). Los ambientes cooperativos proporcionan un refugio en el cual los estudiantes bilingües tienen acceso directo a su segundo idioma y gozan de múltiples oportunidades para escuchar, hablar, leer y escribir en una atmósfera relajante mientras mejoran la cantidad y la calidad de los procesos del descubrimiento científico. (Holt, 1993; Saab, Joolingen, & Hout-Wolters, 2005). El aprendizaje para el descubrimiento es aprendizaje activo y como tal, implica el desarrollo de una comunidad de estudiantes (Fern, Armstrong, & Silcox, 2006). Los estudiantes bilingües resultan beneficiados cuando se les involucra en tareas caracterizadas por una comunicación auténtica en un ambiente de colaboración. Holt (1993) considera que las estrategias de aprendizaje cooperativo promueven el desarrollo del lenguaje y la comprensión del contenido cuando se enfatizan los siguientes componentes:

   - La integración de equipos. Los equipos homogéneos y heterogéneos se planean con anticipación de tal manera que los estudiantes tengan la oportunidad de aprender los conceptos mientras se baja el filtro afectivo.
   - Fortalecimiento de los lazos en el equipo. Es esencial que entre los miembros del equipo exista una confianza y apoyo mutuo.
   - Fortalecimiento de los lazos en el salón de clase. La variedad de actividades en el salón de clases permite que los estudiantes tomen riesgos académicos mientras establecen relaciones positivas de interdependencia entre ellos.
   - Asignación de roles. Los estudiantes toman la responsabilidad de monitorear la comprensión del concepto, apoyar a sus compañeros en cuestiones bilingües y como consejeros en cuestiones académicas.

3. Aprendizaje gradual asistido: El apoyo necesario para que un estudiante lleve a cabo una tarea con alta demanda cognitiva se denomina aprendizaje gradual asistido y aplica tanto al aprendizaje de los conceptos incluidos en el plan de estudios como al desarrollo y adquisición del lenguaje. El aprendizaje gradual asistido facilita la enseñanza individualizada durante la cual el maestro observa y descubre lagunas en el currículo o destrezas y habilidades en las que se requiere la repetición de una lección. En este

sentido, el proceso inquisitivo involucra al maestro en lo que Hammer (1977) denomina "enseñanza para el descubrimiento", es decir, el maestro descubre lo que sus estudiantes necesitan.

La enseñanza inquisitiva beneficia a los estudiantes bilingües al proveer un ambiente en el que se alienta la curiosidad natural y los intereses de los estudiantes. A medida que el maestro guía el proceso inquisitivo, los niveles de ansiedad disminuyen y se incrementa la motivación para construir conocimiento de manera activa.

El aprendizaje gradual asistido en el área de la ciencia generalmente se centra en la expectativa de que el estudiante sea capaz de utilizar terminología científica al tiempo que analiza, sintetiza y evalúa la información. Algunos ejemplos de actividades que facilitan el desarrollo de las habilidades lingüísticas en la ciencia incluyen (Chamot & O'Malley, 1994, p. 202):

- Habilidades Auditivas. Escuchar y tomar notas mientras el maestro o los compañeros de clase llevan a cabo una presentación; escuchar y seguir instrucciones con el fin de llevar a cabo un experimento.
- Descripciones. Las observaciones y una descripción oral de dichas observaciones; la observación detallada de los pasos incluidos en un procedimiento; dibujar y describir los dibujos; formular preguntas y respuestas; trabajar en grupos cooperativos mientras se construye un modelo para luego presentar un reporte, etc.
- Lectura. Localizar información en libros de ciencia, enciclopedias y otras fuentes; la lectura de un texto con el fin de llevar a cabo un experimento.
- Escritura. Escribir respuestas a preguntas formuladas por el estudiante, el maestro u otros estudiantes; la escritura de experiencias personales o ficticias relacionadas con la ciencia.

Conclusiones

Con los nuevos avances científicos y los requisitos federales de que todos los estudiantes de este país deben aprobar una batería de exámenes académicos, incluyendo las ciencias, para demostrar lo que han aprendiendo, es imperativo que las escuelas presten más atención a las necesidades pedagógicas de los estudiantes bilingües y que estas instituciones se comprometan a brindar una educación equitativa. El estudiante bilingüe no debe aprender inglés a costa de una educación.

El aprendizaje para el descubrimiento y la enseñanza inquisitiva facilitan la adquisición de un segundo idioma y el avance académico y cognitivo de los estudiantes bilingües. La enseñanza de las ciencias con un enfoque inquisitivo coloca la comprensión de los conceptos científicos como un aspecto prioritario y establece la adquisición de un segundo idioma como un proceso gradual durante el cual es posible observar un asincronismo entre los niveles de producción lingüística y el nivel académico del estudiante. Finalmente, la enseñanza inquisitiva establece la posibilidad de una equidad educativa al mantener los retos cognitivos en la instrucción por medio de actividades que impulsan el pensamiento complejo y los retos mentales a diferentes niveles.

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Maneras versátiles de aprender en centros de aprendizaje en un salón preescolar de un programa bilingüe de doble inmersión

Isela Almaguer
The University of Texas Pan American

RESUMEN

Los centros de aprendizaje apoyan el desarrollo académico y social de los estudiantes en etapa preescolar, beneficiando que hablen diferentes idiomas y desarrollen diversas habilidades (Christie, 2001; Fromberg, 1998, 2002; Hughes, 1999). Estos centros les ofrecen a los niños una variedad de oportunidades para colaborar mutuamente y para fortalecer activamente el aprendizaje de cada uno; también les ayudan a desarrollar la autonomía, la independencia y la maduración. El ejemplo que se muestra a continuación es en un salón de preescolar de un programa bilingüe de doble inmersión localizado en la frontera del Río Grande. La organización temática que se trabaja en este ejemplo es acerca de la granja. La mayoría de los niños tienen conocimientos sobre este tema, ya que existen muchas granjas en el Valle del Río Grande. Este salón es un ejemplo de cómo los centros de aprendizaje ayudan a fortalecer la adquisición de conocimientos y destrezas importantes en el desarrollo de cada niño.

Contact Information:

Isela Almaguer
The University of Texas Pan American
almagueri@panam.edu
(956) 381-3630

Maneras versátiles de aprender en centros de aprendizaje en un salón preescolar de un programa bilingüe de doble inmersión

La filosofía de John Dewey (1915) enfatizaba "participación activa para aprender" (p.74), y agrega que donde el estudiante tiene la oportunidad de participar activamente se lleva a cabo más aprendizaje. De acuerdo con Dewey "La maestra y el libro no son las únicas maneras de aprender, pero las manos, los ojos, los oídos y todo el cuerpo se deben de involucrar para obtener información y aprender…" (1915, p. 74). Al igual, Piaget (1973) sugiere que la meta de la educación debe ser promover la autonomía de cada niño utilizando centros de aprendizaje donde cada pequeño pueda desarrollarse a su tiempo y a su manera. La autonomía se incrementa cuando los niños son activos, aprenden a su propio paso, tienen opciones y son libres de tomar la responsabilidad sobre su propio aprendizaje.

Para demostrar cómo este aprendizaje se lleva a cabo cada día, acompáñenme en un viaje a explorar un salón enriquecido con mucha motivación para aprender, con mucha diversidad y con mucha colaboración entre estudiantes. En lo que se presenta a continuación veremos como el tema de la granja se estudia utilizando varios centros de aprendizaje, con actividades que estimulan el desarrollo de cada niño. El ejemplo se lleva a cabo en un salón preescolar bilingüe de doble inmersión donde algunos de los estudiantes hablan y leen el inglés y otros el español. Los estudiantes están recibiendo educación bilingüe de doble inmersión y así, ayudándose unos a los otros a fortalecer su primer idioma, simultáneamente aprenden y utilizan un idioma nuevo. Este salón se encuentra en el Valle del Rió Grande cercano a México, donde el nivel socio económico es bajo en comparación con otras áreas más lejanas de la frontera.

Los estudiantes en este salón participan en una variedad de centros de aprendizaje en donde desarrollan las capacidades cognitivas, sociales, y lingüísticas estimulando los logros académicos de cada niño. En el caso que se estudia los niños están trabajando con el tema de los animales de la granja. La organización temática de este ejemplo es conocida por la mayoría de los niños porque las granjas son muy comunes en el Valle del Río Grande, incluso para varios es su manera de vivir, por lo que son conocimientos que traen de sus hogares y de su ambiente familiar; los cuales se unen con la nueva información que están aprendiendo activamente y en colaboración dentro del salón, utilizando los centros de aprendizaje. Esto ayuda a los niños a comprender a un mayor nivel y les da la oportunidad de participar en algo conocido por ellos. La organización temática también es importante, especialmente para niños bilingües en un programa de doble inmersión (Freeman & Freeman, 2005). El tiempo que comparten platicando, jugando y explorando el tema de la granja en los centros de aprendizaje les ayuda a fortalecer la adquisición de destrezas muy importantes en el desarrollo de cada uno.

El Impacto al Desarrollo Social, Lingüístico, y Cognitivo

De acuerdo con el modelo de Wong-Fillmore (1985), los niños en un salón de clases tienen oportunidad de desarrollar el idioma materno mientras van adquiriendo un idioma nuevo; esto es basado en los procesos sociales, lingüísticos, y cognitivos que se llevan a cabo en el ambiente del salón. Los niños, como en el ejemplo de este salón preescolar bilingüe de doble inmersión, tienen la motivación y la actitud positiva de aprender un nuevo idioma. Al entrar al salón se ven estudiantes utilizando varios estilos de aprendizaje, esta diversidad ayuda a

mantener un salón donde se incorporan muchos métodos de enseñanza que ayudan en la adquisición de destrezas importantes para el éxito académico y social de cada niño. En este tema de la granja, los estudiantes también aprenden de diversas maneras mientras desarrollan los procesos sociales, lingüísticos, y cognitivos.

El Desarrollo Social y Lingüístico de Estudiantes de Diversos Idiomas

En el salón hay estudiantes bilingües que hablan y entienden el inglés y hay otros que hablan y entienden el español. Los grupos de niños con habilidades mixtas se mezclan para aprender utilizando la fuerza del idioma de cada uno. Los centros de aprendizaje impactan positivamente al desarrollo social y lingüístico de cada niño.

El modelo de adquisición de lenguaje propuesto por Wong-Fillmore (1991) consta de tres fases que ayudan al desarrollo del idioma; en la primera fase, se describe la importancia de la interacción entre los niños en el salón y cómo es estimulada por sus deseos de hablar unos con otros mientras participan en las actividades, como en este ejemplo del tema de la granja; en la segunda fase de este modelo, se describe la importancia de que los niños continúen platicando y discutiendo sobre lo que están aprendiendo, lo que fortalece su idioma mientras desarrollan uno nuevo; en la tercera fase se describe la importancia en formar uniones sociales entre los niños.

A pesar de las dificultades para comunicarse utilizando el nuevo idioma, por tener un nivel de comprensión limitado, los niños continúan motivados e intentando comunicarse. En las negociaciones sobre como expresarse utilizando el lenguaje, los niños ajustan su manera de comunicarse, por ejemplo: pueden intentar hablar más despacio, usar gramática más simple en las conversaciones o usar gestos o expresiones físicas para expresarse y continuar comunicándose.

En el centro de libros, Pedro y Aron leen libros multilingües y de multi-niveles sobre los animales y la vida en la granja. Aron está leyendo libros de segundo nivel y Pedro está aprendiendo el idioma inglés mientras lee libros sobre el tema de la granja en español, para continuar fortaleciendo su lengua materna.

Una vez que han leído varios libros, Pedro insiste en enseñarle a Aron que los caballos pequeños en la granja se llaman "ponies," al igual que en inglés. El par de niños escriben los títulos y autores de los libros en sus diarios, en donde incluyen una lista de textos leídos. Después de leer y escribir el titulo, los niños deciden escribir en sus diarios sobre lo que han aprendido de los animales de la granja, luego se juntan y comparten información sobre lo que han leído y escrito.

La mayoría de su lenguaje se utiliza en los centros de aprendizaje y se incrementa en el contexto de experiencias significantes y nuevas, especialmente cuando niños con diversas habilidades se unen para realizar un objetivo común. Además, en un salón donde hay mucha actividad y movimiento, los estudiantes bilingües aprenden el inglés formal e informal de sus compañeros más sobresalientes. Este salón demuestra el desarrollo social, lingüístico, y cognitivo que se lleva a cabo en cada niño.

Adicionalmente, el modelo de adquisición de lenguaje propuesto por Wong-Fillmore (1991), enfatiza que los niños tendrán éxito desarrollando su idioma si tienen la oportunidad de socializar y aprender unos de otros estando en relación con las tres fases de adquisición; se multiplican las oportunidades de desarrollar un idioma nuevo mientras estén involucrados socialmente, de esta manera los niños continúan sus negociaciones sobre el idioma comunicándose y socializando mientras se ayudan unos a otros.

El Desarrollo Cognitivo de Estudiantes de Diversas Modalidades

En el centro de lectura, Marta y Susi leen juntas un libro y escuchan un casete que relata la historia de *Rosie's Walk*. Marta le está ayudando a Susi a leer, señalando las palabras mientras Susi observa. De vez en cuando paran y Susi le pregunta a Marta el significado de una palabra. Susi necesita mucha ayuda con la pronunciación de los diferentes sonidos de las letras del alfabeto. Marta es una estudiante que ayuda a Susi y le encanta enseñarle los sonidos de las letras y que significado tienen algunas palabras. Susi le dice a Marta: "Las gallinas son mas inteligentes que los zorros porque a la gallina Rosie no la pudo comer el zorro." Marta contestó: "Creo que la gallina Rosie no sabía que el zorro iba atrás de ella porque en mi casa las gallinitas les tienen mucho miedo a los animales grandes y a los perros." Continúan con otro libro sobre los animales que viven en la granja, especialmente las gallinas. Ellas están interesadas en saber cuántos huevos producen diariamente. Marta le comparte a Susi que sus gallinas producen muchos huevos y a veces mas de una docena.

Del centro de lectura, Marta y Susi cambian al centro de escritura y dibujo. Su propósito es enseñar cuantos huevos producen las gallinas diariamente y dar a conocer los precios del pollo y las docenas de huevos en el supermercado. Ellas van al centro de matemáticas y utilizan el dinero de fantasía para demostrar cuanto cuesta una docena de huevos y cuanto cuestan los pollos, mientras leen una revista con las ofertas del supermercado. Marta comenta: "Mi familia no compra huevos porque mis gallinas producen muchos. Yo puedo traer huevos de mis gallinas para enseñarles a todos." Marta le pregunta a la maestra si puede traer una gallina y unos huevos para enseñarles a los alumnos. La maestra contesta: "Hablaremos con tus padres Marta para ver si ellos pueden traer una gallina en una jaula para enseñársela a tus compañeros." "Y también unos huevos," agrega Marta sonriendo. Marta y Susi van a los otros centros para hacer una encuesta y saber a cuántos en el salón les gustan el pollo y los huevos. Esto demuestra que los niños vienen con muchas experiencias de las cuales pueden aprender otros niños. Adicionalmente, las actividades en los centros de aprendizaje les enseñan que lo que leen y escriben tiene importancia para comunicarse en la vida real. Ellos están combinando los conceptos aprendidos en varias materias. Con la asistencia de la maestra, del diccionario y otros recursos en el salón, los niños pueden lograr su objetivo.

En el centro de ciencias los niños plantan diferentes semillas de vegetales y flores que se encuentran en la granja, como el elote, el fríjol, y la semilla de girasol. Los niños observan las plantas y miden como crecen; apuntan lo que observan en sus diarios de ciencia; también cuidan a sus plantas, les echan agua para que sigan creciendo y si es necesario las ponen en la ventana para que les de el sol. Catalina comenta: "Voy a cuidar mucho mis semillas de girasol porque son muy bonitos los girasoles." Mientras Antonia contesta: "Mis girasoles han crecido una pulgada y cuando crezcan mas yo le voy a regalar un girasol a mi mamá."

En el centro de arte los niños dibujan una variedad de animales de la granja y ponen el nombre correcto de cada uno. Para conseguir información sobre los nombres de los diferentes animales de la granja, los niños ven un diagrama de los animales que tiene los nombres deletreados correctamente, así pueden estar seguros de utilizar los nombres correctos de cada animal. Alesi dibuja un caballo y una vaca y los recorta poniéndoles un nombre a cada uno. Les pone un palo de paleta para que se detengan como títeres, los lleva al centro de drama y juega con ellos. Se imagina que la vaca habla con el caballo y son buenos amigos diciendo: "Hola caballito, yo soy Lucy la vaquita y los niños me quieren mucho porque doy leche para la nieve. También se que te quieren a ti porque los paseas." Alesi sigue jugando con los títeres y pronto la acompaña Irma diciendo: "Mis títeres son una oveja y una gallina. Vamos a jugar juntas."

La Teoría del Juego Influye en el Desarrollo del Niño

Hay varios estudios que demuestran cómo la teoría del juego les da oportunidades a los niños de desarrollar su comportamiento, de unirse con otros niños, y empezar a tomar en cuenta diferentes puntos de vista (Creasy, Jarvis & Berk, 1998; Erikson, 1963; Goleman, 1995; Piaget, 1962; Rubin & Howe, 1986; Rubin, Maioni & Hormug, 1976; Rubin, Watson & Jambor, 1978; Sutton & Smith, 1997; Vygotsky, 1978). Según la teoría del juego, mientras los niños juegan en un ambiente positivo y estimulante, desarrollan sus capacidades cognitivas, sociales, y lingüísticas.

La teoría sobre el juego tiene los siguientes cuatro atributos: a) es voluntario, b) es basado en la motivación propia, c) es basado en actividades físicas donde los niños participan y d) es distinto porque los niños pueden pretender y usar su imaginación al jugar (Blanchard & Cheska, 1985; Csikszentmihalyi, 1990; Pellegrini, 1995; Pellegrini & Smith, 1993; Yawkey & Pellegrini, 1984). El juego también es considerado proceso y producto; proceso porque el juego facilita la comprensión individual relacionada con conceptos, y estrategias y producto porque el juego es el vehículo por medio del cual tienen la comprensión individual sobre conceptos y estrategias que se llevan a cabo (Fromberg, 1998, 2002).

En el centro de escritura, un grupo de niños escribe y dibuja historias de animales de la granja y sus familias. Monserat se dibuja con muchos animales y dice: "Mis abuelitos tienen gallinas, vacas, y ovejas en su granja. Me gusta jugar con ellas." En el centro visual unos niños ven un programa de *National Geographic* sobre animales de la granja. Esta película informativa explica la importancia que tienen los animales para el mercado y los alimentos diarios. En el centro de bloques, Dante y Omar construyen granjas y juegan con varios tipos de animales de la granja haciendo patrones. Omar comenta: "Yo quiero ser un doctor de animales cuando crezca para cuidar a todos los animales cuando se enfermen." Dante le contesta: "Eso es un veterinario. Yo también quiero ser un veterinario." En el centro de computadoras, Rosa y Enrique resuelven problemas de matemáticas, los dos niños están aprendiendo a sumar y practican cooperativamente. A veces le piden ayuda a la asistente de la maestra.

Mientras los niños trabajan en los otros centros, la maestra trabaja con un grupo de estudiantes escribiendo un párrafo sobre la importancia de la granja y los productos que nos dan los animales para nuestra comida y nutrición. Al escribir la carta en colaboración, Jesús dice:

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"Tenemos que cuidar a los animales de la granja y cuidar las granjas porque nos dan muchas comidas nutritivas como el pollo, el jamón, el chorizo, y los huevos." Teresa agrega: "La granja también nos da muchos vegetales muy sabrosos y nutritivos como el elote con mantequilla, mm, mm." La maestra escribe todas estas aportaciones en una hoja de papel grande que sirve como muestra para la clase de cómo escribir un párrafo.

Al final de la actividad en las áreas de lectura, la maestra y los estudiantes reflexionan sobre lo que han aprendido de los animales de la granja y de la granja. Los niños comentan sobre lo que han aprendido y lo muestran en la clase para que todos vean lo que han logrado en el estudio de este tema. En pares o independientemente relatan con gran orgullo y emoción a la clase lo que han hecho y aprendido en los centros. Los niños escuchan y observan a sus compañeros aprovechando la oportunidad de aprender unos de otros. Irasema dice: "A mi me gusta aprender de la granja porque me gustan mucho los animales." La maestra anima a todos los niños y los felicita por un día lleno de mucho aprendizaje diciendo: "¡Muy buen trabajo alumnos, estoy muy orgullosa de ustedes! Mañana continuaremos aprendiendo mas sobre la granja."

Conclusiones

Este salón apoya la relación entre el juego y el aprendizaje en las áreas cognitivas, sociales, y lingüísticas. Adicionalmente, sirve como ejemplo donde los niños están involucrados y participando en una variedad de actividades relacionados con el tema de la granja. El juego ayuda al aprendizaje y desarrollo de los niños y refleja la vida social y cultural que ellos tienen (Christie, 2001; Fromberg, 1998, 2002; Hughes, 1999). En un salón como este todos los niños se benefician porque están aprendiendo activamente en una variedad de maneras, utilizando no solo el razonamiento sino también sus cuerpos en varios centros que apoyan un desarrollo.

De acuerdo con Bruner "el juego no es tiempo perdido, al contrario, es tiempo utilizando pasadas experiencias para crear nuevos entendimientos" (Bruner, 1972, citado en Harris, 1986, p.263).

Las oportunidades brindadas a los niños participando en los centros de aprendizaje ayudan a desarrollar una variedad de destrezas muy importantes para ellos. Este tipo de aprendizaje ofrece muchas oportunidades para el desarrollo académico y social de los estudiantes. Cuando trabajan juntos con un propósito común en un salón como este, los estudiantes están aprendiendo estrategias que ayudan a desarrollar los conceptos académicos y a la vez están aprendiendo destrezas sociales muy importantes en la vida, como la colaboración; dándoles la oportunidad de ser responsables de su aprendizaje y escoger lo que quieren aprender en el contexto del tema de la granja, favoreciendo la autonomía, la independencia y la maduración del estudiante.

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Bilingual Student Teachers: Their Struggles in the Classroom

Matilde A. Sarmiento-Arribalzaga
The University of Texas Pan American

ABSTRACT

In a time when there is a critical shortage of well-prepared teachers nationwide who can work with the growing number of students whose first language is that other than English (Crawford, 1995), exploring the reasons behind the shortage is important (Cochran-Smith, 2002). With this in mind, it is necessary to take a closer look at how teacher preparation programs are preparing future teachers to make the transition from student to teacher.

This article explores what student teachers, in their own words, "go through" as they attempt to complete their student teaching assignment and eventually, if successful, join the teaching force. Data were collected through semi-structured interviews, reflective journals, and field notes. The participants identified acculturation into the teaching profession as the most difficult barrier encountered during the student teaching semester. Another major finding was the clashing philosophies about bilingual education among the cooperative teacher and the student teacher.

Contact Information:

Matilde A. Sarmiento-Arribalzaga, Ed.D.
The University of Texas Pan American
sarmientom@utpa.edu
(956) 292-7350

Bilingual Student Teachers: Their Struggles in the Classroom

Introduction

A student teacher starts his/her student teaching assignment full of fear, excitement, enthusiasm, and ambition. A few weeks later, the same student teacher has sunk into discouragement about ever becoming successful in the profession. This sounds all too familiar for those of us that have witnessed high hopes degenerate into despair several times during our interactions with student teachers as they navigate the student teaching semester.

In a time when there is a critical shortage of well-prepared teachers who can work with the growing number of students nationwide whose first language is that other than English (Crawford, 1995), and at a time when the educational system is implementing numerous efforts to redesign and reform schools under the No Child Left Behind Act (NCLB), understanding the struggles bilingual student teachers encounter becomes even more critical (Cochran-Smith, 2002).

With this in mind, it is necessary to take a closer look at what student teachers "go through" in their own words in order for teacher education preparation programs (TEPP) to learn from their struggles. This examination will allow TEPP to be able to design comprehensive programs that will facilitate a student teacher's (a college student pursuing a degree in education who teaches in a classroom under the supervision of an experienced, certified teacher) transition from student to teacher.

Traditionally student teaching has been seen as the bridge between the theory, knowledge, and skills gained at the university and their application in the classroom. The university provides the theory, the school provides the setting, and the student teacher attempts to bring them together. The result of research on the student teaching practicum suggests that we need to seriously question this notion. The main theme emerging from research is the tension pre-service teachers experience as they attempt to bridge the culture of the school and the university (Bolin, 1990; Chandler, Robinson, & Noyes, 1994; Smith & Rhodes, 1992). These tensions are fueled by a sense among pre-service student teachers that they are poorly prepared for their work in the school setting (Cochran-Smith, 1991; Plourde, 2002).

Research shows that teacher quality is dependent in turn on the quality of student teacher candidates, the support they receive in their first year of teaching, and their continued professional development. In short, to give our public school children the best education possible, the best education and training possible must be provided for those who will teach them (Cochran-Smith, 2002; 2004a; Tisher & Wideen, 1990).

This article shares the struggles of five student teachers (Maria, Antonia, Cecilia, Carmen, and Anna) in a field-based teacher preparation program as they complete their student teaching assignment in four local school districts in the Rio Grande Valley in South Texas. The five participants were my students throughout their coursework and were assigned to me to complete their student teaching assignment. The following are their reflections upon the struggles and barriers they encountered and how and where their TEPP equipped, and failed to equip, them to address those barriers.

Research Question

The following research question guided this study: *What are the perceived problems and issues faced during the student teaching semester by bilingual education pre-service teachers?*

Theoretical Framework

Research cites that teachers identify the lack of supportive professional relationships as a reason for being dissatisfied with the profession (Evans & Johnson 1990; Fore, Martin, & Bender, 2002; Madsen & Hancock, 2002).What are the reasons for the lack of professional relationships among cooperative teachers and student teachers? Do teacher preparation programs influence this lack of professional relationships? Cegelka & Alvarado (2000) showed that in special education, teacher interns were more likely to remain in teaching if they had frequent training and support from a mentor. Pre-service physical education teachers also indicated a need for "reliable support and guidance" that would help them to face the challenges as teachers (Rikard & Knight, 1997, p 292).

According to Tjeedrdsma (1998), TEPPs offer cooperating teachers the opportunity to provide interventions and support for pre-service teachers in the classroom. Pre-service teachers are supposed to receive encouragement, support, constructive feedback, and ideas from effective cooperating teachers who have had adequate preparation for their role as trainers of pre-service student teachers (Giebelhaus & Bowman, 2002; Rikard & Knight, 1997). Pre-service teachers' beliefs were found to be influenced by the "lethargical attitude toward teaching science by in-service/ mentor teachers" (Plourde, 2002, p. 250). According to Rikard & Veal's study (1996), many cooperating teachers had little or no formal preparation for their role in working with student teachers. Cooperating teachers also cited their own student teaching as the strongest influence—whether positive or negative—on their learning to teach (Richardson- Koehler, 1988), and that their own past student teaching experiences were their models for their roles as cooperating teachers (Koerner, 1992; Richardson-Koehler, 1988; Rikard & Veal, 1996).

Literature Review

This literature review focused on problems, issues, and concerns encountered by student teachers in general as they complete their student teaching semester. Furthermore, the potential impact these will have on their professional development and retention was also addressed. The literature review is divided into the themes of student teaching and student teachers' socialization process. These themes are not exhaustive, but allow for the presentation of supportive information relative to the study of the topic.

Nearly 30 percent of teachers leave the profession in the first five years, and the attrition rate is even greater in some school districts. Further, research indicates that the most talented new educators are often the most likely to leave (Gonzales & Sosa, 1993). Research points out that those beginning teachers often experience problems when the beliefs they developed during their university-based teacher preparation stand in contrast to the school culture they encounter in their student teaching assignments. Student teachers are at risk no matter where they teach, but

after a few months, some actually declare failure—even after entering the profession full of enthusiasm. What happens in such a short time to shatter goals, diminish spirits, and destroy self-confidence? In a word: ISOLATION (Cox & Hopkins, 1993; Darling-Hammond, Wise, & Klein, 1995; Monsivais , 1990; Soto, 1991).

The No Child Left Behind Act of 2001 called for a "highly qualified" teacher in every classroom by the end of 2005, and school districts and teacher preparation programs across the nation began facing the challenge of preparing and hiring large numbers of teachers while retaining a focus on quality (Antunez, 2002; Education Commission of the States, 1990; Grant, 1992; Kerper-Mora, 2000; Shiina & Chonan, 1993).

NCLB mandates are further compounded by a recent educational research report indicating that, "During the 1999-2000 school year, 4.4 million students were identified as English language learners (ELLs) in pre-K through 12 public schools. This number represents nine percent of public school enrollment and a 27% increase over the 1997-98 enrollment. In urban school districts, ELLs account for 21 percent of students" (Recruiting New Teachers, Inc., 1998, p. 1). It is therefore imperative that universities be proactive in developing professional bilingual education teachers who will remain in the profession to educate the increasing population of minority students (Darling-Hammond, 1996, 1999).

Although there is little agreement about the most appropriate or most effective routes to pursue when attempting to address these issues, researchers such as Antunez (2002), Monsivais (1990), Darling-Hammond (1990, 1994, 1996) and Cochran-Smith (1991, 2000, 2002) can agree that teacher preparation programs must more realistically address the challenges faced by student teachers during their student teaching semester (Bolton, 1997; Brewster & Railsback, 2001; Cochran-Smith, 2004b; Darling-Hammond, 1990). Effective teacher preparation that meets the demands of today's classrooms can only occur when the quality of teacher education programs is an ongoing goal of university education departments.

Student Teachers' Problems

Student teaching is, by most accounts, the most valued aspect of teacher education programs. Given this perceived importance, it should not be surprising to discover that student teaching is one area of great interest in the research on teacher education. What is surprising, however, is that few studies describe exactly what happens during this important experience. The uneven attention of researchers has contributed to the criticism of the student teaching experience for lacking a theoretical and conceptual framework, for lacking common and shared goals (by participants in the triad--student teacher, university supervisor, and the school), and for not fulfilling its potential (Guyton & McIntyre, 1990).

In short, the student teaching experience is not all that it could be. Student teaching should offer the prospective teachers the opportunity to test and confirm their commitment to career choices, learn their roles in the classroom, and develop the skills and attitudes required to function in the school system. However, as Fives, Hamman, and Olivarez (2007) indicate, the burnout process may begin as early as the student-teaching experience. This is a disconcerting

finding, considering that one purpose of the practice teaching should be to send prospective teachers out into the teaching profession with a positive sense of career purpose.

Aitkens and Mildon's (1991) qualitative study of student teachers over the course of their student teaching assignment and into their first four months of teaching identified some common themes. One was an apparent lack of connection between the content of university courses and the urgencies and necessities of classroom teaching. Candidates felt courses focus too much on theory and too little on practical strategies (Darling-Hammond, 1994; National Board for Professional Teaching Standards, 2002).

Student teachers already feeling inadequately prepared are further aggravated by the vulnerable position in which they are experiencing stress, anxiety, frustration, and isolation as they try to acquire appropriate professional and personal skills. They must also endure time pressures and extraordinary demands on their energies. Pena and Almaguer (2007) concluded that identifying these factors encounter by student-teachers early on as they attempt to gain experience as teachers and being able to formulate a plan of action early on at the university level can resolve many of the problems reported by student-teachers.

Traditionally, the student teaching practicum has been viewed as critical to the development of pre-service teachers' pedagogical skills and socialization into the teaching profession, and as the most effective preparation for teaching and learning the professional role of a teacher. Pre-service teachers and practicing teachers alike rate their student teaching experience as their most important professional experience.

Especially relevant to the student teaching experience is the cooperating teacher who has direct contact and responsibility for the practicum. Teacher educators have acknowledged the critical role played by the cooperating teacher in the student teaching experience. Lofquist (1986) went so far as to say that the cooperating teacher is the most influential individual in a pre-service teacher's undergraduate preparation. If the importance and influence of the student teaching practicum is accepted, then the selection process of the cooperating teacher would be given high priority by teacher education programs.

Furthermore, if the cooperating teacher is the focal point of a successful experience, another major assumption can be made: teacher preparation institutions must have criteria by which cooperating teachers are trained and selected. Too often, the assumption has been that a teacher who has been in the classroom a certain amount of years will be an effective supervisor. Basing selection of cooperating teachers on the teachers' years of experience may, however, be faulty logic because research on effective cooperative teachers does not address issues related to being an effective supervisor, observing skills, analyzing teaching performance, and conferencing. Numerous reports indicate that there is a decline in the quality of those preparing to teach and those who remain in teaching (Cochran-Smith, 2003, 2004a, 2004b; Darling-Hammond, 1990, 1996, 1999; National Commission on Excellence in Education, 1983). If this is true, Goodlad (1990) may have been correct when he suggested that cooperating teachers will not be anything special unless they are selected with deliberate care. Goodlad (1991) also points out that the traditional student teaching experience is fraught with problems. The need for such high numbers of cooperating teachers overshadows the importance of selecting "good"

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cooperating teachers. (Office of Education Research and Improvement, 2000; Page, Rudney, & Marxen, 2004; Rushcamp & Roehler, 1992).

Methodology

During recent years, researchers in teacher education have documented the challenges facing student teachers and their need for support. The study of problems faced by student teachers is important and warranted. The more that is known about the difficulties student teachers encounter and the sources of their concerns, the better the chances are for eliminating these problems and enhancing every student teacher's chance for success (Doebler & Roberson, 1987).

This research was conducted over the duration of the five subjects' student teaching assignment (January- May 2005) and had, as one of its aims, a gathering of stories from the student teachers themselves. The research is a series of case studies that is evolving into a larger regional, longitudinal study that will track the development and career patterns of the five student teachers.

Participants

To qualify for this study, prospective participants (regardless of gender or ethnicity) were required (1) to be scheduled to complete their student teaching semester in a bilingual classroom or dual language school, (2) to have completed all requirements for the internship semester, and (3) to volunteer to participate in the study. The participants were chosen based on the purposeful sampling technique. The rationale for purposeful sampling is to select participants who would illuminate the questions under study. In this regard, I sought as much variety as possible. This type of sampling is typical for qualitative research (Patton, 1990).

The purpose, time demands, and the procedures of the research project were explained to 25 student teachers in eight different school districts. Overall, five student teachers in four different districts agreed to participate in the study. All were completing their student teaching assignment during spring 2005 in the area of elementary bilingual education. All five were female. Their age ranged from 21-30. All the participants identified themselves as Mexican or Mexican American.

Procedure

All participants were interviewed four times throughout the semester. The interviews concentrated on the participants' general impressions about how well prepared they felt they were for actual teaching. The interviews were semi-structured, and all were tape-recorded and transcribed verbatim. Transcripts were returned to participants to be checked for accuracy, and to have comments and/or supplementary information added.

In addition, each student teacher kept a journal in which critical incidents were recorded. These critical incidents were concerned with educational dilemmas with which the student teacher had to contend. For example, student discipline, parent conferences, interaction with

other professionals--obviously successful lessons or instances in which the student teacher performed unusually poorly or unusually well--could be considered critical by the student teachers as they are memorable examples of day to day situations. Their reflective journals were collected at the end of each month and duplicated.

Transcripts and Field Notes

Because verbatim transcripts of tape-recorded interviews provide a good source of data for analysis (Merriam, 1998), each interview session was tape-recorded, and that recording was transcribed. Copies of the transcriptions were made and used for margin notes, coding, cutting, and sorting.

During and after the interviews, in addition to the tape-recording of the process, I kept notes of thoughts, impressions, hesitations, or other occurrences worth considering. These field notes were transcribed after each interview. Keeping a journal of my research experience was a strategy suggested by Strauss and Corbin (1998) as a useful way of keeping track of one's thinking during data gathering and analysis. The research journal was kept for the purpose of tracking my thinking, planning my next meeting, generating follow-up questions if necessary, reorienting myself to the information, and developing or revising questions.

Field notes served as a fundamental data base in qualitative research, as they contained descriptions of observations and experiences, quotes from the participants, and the researcher's feelings, reactions, insights, and interpretations (Yin, 1989). Field notes and a researcher's journals have been reported as useful data sources for gathering qualitative information on pre-service teachers (Sebren, 1995). At the placement site, field notes were taken on observation of pre-service teacher's teaching experiences and informal conversations. The university seminars and informal conversations at the university are expected to provide additional data.

Data Collection and Analysis

During the course of the actual interviews, the data were simultaneously gathered by two separate methods. First, interviews were taped on a digital tape recorder. In addition, field notes were taken by the researcher during the interviews. At a later time, the researcher replayed the tapes and filled in any information that was missed on the original field notes. This process was repeated for each interview.

After the field notes had been finalized (after listening to the tapes and filling in the missing parts on the field notes) the researcher proceeded to read through each interview. Information (quoted or paraphrased) was then listed on information sheets. An information sheet listing each of the final categories was prepared for each respondent. Every response was recorded in the appropriate category on the respondent's information sheet.

The data were then analyzed in two ways. First, data were analyzed from the perspective of categories. The perceptions of the respondents were noted, and their views as to why they think as they do were also considered. This process allowed the researcher to understand not only what the respondents thought, but why they thought what they did. The second method of data

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analysis was cumulative. The trends and patterns of responses were followed throughout the semester to determine what changes occurred in the perceptions of the respondents as to the usefulness of their student teaching experience.

According to Schumacher & McMillan (1993), a "hallmark of most qualitative research is the narrative presentation of data and lack of the statistical tables found in quantitative studies" (p. 506). In the present study, data segments are presented as brief quotations lifted from the interviews. Short illustrative statements in the respondents' own language are used to reconstruct their problems, issues and concerns during their student teaching semester. These statements are arranged in a logical manner to make their meaning as clear as possible.

The data were viewed from a holistic vantage point. This approach permitted an overview of the data as a collective body of information that has been collected from all of the informants. Trends and patterns observed from the start through the completion of the semester reflected any opinion changes that the group experienced as a whole, and resulted in the development of categories and stages of student teacher perception change.

One critical source of emergent categories was the student teachers' journal. Each student teacher was asked to keep a journal of critical incidents that occurred during the course of her/his student teaching semester. While the variety of topics and frequency of use of the journals varied considerably, the information was a useful starting point for follow-up interview sessions when necessary. As the interviews progressed, emergent categories developed. Some of these categories were outgrowths of the original interview questions, while others emerged based on the critical incidents included within their journals.

Finally, each category was introduced by the researcher several times during the course of the interviews. The purpose of this strategy was to determine if the perceptions of the student teachers changed as the semester progressed. There are, for example, instances in which the beginning and ending responses in a given category for a particular student teacher might contradict each other, thus showing an attitudinal conflict and/or change within the student teacher.

All participants--in addition to their interviews--provided a wealth of information through their reflective journals. Antonia as well as the other four soon realized that the days in the classroom were darting past them in a continual blur of vignettes and that, in order to grow and develop in this fast-paced environment, they would have to make time to analyze the vignettes. They were all asked to document the smallest details of their student teaching assignment, but within a matter of weeks into their first placement they claimed that there was not time or mental space to keep up with their journals. Although the entries were few, averaging about 20, they were still able to convey their struggles, problems and concerns.

Findings

One of the first themes to emerge as a struggle for student teachers, identified early on during the first interview, was their concern with their districts' bilingual program. Cecilia provides the following insight:

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[T]hey do… they do support [bilingual education] but some of the teachers, they don't practice it. … some of the teachers they don't enforce, you know, they start talking (English), they get frustrated and they start talking to them in Spanish.

When Cecilia concluded her student teaching assignment, she still could not explain what bilingual education program her campus prescribes to.

Anna was at another district, and she too was trying to decipher what type of bilingual program was being implemented on her campus; this would prove to be a challenge:

I've had good teachers and I've had really bad teachers and they were all considered bilingual teachers, but then they would curve the program around uhmmm….. they were not either using the ah…proper language and uhm…. They were either not speaking both languages while they were supposed to, they were either ah…conducting the class in just one language because they thought they couldn't handle both of them.

It became clear throughout the interviews that all the participants had difficulty identifying or describing their campus bilingual education program. This was a constant struggle as they planned and attempted to teach. Many of them felt that what their TEPP had taught them in regard to bilingual education theory and methodology had no connection to the real classroom.

Another common and recurring problem area that emerged from Antonia's journal and other participants was their relationship with their cooperating teacher:

I introduced myself and I let her know that I was going to be with her for the next nine weeks. …I was so surprised that she didn't know that I was going to be sent to her classroom. …She started asking me a lot of questions like she didn't believe me and like she wanted to find a way to get me out of her classroom. …This situation made me feel very uncomfortable; I didn't know if I was going to be in the same classroom the next day. I told her that I was going to ask one of the administrators to come and talk to her about my presence in her classroom, and some of the things she needed to know about. The teacher never introduced me to the students or other personnel, sometimes I had to introduce myself. …Not even the principal introduced us (other student teachers on campus) to the other personnel.

Carmen disclosed more about her relationship with her mentor teacher in her journals than she did during the interviews:

I feel that I haven't had any hands-on [experience] because the teacher was always there. I mean, I took over the class, but she would always butt in if she felt she had to…she always had something to say when I was teaching. I always felt that I wasn't teaching. It felt more like I was helping out the teacher than actually being the teacher. … She was down to earth and would say things just how she felt. But whenever it had to do with me taking over, I felt she became jealous.

Maria, on the other hand, recorded a different problem in her journal:

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I don't know if it is a good thing to experience teaching before working, because the cooperating teacher can show you good but also bad things. … I feel that she can do a lot better. I have seen her get frustrated because she can not get the outcome she had expected. I have seen her get upset to the point where she grabs the student from the arm and will shake him/her. Honestly, I don't know if that is allowed in school. Sometimes she'll make ugly comments to the students that make mistakes.

In addition to her difficulty adjusting to a difficult cooperating teacher she also wrote, "I feel that an intern student needs to be placed with a teacher who enjoys her work. I do not feel that I am receiving the best learning environment or that the students are, either." During a meeting with the cooperating teacher, Maria, according to her journal, had the following experience:

…when I talked to my mentor teacher I feel that I am speaking to someone who is not interested in her job. Sometimes when I mention an interesting idea for the class, she responds with sarcasm. She will ask me, do you really think this will encourage them to learn or write more. When I heard this and when I hear it I feel a little discouraged. I have to just think about why I started out in this field [teaching].

In a later journal entry she expresses her worries again:

I'm concerned that student teachers are not being given 'good' examples of what a teacher should be. Sometimes I feel that I am not learning much. I guess I am learning how not to behave or treat my students.

This is further complicated by Maria's admission of the following:

…unfortunately, I have found myself mimicking the teachers' actions. The things she tells them are mean and rude. I have always **not** wanted to be a teacher like that. I have caught myself almost being rude to the students. When I'm about to say something, I stop myself. I don't want to say something that will hurt them and make them feel less about themselves.

Maria was extremely preoccupied with the changes she had seen in her own behavior and her actions in the classroom. She felt that the cooperating teacher was being a negative influence and that the teacher

…would just be so, I am concerned about that [mistreating students], treating them awful and making them feel [expletive]. They might forget about it, you know, the next minute or whatever, but what about when they go home and they really think about it or little things, because I remember I would think about that in first grade. The teacher made me feel bad because I got second and not first. What it does for a child when they are so young, you know, we need to … and I am afraid of that, I am afraid of making them feel, you know, less than somebody else or because they're not up here where we want them, that they're not ever going to learn.

The role of the cooperating teacher is crucial and must be carefully examined. In

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the case of Carmen, she often received unwanted and negative advice from the cooperating teacher. She was told that bilingual education students are "… all terrible and especially the bilingual, oh their parents this, the parents that, and I'm thinking, you know I remember we've had that discussion before." In addition, she wrote,

> The most troublesome problem I had this semester was working with my mentor teacher in the 2nd grade. He had never had a student teacher before, so he didn't know what to teach me. … Sometimes he made me feel dumb like I didn't know anything. I felt that I had no way to voice my opinion or concerns in the classroom. … We had two very different ways of thinking about teaching. Uhm, (long pause) Honestly, I am just lost. I don't know what else I should be, besides being that good person and that good teacher, but a bilingual teacher—I need someone to tell me, I need to see that. I have never seen it. It scares me. The instruction, I don't know the class that I am in right now, there is no bilingual going on, uhm…

The participants' overall student teaching experience can be summarized by Anna's last interview:

> I don't think I am going to be a good teacher. I don't know, I just, eso es lo único que tengo, [that is the only thing I have] you know, I am going to cry. I don't know, that scares me that I won't know how to teach, and they don't [referring to the university's lack of training in the actual process of teaching] you mean you come in here and you're on you own, there's nobody there.

In summary, the data from the five student teachers identified the following as their main problems during their student teaching semester: (1) implementing/ understanding the bilingual program and (2) the negative attitudes of cooperating teachers toward them.

Zeichner (1980) cites previous studies that found cooperating teachers to be a major influence on student teachers. The interview data also confirmed the key role played by cooperating teachers in the socialization process. Not surprisingly, student teachers often ended up teaching the way their cooperating teachers taught. The cooperating teachers are the ones in closest contact with student teachers and the ones who have the primary responsibility for student teachers' activities on a daily basis. Thus, they also have the opportunity to exert great influence on student teachers.

Journal entries and interview data from the present study demonstrated infrequent contacts between student teachers and their cooperating teachers. Approximately 80% of the students never met with their cooperating teachers beyond the required meeting times. The same percentage of students indicated that they were not satisfied with their cooperating teachers' quality of supervision.

The importance of cooperating teachers is also reinforced by the written and oral advice for student teachers from the college campus. In our programs, the student teachers are taught to go along with the cooperating teacher and to do basically what they do. The field placement office often reminds students that they are visitors on that campus. Thus, student

teachers are socialized into a process of passive, uncritical modeling of their cooperating teachers.

Unfortunately, despite the high-level of significance assigned to the role played by cooperating teachers, our program has no effective measure to screen cooperating teachers. The cooperating teachers also have no opportunity for special training with regard to their responsibilities besides the initial and final debriefing meeting with the university supervisor. They also do not have the opportunity to decline being a cooperating teacher. This led to some problems, and the student teachers found themselves under the supervision of one of the following cooperating teachers: those who ignored them; those who took advantage of them, using them as handy helpers; and those who considered having student teachers as a negative experience, as was the case with Antonia:

> I have just experienced being in a bad environment. I have noticed for the second or third time that there are teachers who don't like strangers in "their" school….There are those who think that I am here to serve them. I have said "no" on several times to the same teacher, because no, it is getting to a point where she wants to send me to the vending machine to buy her sweet bread. …The only thing that I told her was that I could stay with the class while she went.

These five student teachers' responses to the socialization process vary widely and are influenced by the culture of the school. For some student teachers, the school culture had a powerful negative impact on their self-concept. They encountered teachers whose actions reinforced the tension between the administration and the teachers and served to deemphasize the importance of the students in those schools. Their stories illustrate a complex relationship between the culture of teaching, teachers' self-concept, and meeting the needs of students. Some felt isolated and were unable to find support to help them prepare to teach or the support and guidance expected from a cooperating teacher. Far too often, the student teachers found themselves working in a culture of isolation in which they quickly lost sight of their original teaching goals.

The information provided through analysis of these narratives, however, reveals ways in which teacher preparation programs can better prepare teachers for early socialization experiences. Through developing the skills and attitudes needed to take advantage of socialization opportunities, highly qualified student teachers are more likely to continue to develop professionally.

As a final note, a few weeks after the beginning of her student teaching assignment, Cecilia sat across from me at her campus conference room and told me that she was not sure if she would ever begin teaching. When I asked her to provide a further explanation, she said without hesitation, "Teaching is not for me. I knew it was going to be scary this semester, but I totally underestimated the fear and the huge ups and downs."

She felt that she was totally alone and never in control of where she was going. She further explained that she might just leave the teaching profession. I reminded her of what she had told me the previous semester about being a teacher who was going to provide our bilingual

children with the opportunities and challenges they needed in the school system. She did not respond, but I saw the tears in her eyes.

Conclusion

The purpose of this study was to identify issues, problems, and concerns that bilingual education student teachers experience during their student teaching semester. Both interview data and journal entries from this research provided evidence that student teaching and cooperating teachers are the most powerful sources of influence on teacher candidates in their initial socialization experience. Yet ironically, the student teaching experience is also the weakest element in the teacher socialization process. There were few, or no, measures to screen and train cooperating teachers. In most cases, school teachers other than cooperating teachers did not help socialize new teachers into the profession as a member of a larger intellectual community. Teacher education reform will be pointless if it continues to pay no attention to these most important, but also most neglected, aspects of teacher socialization.

Clearly, the universities and public schools in which the student teachers will conduct their student teaching practicum need to take a closer and honest look at their relationship and partnerships. In addition, in order to link together the fragmented pieces of the existing teacher socialization practices, efforts should be made to create an open, honest, reflective, and ongoing, channel of communication among all agents involved in teacher socialization.

Carter (2001) pointed to the ways that successful mentoring can pave the way to success for beginner teachers. She found that as far as beginning teachers were concerned, critical ingredients to effective mentoring relationships were the availability of the mentors, and whether they were approachable, friendly, open and actively interested in the development of the student teacher.

From the data collected, it is important to point out that in order to continue using these cooperating teachers in the TEPP, teacher education faculty need to ensure that the cooperating teachers are able to perform the above-mentioned tasks as well as possess specific competencies to teach in a linguistically diverse environment. Having said all this, as a field supervisor, if I had to select one competency to develop first in cooperating teachers it would be that they must have communicative competence which would allow them to be able to communicate with the student teacher successfully in a positive and productive manner. The dilemmas encountered by the five bilingual student teachers in this study all clearly point to a need for better communication between student teacher and cooperating teacher to be able to resolve issues and problems that the student-teacher faces in the classroom.

As "visitors" on the cooperating teachers' campuses, these student teachers encountered challenges that took many different forms, from relational issues with and among staff, questioning school policies and classroom practices, to experiencing difficulties with their cooperating teacher. The student teachers also sought guidance in the realms of navigating the schools' bilingual education program. Several student teachers quickly realized that their campus had bilingual education programs only on paper, and that what was actually occurring in the classroom might more accurately be termed as "sink or swim."

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The needs of the second language learners were being overlooked. The student teacher in this situation faced internal and external conflicts when dealing with bilingual education programs or fragments of it that were present in the classroom. Some were struggling with the reality that there was no bilingual program in place and that what they had been preparing for during the last couple of semesters did not exist on the K-12 campus where they were placed.

How could this happen? More importantly, how can we ensure that this does not continue to occur? The current role of the cooperating teacher must be carefully re-examined and redefined. There must be a focus on what needs to be done to allow the cooperating teacher to become a legitimate partner in the preparation of student teachers. The cooperating teacher needs to be involved earlier in the teacher education process, not just during the student teaching semester.

Blame cannot be placed entirely on the cooperating teachers because it is important to be fully aware that they had a lot of uncertainty as to what their role was in the process of preparing student teachers. Some of them were aware and had planned to include a student teacher in their classroom setting, while others only found out on the morning student teachers reported to the campus at the beginning of the spring semester. This uncertainty leads to frustration on the part of all involved, as well as disengagement from the process of educating new teachers.

As the teacher preparation program we must begin to graduate the kind of teacher with whom we would gladly place our next class of student teachers. But this can and will only occur when we begin to place these teachers in classrooms with fully prepared and involved cooperating teachers. Doing so will enable us to begin to develop our core group of cooperating teachers. This point in particular hits home because if we are uncomfortable placing student teachers with practicing teachers whom we have also educated, then it would mean that we have failed along the way as a teacher preparation institution. Somehow we have created a cycle in which teachers, who had inadequate student teaching experiences when they were in college, are now considered inadequate mentors to the next generation of bilingual student teachers.

"How is my internship placement determined, and by whom?" "In what ways are cooperating teachers for interns screened, trained, and monitored by the university?" "Why isn't there closer interaction between the school district and the university?" "If we are working together, why does it feel like the schools think they are doing me, and the university, a favor?" These are but a few of the pertinent questions that student teachers reflecting on their student teaching placements found themselves asking. Some are easier to answer than others; many have caused and will continue to cause teacher educators in teacher preparation programs to squirm with discomfort. All of the student teachers' questions deserve an earnest and sincere response.

Implications of Findings

The successful bilingual education student teacher must understand the best ways to help students achieve in the classroom. A systematic effort to provide ongoing assistance to help bilingual student teachers improve their language proficiency and their knowledge base has

to begin with the teacher preparation program they go through and be followed up with the school district in which they complete their student teaching assignment.

These efforts must promote the personal and professional well-being of bilingual student teachers. Student teachers who are actively helped by positive, well-trained cooperating teacher will become better at their jobs. All participants reported that they willingly accepted any support or assistance provided to them. To actualize the true meaning of teaching, student teachers must be constantly nurtured, and mentor teachers must have specific plans of action that can be articulated, organized, and pursued. Such efforts require that the teacher preparation program and the public school administration understand the needs of the student-teacher and commit resources to enhance the professional growth of the bilingual student teacher.

All the student teachers made positive suggestions about teacher preparation and support. They proposed a system in which student teachers would receive formal assistance from cooperative teachers and mentors with a true understanding of the challenges of the student teaching semester. The participating student teachers also suggested that education courses be taught by professors who had actually been in the classroom and that the university should be the primary source for learning education theory, subject content, and teaching methods. They also felt that more emphasis should be placed on bilingual education. This would include sending them to "good" campuses where "true" bilingual teachers were practicing and where they could learn.

These student teachers were not any different from any others who enter the field of education. They are idealistic, optimistic, and want to make a difference in the life of children. The student teaching experience shook the very ground on which they walked, and no matter how much or how good the university coursework they had completed up to this point they were not able to make sense of their student teaching experiences.

The gap between what student teachers had learned at the university coursework and what is practiced in most public schools represented a fundamental problem. One way to address these contradictions would be to prepare student teachers to be able to formulate a new way of thinking about learning to teach. The questions of identity development are at the core of the student teachers' experiences. Learning to be a teacher is really learning to become a teacher in the fullest sense of the term.

Recommendations for Practice and Research

How do we improve the preparation of bilingual education teachers? The following are recommendations for the university and for school districts: 1) require accountability from school districts that host bilingual student teachers and 2) increase mentor responsibility, accountability, and compensation. Only willing and veteran bilingual education teachers should be assigned to mentor student teachers.

Future research should focus on assessment of actual support given to student teachers. In recent years we have begun to question whether the student teaching portion of the program is as supportive of our efforts as we would like it to be. We had always been aware that some of our

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placements were "better" than others, but we had hoped that our students could implement our principles, with our help, in any classroom context. We realized we needed to take a more systematic look. It is imperative that substantially more qualitative study be made of the outcomes of these programs and the effects that these teachers have on the educational community. There are many areas of concern that fell outside the parameters of this study. These areas are in need of in-depth research, but two stand out: 1) what happens to student teachers who have had a negative student teaching experience, and 2) what impact does this negative experience have on bilingual student learning in their class in the future?

The most important item on the list to improve learning conditions in the field would be that the cooperating teachers' teaching philosophy be consistent with the principles that guide the teacher preparation program at the University of Texas Pan American (UPTA). With more consistency between the cooperating teachers' views and practices, the learning context for our student teachers would be improved. In a similar vein, it would be ideal if the student teacher could see the cooperating teacher model the principles around which the UTPA bilingual program is designed. A second and related condition concerns the student teacher/cooperating teacher relationship. Given the challenge of learning to teach in someone else's classroom, the relationship between the student teacher and the cooperating teacher needs to be safe, supportive, and conducive to learning to teach. Ideally, the student teacher would be able to talk freely with his/her cooperating teacher, share ideas and struggles, and learn through a collaborative conversation about practice.

In conclusion, when bilingual education student teachers were asked to reflect on their own experiences, they gave a clear message about teacher preparation. They hope to move continuously through the process of becoming a teacher. They prefer to move away from the swim or sink mode to the growth and development experience. When asked what they felt they needed to be successful, they proposed a system in which student teachers receive more formal preparation by the university, increased assistance from supportive mentor teachers and administrators, more help understanding bilingual education and its curriculum, and better evaluation processes that allow time for remediation and professional growth.

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Investigating the Critical Lives of Bilingual Educators and Problematizing the Curriculum for Pre-service Education

Irma Guadarrama
University of Houston

ABSTRACT

This paper describes the process and results of an ongoing exploratory study investigating the critical lives of a cohort of bilingual students in a teacher preparation program at a major urban university in Southeast Texas. For the purposes of this paper, several aspects of the data are analyzed and implications for improvement of the pre-service education curriculum are suggested. In the conclusion of this study, several key recommendations are made concerning the organization and the curriculum of pre-service education. Among these are the implementation of an extensive plan of inclusion, a curriculum based on the principles of constructivism, well-structured university and school partnerships, and the maximum use of technology.

Contact Information:

Irma Guadarrama
University of Houston
iguadarrama@uh.edu
(713) 743-4976

Investigating the Critical Lives of Bilingual Educators and Problematizing the Curriculum for Pre-service Education

Introduction

A consensus exists among teacher educators that the challenge to educate our future teachers is as complex and demanding as ever, especially within an era of school reform. Even though researchers have gained considerable ground in pre-service education—generating invaluable data on restructuring teacher education, improving the relevance of the curriculum, and strengthening theory connections with practice (Korthagen, Loughran, & Russell, 2006; Cochran-Smith & Zeichner, 2005)—substantial research gaps exist, especially in the preparation of bilingual educators. Furthermore, recent, emerging demographic data have enhanced our understanding of the needs in teacher education, facilitating our task of fine-tuning the research questions. This paper purports to address the bilingual educator *voice* in the expanding body of literature on preparing future teachers in pre-service education. The exploratory study investigates a cohort of bilingual students in a teacher preparation program at a major urban university in Southeast Texas and analyzes the data to determine ways that the pre-service curriculum can be co-constructed by students and faculty.[1]

The New Demography

Many recent reports have alluded to the radical changes in student populations across the nation's schools as a "new" demography as opposed to one that is in the process of changing (Capps, Fix, Murray, Ost, Passel, & Herwantoro, 2005). Certainly, this data underscore the phenomenal scope and nature of change that has impacted practically every aspect of the educational system. Most important are the implications of these demographic changes to teacher education. In order to contextualize the study herein, several key areas of demographic information are discussed briefly in this section.

The Hispanic Presence in the Nation and Texas. According to the 2000 Census[2] (U.S. Census Bureau, 2001), over 35 million people in the U.S. identified themselves as Hispanic or Latino. That figure represents a 142% increase from the 1980 Census. Latinos or Hispanics make up 13% of the total U.S. population. In Texas, the Hispanic estimate from the 2000 data (Texas State Data Center and Office of the State Demographer) is 32% of the total population; by 2040 the Hispanic population is expected to increase to 45%, without the projected migration estimates from south of the border. This large and growing population forms a substantial basis for the need to prepare more and better qualified bilingual educators.

The Immigrant Presence. According to the Pew Hispanic Center[3], 11 million "unauthorized" immigrants reside in the U.S. When the distribution of this group is broken down by states, those that have the most "unauthorized" immigrants also have the largest number of English language learners (ELLs) enrolled in the public schools. These states are, in descending order California with 1.6 million school-age ELLs, Texas with 684,000 ELLs, Florida with 300,000, New York with 204,000, and Arizona with 156,000. The most recent source of information from the National Clearinghouse for English Language Acquisition[4] indicates that

approximately 5,119,561 English language learners are enrolled in pre-K-12 public schools across the nation.

Teacher Quality and Shortages in Urban Schools. Schools with high ELL enrollments tend to have a greater proportion of new teachers and teachers who are not certified, even though they tend to be paid higher than their low- or no-ELL enrollment school counterparts. Another important point to keep in mind is that due to an aging teaching force, newly hired teachers are replacing veteran, experienced educators, and administrators are relying heavily on the new hires to have acquired the knowledge and skills prior to their first-year assignments (Gonzalez & Darling-Hammond, 2000). Data from the Government Accounting Office (GAO, 1994) indicate a shortage of 175,000 bilingual. Even though policymakers and leaders in teacher preparation institutions contend that teacher quality is vital to educational improvement in the schools, there is a paucity of research that addresses the knowledge and skills that bilingual teachers need to be effective (Menken & Antunez, 2001).

Related Literature Review

The purpose of this section is to illustrate examples of the influential, relevant research, with no intention of providing a comprehensive scope, although some of the references mentioned have well-developed literature reviews. The following four areas of research are discussed: a) the preparation of teachers for diverse student populations, b) cultural relevance in pre-service education, c) teacher belief and how it impacts teacher performance, and d) the importance of self-view among bilingual educators in pre-service teacher education and issues of empowerment.

One important category is in preparing teachers to work with diverse student populations. Ladson-Billings' (1999) review of research from the perspective of critical race theory is both comprehensive and insightful. It is one of the earliest reviews on teacher education that juxtaposes teacher education issues with the changing demography of our society. Ladson-Billings' concluding remarks (on how pedagogical considerations for diverse populations should be center stage rather than sidelined) is echoed in Sonia Nieto's book on language, culture, and teaching (2002). Nieto's engaging discussions on key topics from multicultural education and bilingual education to pedagogy, power, and ideology offer invaluable information that get to the heart of the matter: working effectively with students. Darling-Hammond and Bransford's book chapter on preparing teachers to work with diverse learners also emphasizes the importance of a pedagogy that closely links the students' lives with the subject matter: "The challenge of teaching diverse learners starts the moment teachers begin planning ways to connect their students with the subject matters they intend to teach" (Darling-Hammond & Bransford, 2005, p. 264). Other sources on a similar vein can be referenced for more information, such as Garcia's book on early childhood education practices in cultural and linguistic diverse settings (1995), more recent publications on culturally responsive teaching (Gay, 2000; Irvine, 2003), and Cochran-Smith on preparing teachers for diverse settings (2004). Villegas and Lucas' book contains invaluable information on what teachers and other school staff can do to effectively bridge the gap between the school and community (2002). Similarly, the work of Moll, Amanti, Neff, and Gonzalez (1992) greatly influenced the way teachers can employ anthropological perspectives to strengthen their understanding and create new pedagogies as culturally

responsive teachers (see, for example, Guadarrama, 1997).

A variety of studies on culture and teaching have been influential in shaping a pre-service curriculum that is meaningful and relevant. For example, The Kamehameha Program, also known as KEEP (Tharp & Gallimore 1988), highlighted the transformational outcomes of both teachers and the curriculum or pedagogy that was made more compatible with the unique characteristics of the students. The social action and organizational efforts of the Ciulistet Group of teachers and community leaders among the Yup'ik Eskimo led to a transformational journey that impacted teacher thinking and the curriculum (Lipka, Moffat, & Ciulistet Group, 1998). Another influential source is Kailin's (2002) powerful (and empowering) book on antiracist education that chronicles her work with teachers as she helps them construct new paradigms based on the premise that they may "practice racism without being aware of it" (p. 3). Above all, the inspirational messages conveyed by these and similar cases illuminate the accomplishments of culture brokers/educators who positioned their actions according to their principles.

Another category of relevant research focuses on how teachers' beliefs or thinking, and opinions affect their teaching performance. This body of work is relevant to the study reported in this paper because it underscores the importance of teacher candidates' voices and how they inform teacher education practices. Pajares (1992) provides a comprehensive review on how the belief structures of teachers influence their decision making as educators and curriculum planners. Kagan's (1992) work on the implications drawn from this body of research highlights the difficulty in assessing teachers' beliefs and determining if and/or how teacher education should address change or transformation in teachers' belief systems. Ramos' work (2001) focuses on bilingual teachers' opinions and how these may affect their teaching behaviors. Specifically, he surveyed bilingual educators' opinions of primary language use (Spanish) and the extent to which they implemented their ideas in the classrooms. Ramos found a discrepancy between teachers' beliefs and their practical implementation, suggesting that the teachers appear to be "guided by their own beliefs" (p. 265). Flores' research corroborated Ramos' in that the beliefs of the teachers she studied were also influenced by their prior experiences (2001).

The final area of discussion underscores the themes that relate to how minority candidates perceive themselves as being without *voice* in traditional teacher education. A brief and excellent recent review of the research on the silencing of minorities is available in a document on minority teacher recruitment, development, and retention by the authors of the Brown University Education Alliance (Torres, Santos, Peck, & Cortez, 2004) The authors' foreground key issues in this area, namely, that the research reveals minority teacher candidates often perceive themselves as invisible, powerless, and excluded from the overall teacher education curriculum. The candidates believe that the majority-group students and faculty perceive the minority candidates as inferior or deficient when compared to their majority group cultural and experiential norms. The bilingual candidates possess conflicting perspectives as they navigate their bilingual world within a monocultural framework of the teacher education curriculum. The authors allude to how teacher education programs may be actively engaged in recruiting minority candidates, but often fall short in harnessing their cultural and linguistic experiences and in using these as curricular resources.

The research presented in this paper addresses the need to further shape and develop the

pre-service education curriculum so that the teacher candidates are empowered as active participants in their education and as future bilingual educators.

Purpose and Rationale of Paper

This paper describes the process and results of an ongoing research project on identifying the *critical* experiences of pre-service students and drawing implications for change in the curriculum for pre-service education from their *voice*. The descriptor, *critical,* refers to the specificity in candidates' lives in which culture and language intersect with their social worlds, providing the candidate with unique, transformative changes in their perceptions. *Voice* describes the ideas, expressions, opinions, and sentiments specific to the task at hand and emanating from a lived perspective. Because of a silencing context that has dominated their schooling experiences, the candidates have not had the opportunity to express themselves, at least not in the way presented in this paper. The choice was made to use qualitative tools to collect, analyze, and interpret the data over quantitative methods to facilitate in the management of the narrative aspects of the study that make up the majority of the data. A process using narrative analysis was used as a basis for organizing and interpreting the data (see, for example, Polkinghorne, 1995).

Very few studies have been published on preparing bilingual students for teaching in bilingual education programs. A qualitative study by Galindo & Olguin (1996) examined the autobiographies of bilingual educators, specifically on how the educators' personal teaching philosophies were impacted by reclaiming their cultural resources. The authors also featured a case study of a bilingual educator who analyzed how culture is integrated into her teaching and philosophy. In a quantitative study, Flores and Clark (2004) studied a cohort of normalistas (teachers from Mexico) by examining their self-identity and self-concept and how these may potentially affect their self-efficacy as teachers. Based on their conclusions, the authors point to a need to develop in the normalistas a sociopolitical awareness prerequisite to an understanding of the educational needs of ELLs in the U.S. Indeed, most of the recently published studies on preparing teachers to teach in diverse student population schools involve prejudice reduction efforts among teacher candidates who are female, from a non-minority group and middle-class socioeconomic levels, and who have suburban or rural backgrounds (Hollins & Guzman, 2005).

This study is framed within a knowledge base that ascertains best practices in pre-service education (Korthagen, Loughran, & Russell, 2006) and what researchers and practitioners have deemed the most important elements of effective, successful bilingual education pedagogy (e.g., Brisk, 1999). The construction of the curriculum proposed herein conforms to the fundamental principles for teacher education that Korthagen, Loughran, and Russell describe in their work. Similarly, this study attempts to align effective bilingual education practices with the curriculum examples that the author includes in the corresponding discussions.

Considering the shortages of bilingual educators that are well-prepared to meet the immense challenges (see, for example, Crawford, 1997), we have the urgency to ensure that the most relevant and effective pre-service programs are offered in colleges of education. To this end, this study intends to contribute to a better understanding of how the bilingual pre-service students' experiences and thinking can shape the curriculum.

Design of the Study

The major research question underlying this study is: "what are the critical experiences of the bilingual teacher candidates, i.e., the outcomes of the important cultural and social events in their lives that specifically intersect with their schooling experiences and have a potentially influential impact on their teaching performance?" Another important question posed but addressed only slightly since it is beyond the scope of this paper, is "how do the data on the critical experiences of the candidates inform pre-service education practices and structures?"

The following paragraphs address the major sections of the study: a) participants, b) the role of the researcher, c) data collection, d) analysis, and e) findings and interpretation. The last section includes in are examples on problematizing the pre-service education curriculum, framed within a conceptual framework of a socially and culturally responsive curriculum.

Participants

For the purposes of this paper, I randomly selected nine of the 34 original participants, eight female and one male. All of the Hispanic students are juniors in the undergraduate teacher education program in a large, urban university in Southeast Texas, studying to become bilingual teachers and work in elementary schools. By selecting a small group of participants, I was able to pilot test the methodology and procedure used in the research and thus gain a better perspective on the analysis of the data.

The Researcher

As a professor of the participants used in this study, I need to describe my role in this self-study as a researcher/participant. I initiated this research because of my interest in providing the best opportunities available for my students. Since beginning my university teaching career 25 years ago, I have been involved in developing and teaching curricula for teachers in bilingual education and English as a second language, at both the in-service and pre-service levels. Recent advances of technology have provided innovative venues and tools that serve not only to improve our instructional component in the pre-service program, but also greatly enhance our ability to conduct research. For faculty, technology tools are invaluable within a context of time constraints due to the multi-task nature of our roles as instructor, curriculum planner, advisor, and researcher, to name a few.

Data Collection

The following data sources were used in this research:

- Narratives–each participant wrote a free-style narrative addressing key life-changing events: when did they come to the US, when and how did they learn English and learn to read, what were their positive and negative experiences in school, etc. Each participant developed a protocol around these events. Each participant worked with a partner. Partners interviewed each other, transcribed the interview, and wrote a narrative based on the transcription. This partner-style technique served to help them

stay focused on the task, thereby increasing their skills as interviewers and interviewees.

- Self-Portrait Survey, an open-ended questionnaire–participants filled out a 32-item questionnaire and wrote two essays, one in English and the other in Spanish (see Appendix B).
- Journal entries–participants wrote several entries during the two-year period describing an event or incident they perceived as crucial to their understanding of the teaching process in bilingual education.
- Electronic bulletin board journal entries–participants wrote five entries during their pre-internship practicum component. The electronic bulletin board, called eClassroom, is a password-protected web site that allows the posting and replying of messages. The web site is available to all course instructors in the college of education. Every group is identifiable by course number and title. Each participant was assigned to a bilingual education classroom in an urban school that had over two thirds of students classified as English language learners, the majority of whom were Hispanic. There were approximately 38 pre-service students distributed among the five urban schools. During the six-week period, participants wrote journal entries that responded to the following statements: 1) Describe and critique the bilingual education program in your classroom. 2) How are students encouraged to be life-long learners? 3) How does the teacher address the language and cultural needs of all students? 4) How much English and how much Spanish is spoken by teacher and students and for what purposes? 5) How is bilingual education theory applied, especially in the BICS/CALP paradigm?
- Exit journal entries–participants wrote journal narratives describing their experiences in the program, noting specifically what they learned and what and how the program could be improved.

Analysis

The selected responses were coded and entered on a spreadsheet according to the questions. The data indicated that the issues of language, culture, and early experiences and notions of self-efficacy present the most valuable factors to explore. The data from several sources yielded a rich bank of information that can be used to analyze a variety of questions. The focus on a few issues and the responses of a randomly selected group of students facilitated the organization and presentation of the findings.

Findings/Interpretations

The following chart lists the data organized into four tables that are discussed in this section.

Table 1 - Background Information	Provides key descriptions of the participants.
Table 2 - Positive & Negative Experiences	Students reflect on how their experiences (positive and negative) impact their thinking.
Table 3 - Students' Responses to Points of View	Students' reflections on acculturation, assimilation, and society's reaction toward

	these notions.
Table 4 - Responses to Field-based Questions	One of the participants responds to three questions.

The Self-Portrait open-ended questionnaire was useful in organizing the initial data (Table 1). The most striking aspect on the background information of the group was the commonalities that they shared; however, their differences were just as important. The personal narratives of the participants were also reviewed for additional information and in an effort to reconfirm the consistency of the data.. (Bogden & Biklen, 1998; Clandinin & Connelly, 2000). Their journal entries, elaborated upon in the next section, provided insightful information that revealed what we often call *teacher thinking*, or their thoughts and ideas about their role as teachers. The following Table 1 summarizes the background information of the students.

Table 1: Background Information

- Immigration Status – All the students are either foreign-born or are children of immigrant parents. Some indicated in their personal narratives that they attained U.S. citizenship during the amnesty policies of the Reagan administration in mid-1980's.[6]
- Attended Bilingual Education Programs–Only two of the nine students indicated that they had attended bilingual education programs in elementary school. One of the two remarked that she was in the program for a brief time before her family moved to another school district with no such programs. She also commented in another journal entry about the negative experience she had in her new school.
- First Language–All of the students reported that Spanish was their first language.
- Language Spoken at Home–All of the students reported that they spoke Spanish to their family members; however, four of them indicated that they spoke Spanish and English at home.
- Language Spoken at School with Teachers–All students indicated that they spoke English with their teachers.
- When did they learn English?–All but two reportedly learned English at age six or seven. One reported to have learned English at age three, and another at age 11. The latter student reported that she and her family arrived in the United States at that age. All of the other students started school in the U.S. in first grade or kindergarten.
- When did they learn Spanish? The questions were clustered around the topic of learning to read and write in Spanish. All of them indicated to have learned to read and write by age six or eight or "very young," and in two cases, one was self-taught and the other learned to read and write in Spanish in middle school.
- Which is their dominant language? All of them reported that English is their dominant language. Their general comments alluded to how the schooling process had strengthened their English skills.
- Competency in Spanish?–Since this was an open-ended questionnaire, the students chose the manner by which to describe their competency in Spanish (and in English in the next question). Usually, they used the same descriptors to describe their

competencies in each of the two languages. So, subject A's comment for describing her competency in Spanish was, "competent but am afraid of making mistakes," and for describing her competency in English she noted, "competent both in writing and speaking but am afraid of making mistakes." One student indicated that she can understand Spanish fluently but has difficulty writing it, while for the English competency she wrote, "I am fluent."

- Competency in English?–Most of the responses were "very competent" or "very fluent," indicating that overall the students indeed felt that their English was the stronger of the two languages. The student who indicated a fear of making mistakes in Spanish stated that she had a fear for making mistakes in writing in English.

The students' self-assessments of their language dominance and competencies are relevant because of the extent to which they rely on their bilingualism to teach their future students. Language performance in two languages is one of the unique qualities among the bilingual students that differentiate them from their non-bilingual counterparts. It is important to understand the students' early language learning experiences because as Ramos (2001) points out, the bilingual teachers that he studied "were guided by their own personal experiences as second language learners or speakers rather than by the knowledge or experience they had acquired" (p. 263). Kagan (1992) concludes in her research on teacher belief that "we lack direct evidence concerning the processes that effect change in teacher belief" (p. 65). This research strongly suggests that understanding the early language learning experiences of pre-service teachers is an important first step in addressing their views on theory and practice in bilingual education programs.

Another important commonality found among these students is that although Spanish was their first language, their self-assessments in terms of competency levels indicate a lack of development in their language skills in Spanish compared to English. Yet, the students indicated having "high" levels of fluency in Spanish. Could this be based on a self-perception that their Spanish competency, albeit underdeveloped, is important and valuable, but at the same time, they realize they need to focus on improving their skills? An important question that emerges here is whether our pre-service education programs are doing enough to assist students in their development of bilingualism and in contributing positively to their linguistic self-efficacy as bilingual educators (Johanessen & Bustamante Lopez, 2002).

The next section focuses on students' responses on five questions: 1) What positive school experience(s) did you have? 2) What negative school experience(s) did you have? 3) As a result of the experiences you had in school, what will you do differently as a teacher? 4) Do you think people from other countries should become Americanized as soon as possible? Why or why not? 5) Do you think that it is important for people in the United States to understand in substantial ways what immigrant families go through, economically and educationally? Why or why not?

Table 2 below lists the students' responses of the first three questions. Only kernel statements are displayed, and the students' names are deliberately left out to protect their identities.

Table 2: Positive and Negative Experiences Responses

Student	Positive experience	Negative experience	As a result….
A	Having a bilingual friend that could help me communicate with the teacher–nice experience.	My bilingual friend was absent–I raised my hand to ask permission to go to the restroom–teacher didn't understand–I wet myself–that was the worst memory.	I will make sure to create a comfortable setting in the classroom in order for my students to feel accepted and free to be themselves. I will always let them know how important they are to society and to never be ashamed of who they are.
B	I don't remember being discriminated by anyone, most of my teachers helped create memorable memories.	Negative experiences occurred frequently during middle school–there were often many students who were disrespectful with each other which delayed the teachers' instruction time–I would get annoyed and frustrated.	I might sound mean at the beginning–I will set firm boundaries to the students. But in the inside I will only have love towards all the children and will still be compassionate towards them. Afterward, I will gradually be less strict–help the children's behavior to be more controlled.
C	My third grade teacher was one of the best teachers I've had. She made school fun–we played games while learning and she even taught us how to play chess.	None that I can remember.	I will definitely try to make school fun. I myself am an outgoing fun person, so I can't wait until my students start learning in a fun entertaining way.
D	I had dedicated bilingual teachers that worked very hard to help me acquire the English language.	I had been enrolled in the bilingual education program at HISD when my parents moved to Pasadena and I was placed in all-English classroom. The results were–I failed horribly and was transferred to another school with bilingual program. I felt something was wrong with me–that I	I think it's important to assess our students to find out where they should be placed–the findings thoroughly explained to parents so they can make the best decisions–making good decisions early can prevent bad experiences for the child.

		wasn't intelligent.	
E	I had an opportunity to read and write in both languages instead of just speaking them. It's important to know how to communicate through other methods instead of just verbally.	I can't remember–maybe just got bad conduct grades because my teachers always said that I was a chatter box. I always talked a lot.	I will try to make a difference in children's lives–I will make the best of each day to help a student learn and be successful in the classroom. I will access my students and find ways to better help them learn. I will incorporate technology to enhance their skills.
F	I had a wonderful experience with the teachers I have dealt with while in elementary. They were very caring and helpful.	I was unable to communicate and no one seemed to understand me. I was in an English-only classroom at the time and it was very difficult to follow along.	I would try to make my students feel as comfortable as possible and make sure they fell like they are always heard and what they have to say is important.
G	I had several wonderful teachers throughout my education that really seemed to care about me and pushed me to strive for a higher education and be successful.	I had a teacher in 10th grade that taught us nothing (geometry). He gave us worksheets everyday so he could attend to other things. I was always the one that understood the work and I learned it by myself by reading the textbook–soon everyone would ask me to show them how to do everything. I was pretty much the teacher there. It was bad experience having to take a class with a teacher like that, but it helped me because look at where I am doing now.	I will definitely care for, give my students that trust and self-esteem that those wonderful teachers gave me. I would also show my students in every way possible that I do care and I am someone they can trust and that they can come to for help.
H	I found a lot of resources and a lot of support and encouragement from some teachers. I couldn't believe how much materials and	I found under-appreciation of my culture and especially my first language not from every teacher but some pseudo	I am committed to instill high self-esteem in each one of my students by teaching them to appreciate their heritage

	access to books [there was], including individual attention there was in this country.	teachers. I think that the worst comes from certain people who hold a false concept of Spanish speakers and their cultures, generalizing and even criminalizing every Spanish speaker no matter what.	culture and language. I plan on leading them to embrace the value of being bilingual and se themselves more as members and citizens of the world (in other words expand their concepts).
I	I was fortunate to have wonderful teachers; with the help of both my family and teachers, I was able to learn English and maintain my Spanish.	I do recall some teachers getting upset because I would speak during class with other Hispanic students.	I will always encourage my students to speak and improve both languages. It is important to love both languages and not reprimand a student for speaking Spanish.

The students' narratives indicate that they each had a positive experience(s), whereas a few of them commented on a negative experience. One of the reasons may have been simply a matter of maintaining privacy. Another important observation is the manner by which the students' responses to the third question, i.e., what the students will do as a result of their negative experiences, followed the second question in which they describe their negative experience(s). When I employ critical discourse analysis as an analytical tool, i.e., a lens by which to discern the socio-cultural dimensions of the student narratives, I identify the negative experience responses as *anticipatory discourse*.

According to Scollon and Scollon, re-phrasing from de Saint-Georges, *anticipatory discourse* "is a discourse which occurs prior to the action which prefigures that action in significant ways, which is not concurrent with it as part of the action itself" (2005, p. 103). The negative experiences that occurred early in the students' lives probably impacted them to a great degree that, whether consciously or unconsciously, contributed to their current views or even philosophy of teaching. There appears to be a cause-and-effect pattern that conforms to the "discourse cycles" that the Scollons explain thusly: "psychological formations are internalized first as actions, and only subsequently externalized as discourse" (p. 108). For example, Student D relates a story of how, as a result of being placed in an all-English classroom as a child, that led to her academic failure; as a teacher she will conduct assessments and communicate with parents to prevent similar conditions that may lead to student failure. Student F had a similar experience in that she was also in an English-only classroom and as a second-language beginner had difficulty understanding and being understood. Thus, as a teacher she will try to make students feel as comfortable as possible to prevent recurrence of the problems she had experienced.

It appears that by asking students to share their positive and negative experiences, then, posing questions of resolution is an example of what Freire discussed in critical pedagogy as problematizing experiences, or a way of building or activating conscientization (Freire, 1970; Shor & Freire, 1987).[7] The students' experiences are unique, and by providing them with space

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to discuss and reflect on their illuminating experiences, students can learn to become critical thinkers.

The negative experiences related by the students coincide with the statistical information collected and reported by the Pew Hispanic Center. The 2004 Survey Brief Report[8] (Pew Hispanic Center, 2004) on discrimination against Latinos in five state reveals that "around three in ten Latinos from California (30 percent), Texas (34 percent), Florida (27 percent), New York (28 percent), and New Jersey (34 percent) report they, a family member, or a close friend have experienced discrimination during the last five years because of their racial or ethnic background" (p. 3). Even though the students (students A, D, F, H, and I) avoided labeling their experiences as discriminatory, the actions against them due to their lack of English language skills qualify as discriminatory. The fact that they recognized that they could correct the wrongs they experienced is a credit to their self-empowering abilities. As bilingual educators they will have the opportunity to treat their students the way they would have wanted to be treated.

The next table, Students' Responses to Points of View, includes the comments from the fourth question on whether immigrants should become Americanized quickly, and the fifth question, whether people in our society should try to understand the immigrant experience.

Table 3: Students' Responses to Points of View

Name	Should Immigrants become Americanized?	Should People in the U.S. Try to Understand the Immigrant Experience?
A	I believe that most countries today are indeed Americanized. When I visited Los Cabos–I really did not feel as if I were in Mexico, I thought I was still in the US–as if our people were losing their identity and becoming Americanized.	I think it's important because they need to see how things are before they judge. Many times they don't understand what sacrifices need to be made in order to come to this country. They judge us by saying we are lazy and bad in school because we have a high dropout rate. They need to know the daily lives of the immigrant family–it is not easy.
B	I believe that people should become Americanized when ever they choose to. Some might see it difficult but should also be respected. I believe that it would be beneficial to get Americanized as soon as possible for this permits the person to grow more easily here in the U.S.	People should know and understand the difficult ways that immigrant families go through. In knowing this, people could make available new opportunities for people to get educated–gradually help reduce those percentages of poor. … More money could be funded to those poor countries so that people could get educated.
C	If by Americanized you mean learning the culture and acting like an American, then yes. People should try to learn the culture to better fit in society. … They should essentially know some of the	I think people should know that immigrants who come to the US come here mainly to acquire a better life. We as immigrants come here to achieve and to better ourselves. Many people who

	basic and common aspects that make America the great country that it is.	are born in this great country do no know the harsh economical governmental conditions that other countries contain.
D	No, I think they should first live in this country for at least five years. They can then decide if they want to stay here or not.	Yes, just like our founding fathers came to this country in search of a new life with better opportunities so are other immigrants. These families also want better jobs and quality education for their children.
E	I don't think Americanized is the correct word–but I do believe that if you live in the U.S. you should respect the country and show leadership because it's the place where you choose to live.	Yes, I believe it's important for American people to understand what immigrants have to go through to get to the United States. It's a way of knowing how to value that person for their courage to overcome many obstacles that that they have to face to get to this country.
F	No, I feel like people from other countries should be proud of where they come from and be able to give America a little bit of what they have to offer from their culture. It's what makes America such a wonderful country.	Yes, there is a lot of misunderstanding and ignorance out there and I feel like people should try to have some empathy before speaking and making comments that are otherwise quite selfish.
G	They should not be Americanized as soon as possible because this causes them to end up not accepting of their own culture and background. It causes people to think that their background or language is not acceptable.	Yes, it is important because that way they could get a feel for what it is that immigrant families go through and what they feel like sometimes when they are not accepted. This way they could understand why it is that families migrate from other countries to the U.S.
H	Everybody has the right to keep customs, beliefs and traditions as long as they are not offensive and damaging to others. To become Americanized is a term that doesn't hold a clear concept because to be an American means to be diverse, unique, and free at the same time and unfortunately the term is used in a very narrow-minded way, making people think [it] is about a language and a way of thinking or acting. When in reality whoever becomes an American is pledging allegiance to this country and doesn't need to fit where others fit or tell you to fit culturally or socially. In	It is wise to always be informed about topics that affect the nation. Everybody in America should observe and experience in a closer way the ordeal every immigrant family goes through in basically every aspect to be able to give an opinion or even to dare to pass bills and push for reforms.

	other words there is no linear pattern of conduct; we are all different and thank God for that. The key word would be become sensitive toward others instead of Americanized.	
I	I do not think so because culture is what defines different countries. If they all become Americanized there would be no differences and our diversity would be lost.	I think they should because many people generalize or assume certain aspects about immigrant families. It is important for them to understand so they can see where we are coming from and reasons for being here.

The voices of these aspiring teachers express an insightful perspective that can only be acquired through lived experiences. If understanding individual narratives is "central to comprehending our collective narratives," as Kailin (2002, p. 161) suggests is paramount in an antiracist curriculum, then the kinds of viewpoints shared by bilingual students such as the ones here hold invaluable lessons for pre-service educators. Clearly, the students have demonstrated that they can harvest the bitter seeds of society's ills and plant them as seeds of hope and renewal. But, unless we facilitate their journey of self-reflection to action process, the seeds will not germinate. How can pre-service education build on the experiences and perspectives of these students? How can it facilitate students through their transformative process from students to critical thinkers to teachers equipped to work within an antiracist curriculum as agents of change?

To answer these and other related questions, pre-service educators must first ask the question, Who is responsible for educating students for bilingual education programs? Is pre-service education of bilingual students the sole responsibility of the bilingual teacher educator(s), or should all pre-service educators share in the responsibility? According to research on prevailing practices in teacher education, most of the teacher educators or professors teaching bilingual candidates are from mainstream backgrounds who, even if they are well-intended, are often unprepared to teach them effectively (Torres, Santos, Peck, & Cortez, 2004).

A quality pre-service education curriculum requires the shared, cohesive efforts of all faculty and staff. It requires the players to examine (or re-examine) their practices, viewpoints, and perspectives beyond the multicultural education tenets and acquire the sense and understandings of an antiracist philosophy that "examines the root causes of inequality looking at the world from the perspective of those who are oppressed" (Kailin, 2002, p. 55). The task of ascertaining the willingness and cooperation of an entire college is an enormous one, even among faculty who perceive themselves as progressive in thought and action. For as Kailin puts it, "people think it is those 'hard-core' backward places or impoverished large urban areas that have serious problems, while not recognizing the racism that is in their own backyard" (p. 93). The construction of "white" identity among teachers that she investigated was, for most of them, a result of not critically examining their personal views of the "other" and how and why these images were constructed. Ignoring racism or assuming that it does not exist among faculty in colleges of education obfuscates the efforts to improve the quality of pre-service education.

In the next section, I provide examples of "problematizing" the pre-service education curriculum for bilingual teacher candidates in field-based experiences and in the knowledge base.

Problematizing Field Experiences

The most effective aspect of our pre-service component, by far, is the field-based practicum whereby students are assigned to conduct observations in an inner-city school largely populated by Hispanic students, at least two-thirds of whom are English language learners. The cooperation of school personnel is extremely valuable in these schools since the school personnel assume the responsibility of placing and scheduling students in the appropriate classrooms.

Students are asked to make specific observations using guided questions that are assigned to them. The questions refer students to their observations and the knowledge base introduced in another course that they take during the same semester as their practicum. Thus, the students have opportunities to observe, reflect, and discuss the assigned topics. Students posted their responses on an electronic bulletin board, called eClassroom, made accessible and protected by password. Each student is asked to enter responses on each of the questions. Therefore, every student had the opportunity to read each other's responses, learn from others' comments, dialogue with each other, and pose other questions. Thus, the objective of this reflection-on-observation activity was to problematize the students' knowledge base. As an example, responses of one of the students on three of the five assigned questions are provided in Table 4.

Table 4: Student Responses to Three Questions During Practicum

Guided Questions	Student Response
Question #1 a) How much Spanish and how much English is used by the teacher? What are the reasons for using one language over another? b) How much Spanish and how much English is used by the students–with each other and with the teacher? c) Is there a pattern of language use–does the teacher use English or Spanish during a particular time–or does he/she	Based on my very brief observations and on student interviews, I have noticed that the teacher speaks to the children mostly in Spanish and some in English. The teacher uses Spanish over English during instruction (CALP). When he is giving the students simple instructions (BICS) he speaks to them in English. He also uses English during ESL. The students I interviewed mentioned that their teacher talks to them in the language that they choose to talk to him. "Si le hablas en ingles el te contesta en ingles, y si no lo entiendes entonces te lo dice en espanol," answered a third-grade girl. Most of the students talk to him in English. When the students talk to each other they talk in Spanish. If both students know English well then they will talk in English to each other. "No le hablamos en en ingles a ella porque no entiende," said one girl about her friend sitting next to her. The teacher does use a pattern when talking to his students. The language that the student initiates is the language that the teacher will respond in. He also uses English during his ESL lessons and during handwriting. I think that he uses both languages effectively because he's exposing all of his students

mix the languages? d) Do you think the teacher uses the language(s) effectively? Why or why not?	to both languages using BICS. I have not been in the classroom long enough to observe CALP being used, but the children mention that he sometimes gives them social studies and science lessons in English.
Question #2 a) Does the teacher make a concerted effort to systematically build the academic/cognitive language skills in his/her students–in Spanish and English? Give an example. b) Does the teacher have a good idea of the varying levels of proficiency of the students' cognitive academic language in English? c) What does the teacher do to help the struggling students? d) What would you do differently to make sure your students are learning their academic language skills in both English and Spanish?	The main academic language of this classroom is Spanish. The teacher makes an effort to build the students' academic language in Spanish and English by using visuals and peer tutoring. He reviews vocabulary in the stories they read in Spanish and in their ESL lessons. When the students don't understand a word, he explains it to them, but then they have to use it in a sentence. The teacher does have a very good idea of which children have developed their cognitive academic language in English and which students are still developing it. He knows this because of the conversations he has had with students, the stories they have read and written, and the fluency test he administered. To help the struggling students develop their academic language he uses visuals. To make sure that my students were learning their academic language skills in both English and Spanish I would support my students' first language by using it myself. I would use strategies like modeling, hands-on manipulatives, graphs, charts, word walls, cooperative grouping, and multimedia to help my students understand and develop their language skills. By varying instructional strategies I hope to keep my students engaged in learning the language. The most important thing is to have high yet reasonable expectations for each of my students.
Question #3 a) Are the goals of the program you're observing clear and transparent? What are these goals? b) Does the instruction help children	I interviewed the teacher I am assigned to and he told me that the goal of the program is to transition the students into an all-English class. These goals are quite clear because as the grades progress, there are less and less bilingual classrooms. This school serves students from Kinder through sixth grade, and by sixth grade there are no bilingual classrooms. To develop the students' language the teacher works on the

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develop their language skills in both English and Spanish? c) Does the program encourage children to use BOTH languages? d) Does the teacher promote bilingualism as a valuable asset? e) What would you do differently to make this program or model more effective?	students' English vocabulary and fluency during a 90-minute ESL lesson. He says that he tries to build on the language they already have. If a student does not understand the teacher will translate for that student. He encourages the use of both languages, but the instruction is in Spanish because the TAKS* test his students will take is in Spanish. Mr. _____ promotes bilingualism as a valuable asset. He informs his students of the benefits of bilingualism, like career opportunities and higher pay. Ideally, to make this program model more effective, one would have to change the whole program into a maintenance program. Since that is not always possible, I would try to focus on building my students' Spanish language up to an academic level to make the transition into the English language easier. I would use a number of strategies like visual aides, my body, and tone to help them develop and understand the language. I would encourage them to use both languages and I would inform them of the benefits of bilingualism. I would like my students to be proud of their languages. (*Texas Assessment of Knowledge and Skills criterion-referenced test, mandated by the State; students who dominate Spanish take the Spanish version; English-speaking students take the test in English. Eventually, the Spanish-speakers take the English version when they meet certain criteria.)

Facilitating students in their efforts to become well-informed, knowledgeable problem-solvers and critical thinkers is one of the main objectives of a pre-service education program. However, the key ingredient is collaboration among and between the university and school players.[9] The K-12 schools are invaluable in providing the pre-service students the opportunities to learn optimally from their field experiences. Conversely, schools reap the rewards when their newly hired teachers are equipped with the knowledge and skills that they had a hand in educating as well.

Problematizing the Knowledge Base

As teacher educators we constantly face one of the most important curricular challenges of ensuring that our students are well prepared to meet all of the mandatory State requirements. In our university, for instance, our teacher candidates are required to pass two pre-tests before they are authorized to take the State-mandated exams. Thus, the curriculum should conform to a knowledge base specified by State standards, but at the same time it should challenge students to analyze, synthesize, and evaluate as they gain greater understandings, using their own

experiences and insights to learn new information. Appendix A provides a vignette as an example of how learning about state and federal legislation and significant court cases related to bilingual education can be challenging and meaningful.

A meaningful, relevant curriculum in pre-service education is important because it sets the standard of what we expect the students to develop in their teaching performance. By problematizing the curriculum, students engage in learning and critiquing, incorporating their understandings of the knowledge base with their own experiences. Constructing or co-constructing such a curriculum may be time-consuming; indeed, the process may be a transformative journey like the one described by the courageous, phenomenal teachers in the Yup'k Eskimo community (Lipka, Moffat, & the Ciulistet Group, 1998). A quality curriculum requires that the players focus on shaping a curriculum that challenges students to think critically and learn how to become mediators as well as advocates for their students.

Conclusion

Based on the research of related literature, the demographic data, and the research presented herein, the following lists a few of the important aspects of an agenda for change in pre-service education:

- An extensive plan of inclusion. The education of pre-service students should be the responsibility of all players; decisions concerning course content, placements and supervision of field experiences should be well-informed, emanating from knowledge of bilingual education as a field of study and pedagogy and the experiences of practitioners.
- Problematize the curriculum by employing critical thinking and questioning strategies. Use constructivism as the principle by which to generate knowledge that is meaningful, relevant, and empowering.
- Integrated partnerships with the K-12 schools. The role of the K-12 school staff is invaluable in the education of pre-service students. A well-planned university-school partnership should engage players in a mutually designed work arrangement to ensure that pre-service teachers receive quality mentoring and the participating K-12 teachers receive educational benefits from their involvement.
- Maximize the use of technology. Technology offers a variety of invaluable tools to enhance our knowledge and understanding. However, technology tools cannot supplant the expertise and guidance of faculty and staff. Pre-service students benefit from the convenience and accessibility garnered from technological tools, but they also learn to a greater extent from debriefing sessions and opportunities to dialogue on specific topics.

Concluding Remarks

This article attempts to bring into focus some of the most important aspects of pre-service education for the preparation of bilingual educators. It incorporates some of the recent, related literature as a way to underscore the connections of these to the pre-service educational experiences. However, I contend that our most valuable source of information is our pre-service students: their ideas, lived experiences, aspirations, and critiques. Their narratives are like the wellsprings whose profound depths we have yet to explore fully and deliberately. When we set out to learn about our students' experiences, we acquire a perspective that transcends their

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individual lives. By learning from their immigrant experience and/or their language and cultural experiences, we gain a better understanding of *their* students with similar experiences. A quality curriculum in pre-service education embraces the critical experiences of the students. It is our responsibility to listen to their voices and learn from their experiences.

NOTES

1. The author is indebted to the Center for Mexican American Studies at the University of Houston for their assistance in this research project. The author also wants to extend gratitude to the anonymous reviewers for their invaluable suggestions.
2. The census data were compiled from information distributed by the Pew Hispanic Center.
3. The Pew Hispanic Center has a web site with census data and reports. Their URL is http://pewhispanic.org.
4. The National Clearinghouse for English Language Acquisition's URL is http://www.ncela.gwu.edu.
5. "Educational Attainment: Better than Meets the Eye, But Large Challenges Remain" can be downloaded from http://pewhispanic.org/factsheets/factsheet.php?FactsheetID=3
6. Texas Senator John Cornyn has spoken publicly against repeating the amnesty policies from the Reagan administration that allowed many of our students to become citizens. If this had not been the case, many would be in a similar position as some of our other students who lack Social Security numbers because of their immigration status. Since 2001, approximately 10,000 students from Texas have benefited from HB 1403 that allowed undocumented students to attend colleges and universities without paying out-of-state tuition. They await the passage of the so-called *Dream Act* that would serve as a pathway to citizenship, allowing them to attain social security numbers to gain employment after graduating from their college or university.
7. Additional information on critical pedagogy and Paulo Freire can be found in books by Antonia Darder: Culture and Power in the Classroom and Reinventing Paulo Freire. Critical pedagogy is known as a way of perceiving and transforming the educational processes; a philosophical rendering of reality from multiple perspectives, especially from those that are victims of oppression and other social and political ills.
8. "Latinos in California, Texas, New York, Florida and New Jersey: Data from the 2002 National Survey of Latinos," can be accessed in this web site: http://pewhispanic.org/files/factsheets/10.pdf
9. For more information on university and school collaborations, see Guadarrama, Ramsey, & Nath, 2000 and 2005.
10. TExES or the Texas Examinations of Educator Standards for bilingual educators can be downloaded from http://texes.ets.org/assets/pdf/testprep_manuals/102_bilingual_educ_supp_ec_4.pdf

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APPENDIX A

In this vignette, the professor guides the discussion on the teaching standards as part of the curriculum to ensure that the pre-service education students are well prepared as mandated by the state and university's educational component. The topic focuses on historical background of bilingual education, quoting the document developed by the Texas State Education Agency, that students must know the "pertinent federal and state legislation, significant court cases related to bilingual education, and the effects of demographic changes on bilingual education" (TExES Preparation Manual, 2006, p. 7).[10] The professor continues the lecture in Spanish. The bilingual students speak Spanish as their first language, and it is the language spoken by the majority of students in K-12 bilingual education programs in Texas and even across the nation. In the course of the discussion the professor sets up a scenario based on the Mendez v. Westminster case (e.g., Arriola, 1995) proceeded by a set of questions:

Imagine that you attend an elementary school in a rural community in southern California in the mid 1940's. The school is Lincoln Elementary, an old brick building, and all of the Mexican American students are learning English as their second language. On the other side of a baseball or recreational field is Roosevelt Elementary. You can see it from your school; it is a yellow stucco building with palm trees in front and it looks quite new. The children who attend Roosevelt are different and somehow you feel that they are better than you but you cannot quite articulate the differences. The majority of the children at Roosevelt, children of the farm owners in the area, are mostly white and from a substantially higher economic bracket than the kids at Lincoln. Why do you think the children were separated into two schools? What is wrong with this arrangement? If you were a parent what could you or could not do? Do we currently have schools like Lincoln and Roosevelt?

As the students discussed these and other similar questions, they became interested on how the Mendez v. Westminster case of the 1940's was relevant today. The facts were easier to remember as were the ideas generated from the discussions.

APPENDIX B

SELF-PORTRAIT SURVEY

NAME _____

CONTEXTS OF BILITERACY

1. Which <u>language</u> do you use, English, Spanish or mixed, when you

- <u>Speak</u> with and <u>write</u> to your friends?

- <u>Speak</u> with and <u>write</u> to you family?

- <u>Speak</u> with and <u>write</u> to your instructors?

- <u>Speak</u> with community members, such as bank tellers, grocery store clerks, etc.?

- Other (such as colleagues, people you <u>work</u> with)?

2. Which television and radio stations do you listen to, how often and in which language, English or Spanish?

- Which situations do you use ONLY Spanish and which situations do you use ONLY English?

3. Which language do you <u>prefer</u> to read (or write) and why?

- magazines;

- newspapers;

- fiction books such as novels, short stories;

- textbooks?

- Internet?

4. Which music do you listen to, in English, Spanish, both?

HISTORY

- What was your <u>first</u> language?

- How competent are you in Spanish?

- How competent are you in English?

- Which is your <u>stronger</u> language–English, Spanish and why do you think so?

- Do you think it's important to maintain your Spanish? Why, why not?

- Do you think it's important to be equally competent in English and Spanish? Why, why not?

- What language(s) is spoken <u>most</u> of the time by the people you associate with quite often such as your family or immediate circle of friends?

- When did you learn English?

- What positive experience(s) did you have in school (in US)?

- What negative experience(s) did you have in school (in US)?

- As a result of the experiences you had in school, what will you do differently as a teacher?

- If you wanted to, what is the best way for you to improve your English language skills–speaking, reading, and writing?

- If you wanted to, what is the best way for you to improve your Spanish language skills–speaking, reading, and writing?

- How did you learn to <u>read</u> and <u>write</u> in Spanish?

- How did you learn to <u>read</u> and <u>write</u> in English?

POINTS OF VIEW

- Do you think that Spanish speakers (who are learning English as a second language) should be able to read and write Spanish pretty well? Why, why not?

- Do you think people should be punished for speaking Spanish in the work place? Why, why not?

- Do you think people from other countries should become Americanized as soon as possible? Why, why not?

- Do you think that its important for people in the United States to understand in substantial ways what immigrant families go through, economically and educationally? Why, why not?

IN SEPARATE SHEETS OF PAPER: (Please type.)

- Write in Spanish, a brief description about your FAMILY–your mother, father, siblings, when your family came to the U.S. and why, etc.

- Write in English, a brief description about YOURSELF–what you want to accomplish, what you consider as important in your education and career, and in your personal goals, and what you hope to accomplish specifically as a bilingual education teacher.

Making Connections: Bilingual Pre-service Teachers' Service-Learning with Spanish-Speaking Parents Living Along the U.S./ Mexico Border

María Teresa de la Piedra
The University of Texas at El Paso

ABSTRACT

This article describes an action-research project that investigates the ways in which pre-service bilingual education teachers understood the dominant ideologies based on deficit perspectives about Mexican-origin parents and the diverse forms of parental involvement through their participation in a service-learning assignment with local elementary bilingual students and their parents. The main objectives of the course are to look at traditional definitions of parental involvement, become aware of the diverse ways Mexican-origin parents participate in their children's education, and imagine new roles for parents. Using the students' reflections, assignments, in-class group work, and participant-observation, the study examines the students' processes of reflection and understanding. These processes were characterized by students using their own lives and family histories to make connections with their parents during the service-learning activity.

Contact Information:

María T. de la Piedra
University of Texas at El Paso
mdelapiedra@utep.edu

Making Connections: Bilingual Pre-service Teachers' Service-Learning with Spanish-Speaking Parents Living Along the U.S./ Mexico Border

Teacher educators are increasingly concerned with the unreflective ways that some educators explain the schooling experiences of linguistic and culturally minoritized students[1]. Gloria Ladson-Billings, in her 2004 George and Louise Spindler Award Lecture (Ladson-Billings, 2006), compellingly argued that there are two major problems in the preparation of teachers. On one hand, teacher education in the U.S. tends to be a "psychologized" field, where the so-called "self-esteem problem" "has become a common sense way of speaking and thinking about students who experience academic or discipline problems in schools" (p. 105). On the other hand, teachers tend to explain the academic performance of a child by using "a catch-all they call 'culture'" (p. 105). Deficit thinking (Valencia, 1997), which explains school failure in terms of students' self-esteem or culture, is common among preservice teachers who come from different backgrounds than their future students and are thus not able to identify with them. However, what motivated me to conduct this study is that I found comparable attitudes among the preservice students at Border University (a pseudonym), even though they shared linguistic and/or cultural backgrounds (to different degrees) of most of their future students.

Before starting this study, I had taught education courses related to Biliteracy Development, the Principles of Bilingual Education, and Critical Pedagogy. While addressing the theme of how to work with families and communities, I noticed that many preservice teachers held deficit views about Mexican-origin families; some held these views specifically about low-income Mexican-American families, while others had deficit views about Mexican immigrant families. Most could see the Spanish language as a linguistic resource that children brought with them; however, that was not the case when pre-service teachers talked about parents, families, and communities. Some of the comments voiced during the initial brainstorm sessions about low-income and immigrant families resembled the following: "Parents do not care about education," "Many parents see the schools as a babysitting agency where they drop their children off," "They do not assume any responsibility for their children's education," and so forth.

Thus, during my teaching I observed that many preservice teachers who were raised as immigrants or children of immigrants in the U.S.-Mexico borderlands had internalized dominant discourses about Mexican-American parents and families, particularly, about low-income and Mexican immigrant parents. Researchers have found that schools in the U.S. tend to describe a "standard" family in terms of the middle class, Eurocentric image (Valdés, 1996; Delgado-Gaitan, 1991), and the curriculum and language usually valued in schools reflect European-American students' backgrounds. The borderlands are not an exception. A recurrent topic during in-class discussions was the pressure experienced by future bilingual educators to assimilate to a Eurocentric way of living. Some reported feeling discrimination during their own school careers because of not speaking English. They shared their stories about how teachers and school authorities prohibited them from speaking Spanish, or how they felt ashamed to speak their native language. A few reported that they had to re-learn their mother tongue as adults because

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[1] According to McCarthy's (2002) use of "minoritized", this term "more accurately conveys the power relations and processes by which certain groups are socially, economically, and politically marginalized" (p. 171). I chose this term because, as McCarthy states, "minority" might be stigmatizing and numerically inaccurate.

they had forgotten it as a result of the schooling process. Thus, the preservice teachers themselves had experienced "subtractive schooling" (Valenzuela, 1999) – including at the university level – that led some of them to internalize hegemonic ideas about low-income and immigrant families.

These previous experiences motivated me to discover better ways to support the de-colonization process of my students and prepare them as future bilingual teachers. The present study is part of an ongoing attempt to find pedagogies that are culturally relevant to the U.S.-Mexico border region and that provide preservice teachers with opportunities to learn from students, families, and communities. Through the experience presented here, preservice teachers had the opportunity to revise their own assumptions about Mexican-origin families by learning from parents through the use of community-based assignments that allowed the preservice teachers to discover important connections between themselves and community members. These assignments were designed as part of my ongoing action-research as a bilingual teacher educator. The study was guided by the following questions:

- What sense do preservice teachers make of their service-learning (SL) experience?
- How did the SL experience and other assignments support preservice teachers to challenge their assumptions and dominant ideologies about low-income Mexican-origin families?

Literature Review:
Community-Based Learning and Parental Involvement

Many researchers and teacher educators have had satisfactory experiences using community-based learning (Boyle-Baise & Sleeter, 2000; Burant & Kirby, 2002; Easter, Shultz, Reck, & Borden, 1998; Erickson & Anderson, 1997; Murrel, 2001), particularly to revise prejudiced assumptions and better understand culturally relevant pedagogy in practice (Burant & Kirby, 2002; Hyland & Noffke, 2005; Romo & Chavez, 2006). However, the issue of parental involvement has been largely ignored in teacher preparation programs (Epstein, 2001), and research on the effects of the parental involvement component in teacher education programs is scarce (Hiatt-Michael, 2006).

The literature suggests that community-based approaches in teacher education have long-term influences on future teachers' teaching practice. These studies show that community-based learning experiences focusing on educators' interactions with parents and families are a powerful tool in the training of preservice teachers whose backgrounds differ from those of historically marginalized student groups (Burant & Kirby, 2002). Burant and Kirby argue that "the [teacher education] students who interacted with parents overwhelmingly reported much greater understandings about the structural obstacles parents face and were convinced that the majority of parents were doing their best to make wise choices for their children" (p. 571). Thus, for preservice teachers who do not share the linguistic and cultural background of their students, community-based learning experiences helped the teachers question prejudiced ideas and assumptions about families from historically marginalized social groups.

Similar to Burant and Kirby's study, most of the service-learning or community-based learning literature that focuses on the transformation of preservice teachers' assumptions about linguistic minority students presents cases in which the majority of the participants are white, female, and young (Arias & Poynor, 2001; Almarza, 2005; Romo & Chavez, 2006). The study presented here extends the existing conversation about community-based learning in teacher education by adding the perspective of preservice bilingual teachers of Mexican descent. Through the study, I learned the importance of providing preservice teachers with opportunities to make connections to their own linguistic and sociocultural backgrounds through interactions with parents. By making these connections, preservice teachers were able to better understand the families with which they worked.

Theoretical Framework

I draw from three theoretical frameworks to organize my teaching and explain the findings of this study. One of the goals in teaching this course was to develop an understanding of the six qualities of the "culturally responsive teacher" as proposed by Villegas and Lucas (2002):

> Such a teacher (a) is socioculturally conscious, recognizing that there are multiple ways of perceiving reality and that these ways are influenced by one's location in the social order; (b) has affirming views of students from diverse backgrounds, seeing resources for learning in all students rather than viewing differences as problems to be overcome; (c) sees himself or herself as both responsible for and capable of bringing about educational change that will make schools more responsive to all students; (d) understands how learners construct knowledge and is capable of promoting learner's knowledge construction; (e) knows about the lives of his or her students; and (f) uses his or her knowledge about students' lives to design instruction that builds on what they already know while stretching them beyond the familiar (p. 21).

In addition, I draw from the sociocultural theory of learning, which argues that learning occurs in a social context in interaction with other people and cultural tools (Wertsch, 1998). This approach stresses the mediating role of culture and language in human cognition. Thus, knowledge and understanding are constructed through social interactions and constitute "mediated action" (Wertsch, 1998). Frequently, preservice teachers find it difficult to connect the theories and ideas from readings and class discussions to the teaching experience. However, as noted by Hammerness, Darling-Hammond, & Lee, (2001) "in some cases, through the use of well-scaffolded assignments and authentic assessments, new teachers are able to more effectively apply the theories and concepts addressed in their preservice programs, in turn engaging in more sophisticated thinking and practices" (p. 2). The sociocultural theory of learning explains the need for authentic assignments in teacher education, and how preservice teachers' learning about parents and families can be mediated by a "hands-on" SL activity. This experience can help preservice teachers better understand the theory they studied in class by putting it into practice.

Finally, I draw from Delgado-Gaitan's (2005) ideas and reflections about the power of life narratives to connect with others and build community. Her critical and emotional account of two groups of immigrant women shows how the memories of life events become important tools

to connect with other women in similar situations. Furthermore, sharing their autobiographies (orally or through e-mail) became part of the learning process in both communities; women taught one another about the educational system and also how to live with a critically or terminally ill child. Similarly, the preservice teachers in my own class used personal narratives in order to make connections to the students and parents with whom they worked.

Methodology

This study took place at "Border" University, a large university in a southwest Texas border city of approximately 700,000 residents, where the majority are of Mexican descent. Around 75% of the residents speak a language other than English at home; of these, 98% speak Spanish (U.S. Census Bureau, 2002). The majority of Border University's students are from the surrounding region; more than 70% of students are Latino and approximately 10% are Mexican national students who commute from the sister city across the border. Nearly half are first-generation college students; many have families of their own and work full-time.

This study is an action-research project (Webb, 1996) because I identified concerns in my own practice and looked for pedagogical changes to improve my teaching. Finally, I implemented these changes and gathered evidence about how students responded to them. With this project I looked at my students' oral and written responses to the course content and assignments in order to make informed pedagogical decisions. Thus, the information I gathered served the purpose of informing my teaching practice. The action-research and data collection are ongoing; however, this article presents data collected from August to December 2006, with 34 students who were taking a Parent/Community Advocacy course. The course is required for preservice teachers enrolled in the elementary or middle school bilingual education preparation program. The goal of this course is described in the University Catalogue as follows:

> The development of advocacy within families and community as a means of participation in the educational process of their children, with particular emphasis on parents of children in bilingual/ ESL education programs. Emphasis on appreciation of cultural diversity and alternative ways of knowing among family and community. (Border University, 2006, p. 258)

The 34 participants in the study were preservice bilingual educators enrolled in the EC-4 Bilingual Education program at Border University. They all were Mexican-origin and partly to fully bilingual (Spanish and English). All except four were female. Most felt comfortable with their Spanish oral proficiency; however, around half felt they needed to further develop their written Spanish. Most of the students were born in the U.S. (in the region served by Border University) or immigrated from Mexico as children and attended school in the U.S. A few had lived in both of the border sister cities in different periods of their lives. About 30% of the students came from Mexico as adults to attend college.

The study examined students' 1) *funds of knowledge* projects, 2) group discussions and group assignments, 3) group evaluations of the SL experience, 4) individual reflective essays about the SL activity, and 5) my fieldnotes during participant-observation of in-class activities and the SL activity.

During the thematic coding process and analysis, I paid attention to the students' interpretations and meaning-making about their experiences in relation to parents and communities throughout this course. Main themes that emerged from the coding are presented in the Findings section and include the following: 1) Changing definitions of parental involvement; 2) Making connections about life experiences, language use, and identities; and 3) Connecting theory and practice. I triangulated the data by using multiple participants and different methods of data collection, such as group evaluation of the experience, participant-observations, and individual reflective essays. In addition, I conducted informal follow-up interviews with some participants to get participants' input and verify some of my interpretations. Because of the small number of participants and the exploratory nature of the study, the study does not make any generalizable claims.

Findings

Assignments and Reflections Prior to the Service-Learning Experience

The SL project was integrated with a formal and structured learning component where the students read studies conducted among Mexican-origin and Native American families in different parts of the U.S. (e.g., Valdés, 1996; Vélez-Ibáñez & Greenberg, 1992; Pérez Carreón et al., 2005; Gándara et al., 2004; McCarthy & Watahomigie, 2004; Reese & Goldenberg, 2006; Delgado-Gaitan, 1991). The students turned in assignments designed to help them 1) understand dominant deficit perspectives about marginalized families, 2) locate and understand the funds of knowledge in households in the area, and 3) apply the course content in a lesson plan for a workshop to be implemented with parents and children. A critical and reflective component accompanied the SL experience, with the intention that the preservice teachers revise their internalization of hegemonic ideologies before interacting with the parents and students.

The funds of knowledge project conducted by the preservice teachers was significant to revising their assumptions. Funds of knowledge are "…the essential cultural practices and bodies of knowledge and information that households use to survive, to get ahead or to thrive" (Moll, 1992, p. 21). These bodies of knowledge constitute valuable resources for use in "culturally relevant" classrooms. Each preservice teacher wrote a case study of a bilingual child and his/her family's funds of knowledge, based on household visits, observations, and interviews conducted with the family. To prepare for the project, and in class, the preservice teachers identified their own families' funds of knowledge, as they were growing up. Although the results of this project are not the focus of this article, it is useful to briefly introduce some of the families' resources that the preservice teachers were able to identify in the students' homes. Being able to identify these families' linguistic and cultural resources and "pedagogies of the home," coupled with an in-class activity applying these funds of knowledge to actual lesson plans, led the preservice teachers to view parents and children as experts who can contribute intellectually to the learning process at school. In addition, the preservice teachers found both differences and points of connection between their respective case studies and themselves. This finding is particularly important for understanding the transformation process of the preservice teachers, as will be explained later.

Students found that funds of knowledge were shared among social networks on and across the border. These funds of knowledge were related to 1) the use of the Spanish language for oral and written language development, 2) the parents' jobs and activities inside and outside the home, and 3) transnational funds of knowledge related to activities in Mexico that families shared across the border.

Preservice teachers found abundant examples in which parents or older siblings assisted young children during "hands-on" learning activities in home and community contexts. Some of these were related to 1) the process of making tamales and packing and sorting them to sell; 2) budgeting and record-keeping at home; 3) the use of the Internet and instant messaging in Spanish; 4) knowledge about money, interacting with customers, and keeping inventories; 5) measurement concepts (ounces) for preparing milk while caring for children; 6) measurements used when working in construction; 7) knowledge of tools and their functions in car repair; and 8) mathematical notions related to carpentry.

In addition, the preservice teachers encountered a fluid relation between the two border cities among some of the families they visited. They found transnational funds of knowledge that challenged the hegemonic idea that "Mexico has little sociocultural, economic, or educational value to inform or offer U.S. society" (Romo, 2005, p. 194). These transnational funds of knowledge were related to festivities and ceremonies celebrated in Mexico, working in the *ranchos* (farms) and marketplaces across the border, and *folklórico* dancing, music, and acting.

With this experience, the preservice teachers began to understand the idea that learning occurs outside the classroom in diverse ways and came to see community and family contexts as resources to link school knowledge with the knowledge children bring with them to the classroom (Burant & Kirby, 2002; Dworin, 2006; Gonzales et al., 1995).

Making Meaning of the Experience with the Parents

Even though the SL assignment was not mandatory, all 34 preservice teachers decided to participate. Students in groups of five volunteered to participate in Border University's Mother-Daughter (M/D) and Father-Son (F/S) programs during the last week of classes. The program serves sixth grade girls and boys from eight school districts, who visit the university and learn about different careers from university students and professionals. Parents attend the events with their children. As stated in the published monograph about the program "the girls [and boys] learn about their many options in life by seeing success firsthand in the form of Hispanic university students and career women from every walk of life who participate as role models."

For their SL project, the preservice students participated in Border University's "Career Day." In this event, different professionals, through a hands-on approach, informed participants about different careers available to them. The preservice teachers prepared workshops with students and their parents, with the goal of showcasing the teaching profession while discussing the topic of gender and career choice. This assignment was designed to respond to the needs of the M/D and F/S programs. In recent years, there has been a new emphasis within these programs on reflecting with participants about the relationship between gender and career

choice, through Border University's ACE (Action for Equity) project. The goals of the ACE project, as stated in the abstract of the project proposal, are to (1) "foster participation of school, university and community educators in advancing gender equity issues in grades K-20, (2) increase the representation of Hispanic girls and women in STEM [science, technology, and mathematics] programs of study, and (3) institutionalize reforms in Border University's program of studies for future teachers to advance gender equity." Thus, the M/D and F/S program added a component of faculty and preservice teachers' participation within the context of the ACE project.

During "Career Day," teams of preservice teachers conducted two one-hour workshops with participants in the M/D and F/S programs. The workshops they designed were diverse and reflected planning by each group. Workshops all involved parents and children in diverse ways in different moments of the workshop. For example, one team brought magazines and newspapers, had the participants look for images of men and women in the publications, discussed gender portrayals in the media, and made a collage with them. This team shared statistics regarding economic and educational disparities between men and women. Finally, each group presented its collage and discussed the topic of gender equity with the new information provided during the workshop. A second team read the parents and the children a story (in Spanish) that challenged traditional gender roles. Later, the parents and children paired up to write their own stories challenging gender stereotypes.

It is particularly important that the preservice bilingual teachers had the opportunity to interact with children and parents outside the school context. Both the funds of knowledge project and the SL project were designed to provide students the opportunity to observe the children and parents in their own familiar and/or familial contexts.

Changing Definitions of "Parental Involvement"

For many of the participants, these workshops were their first time conducting an activity and facilitating the learning process with children. For all the participants, it was their first time interacting with school parents in a formal setting. Participants manifested in diverse ways that they had gone through a transformation regarding their initial beliefs about the forms that "parental involvement" could take. They reported that even though they had read about the diverse ways that immigrant and Mexican-origin parents participate in their children's education, the SL activity allowed them to directly observe parental involvement in action. After observing parent-child interactions, the preservice teachers understood that parents "do care" about their children's schooling:

> This [SL] activity taught us that parents do care about their children's education. Taking this class made me aware of the different possible ways for parents to get engaged with our students.[2]

Another student also reported in her reflective essay:

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[2] In order to preserve the authenticity of the students' writing, their comments are not edited.

I was overjoyed because the parents actually like the idea to help their child in a lesson. It even looked like the parents got more involved in some parts and this helped their children become involved. The children could not be happier and more involved in the lesson and all because the parents were there. I got to witness how important it is to have the parents involved in the classroom because this stimulates the child to learn. Parents do care and want to be involved in their child's education, it's just a matter of finding a way how to incorporate them.

The preservice teachers reported observing parents directly involved with their children–assisting them with learning tasks, giving them oral advice, and contributing to the discussions organized by the preservice teachers. Teachers also observed that the parents transmitted their enthusiasm to their children and encouraged their participation. Furthermore, they observed affection among the members of the family:

Parents and kids were working together to create wonderful stories. It was great to be able to include the parents into our lesson. We realized that parents can be indeed part of the curriculum. Teachers need to think about ways to include parents into the classroom. After experiencing the program it brought together everything that we had been discussing in class.

After their dialogues with parents of Mexican descent, the preservice teachers reported that they had a better understanding of the difficulties affecting immigrant parents' involvement with schools. They reported coming to understand the difficulties parents have in accessing information about the school system, educational opportunities, and life on the U.S. side of the border. Furthermore, by observing the children learning with their parents in a non-school context, the preservice teachers understood that there are multiple ways for parents to be involved in a child's education, particularly when the family is not part of the "mainstream" society.

In their study of preservice teachers' community-based experiences with parents and children, Burant and Kirby (2002) found that "the parent interactions were pivotal for confronting prior beliefs" (p. 572) about children and families from different backgrounds than the teachers'. In the case presented here, the same affirmation applies, although some of the preservice teachers' backgrounds were similar to those of their students. As explained earlier, most of preservice teachers had gone through a colonization process, which explains their internalization of deficit views about poor and immigrant parents and families. Thus, these kinds of experiences can still be a pivotal part of a transformational process for preservice bilingual teachers, even when they themselves belong to marginalized social groups.

In the class, we read about and frequently discussed how parents are experts in diverse matters and can contribute to enriching the curriculum. When the preservice teachers conducted their own case studies about the funds of knowledge of the families, they better understood this idea. In addition, the SL experience made them more aware of the lessons parents taught them:

As everyone was walking out, a mom approached us. Although she didn't really participate much in the discussion because perhaps she was shy, she gave us the best

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feedback of any of the parents. She told us how important this was to her because she grew up with all the old [gender] stereotypes and wanted her daughter to be whatever she wanted to be in life. She even told us to do this in elementary schools so that children see the importance of following the future that they want.

In addition, a few students reported being surprised at the amount of information children already had about careers and college; this led them to question their preconceptions about Mexican immigrant and low-income students.

Making Connections about Life Experiences, Language Use and Identities

During oral group discussions, especially those concerning racism and linguistic discrimination, students made connections between their own lives and their future students' lives. Many shared their stories and reported they were bilingual educators because they did not want any other child to go through the subtractive assimilation they and their community had experienced. When narrating their SL experiences, students constantly drew connections between the participants of the M/D and F/S programs and themselves:

> I felt so nervous in the beginning of the morning but at the first time that I saw coming into the classroom all the group of people that was in our presentation made me change my mind, because I am a mother and I want the best for my daughters and that's what those parents were doing with their kids.

One immigrant Mexican student had been a participant in the Mother-Daughter program herself, as the mother of a sixth grader, prior to the SL activity. In her reflective essay about this experience, she wrote the following:

> I remembered when I was attending for the first time with one of my daughters to one of the meetings for the "Mother & Daughter program." It was at [Border University] also. My role then was to be the support of my daughter, attending the meeting with her… I was there, between the mothers, ready to encourage, and support their kids' education… Now, going back to the service learning experience, it was a nice feeling to be there as a future bilingual teacher, ready to show the mothers and daughter our role as teachers.

Another preservice teacher (a U.S.-born Mexican-American) drew connections between her own experience as a young student and the children who participated in the program:

> Even though they were strangers to me I was very proud of every single one of them for having enough interest in their child's and their own education to participate in the program. I shared my thoughts about this with them about my own experience visiting [Border University] for a LULAC youth leadership conference when I was about the same age as the students were. I think that my experience gave me an image that I could refer to when I was talked to about going on to a university. I hope I had a part in creating this image for the students and the parents that participated in our discussion.

The Spanish-dominant students, who felt uncomfortable with their English proficiency and struggled in their classes at Border University (most conducted in English), reported that the SL activity was an opportunity to feel validated when using their native language with Spanish-speaking parents and children:

> To tell you the truth, I don't like to give out presentations in English because sometimes I can't express myself that well. The funny thing of all this is that I told my [group] members that I didn't want to speak, but I did have a while chance to speak. I don't get nervous because the presentation was in Spanish.

In addition, during the class discussions, communication and miscommunication with parents was a frequent topic. We discussed the misunderstandings between school personnel and parents due to the lack of Spanish speakers among school staff and to the fact that parents and school personnel frequently had different expectations and definitions of parental involvement. With the SL activity, preservice teachers reported they experienced first-hand the importance of using the home language to communicate with parents "by starting our presentation in Spanish, parents felt more connected to our experiences and were able to express their concerns about school."

Some of the preservice teachers opted to share their own stories as a way of introducing themselves or explaining a point they wanted to make during the workshop:

> Our lesson consisted of a brief introduction in which the six members of the group shared personal experiences about their academic journey and what it took for them to become college students.

The life stories motivated a rich discussion in many of the workshops about how these preservice bilingual education students who were immigrants themselves got to be college students. There was a strong and enthusiastic response from parents, mostly the mothers, who expressed their desire to continue their formal education, actively asked questions, and sought information about the different avenues to obtaining a degree.

Similarly, a male student reported that in another workshop:

> The parents had questions for themselves as well as where they can go to get a better education. Within my group I had two older ladies [preservice teachers] who have children and were still able to attend school. I believe that this was a very strong message to the parents.

Parents also approached the preservice educators to congratulate them on their accomplishments, asked them for advice (*consejos*) for themselves or their children's schooling, and gave them advice for their future role as teachers. These dialogues positively impacted the preservice teachers, as was demonstrated in their reflective essays and group evaluations.

In sum, for many of the future bilingual educators who participated in this study, the community-based experience supported the revision of prior assumptions about low-income and

immigrant families, helped them see the parents as experts who can contribute to the knowledge construction in the classroom, and allowed them to make connections between their own lives and the lives of the parents. The following quote summarizes what many of the students expressed in their reflective essays and group evaluations of the SL experience:

> As a presenter, my goal was to educate the young audience and their mothers about how to fight gender stereotypes. But, as time went by, they made my view and perspective of them [the parents and children] change, because at the end of the presentation, I realized they were the ones who taught me a good lesson. Usually we hear that parents do not care about their children's education, they do not participate or they do not have valid arguments in topics related to the educational system; at least I believed in that. Thanks to the parents and the words I heard from them, I could break the stereotype. I see that on the contrary, they want to become informed about the educational system in the U.S., but [can't] because of difficulties such as not knowing the language or working long hours. The parents and children actively participated and even made suggestions to us as future teachers. For example, they asked us to advocate for dual language programs.

Making Meaning of the Experience as a Future Bilingual Teacher: Connecting Theory and Practice

Students reported feeling nervous but reassured when they felt the program trusted them to organize and implement the workshops themselves. A Mexican-American student who is fully bilingual wrote:

> Having the opportunity to participate in a real event like the M/D program has helped to boost my confidence as a future educator and has reminded me why I choose this career above all others. I think that one of the most important reasons why I felt this way was that we were only given the topic for the presentation and were trusted to come up with an original idea of how to discuss it with our class. That trust means a lot to my confidence because it reassures me that I am seen as a capable individual and a soon to be professional educator.

Students also expressed that the SL experience allowed them to connect the readings for the class to actual observed behaviors, as a students' words in her reflective paper show:

> My experience helped put into practice what we have learned in class throughout the semester. In class discussions, we talked about the different levels of parent involvement, the funds of knowledge that students bring with them and what they all have in order to provide culturally relevant pedagogy that would give meaning to their education. However, I discovered that we learn more when we actually implement our knowledge into a hands-on activity like this one.

Thus, the SL experience was powerful because "it brought together everything that we had been discussing in class."

Conclusions, Limitations, and Lessons Learned

Integrating theory, discussions of research about immigrant and border households, case studies developed by the preservice teachers themselves, their own stories and household funds of knowledge, and the SL activity provided the connections between theory and practice that the preservice teachers were seeking. The funds of knowledge assignment enabled them to understand the importance of gathering data and getting to know their students, thus avoiding prejudiced assumptions. The SL activity complemented the previous assignment. It also provided another opportunity to understand border families and their funds of knowledge and to question monolithic views of parents and "parent involvement." By the end of the semester, the students expressed more positive views about Mexican-origin families and questioned the traditional ways of involving parents in school.

The main theme that emerged from reflecting on the two community-based assignments was the important connections that the preservice teachers made between their own life narratives and students' and/or parents' lives. This connection was crucial to their transformation process. In the words of Delgado-Gaitan (2005), preservice teachers were "transcending the fear of not knowing and using personal stories to preserve the thread that defines us" (p. 271). Through the use of personal narratives, preservice teachers were able to identify with students and parents, which in turn facilitated their understandings of Mexican low-income and immigrant families, as well as the parental involvement strategies targeting them. This experience promoted "*convivencia* and respect" (Villenas, 2005, p. 276).

This research sheds light on some useful pedagogical tools for *border pedagogy* (Romo, 2005). Because some bilingual teachers have gone through a process of colonization in the borderlands, where hegemonic discourses in the media and social institutions reinforce deficit views of Mexican children and families, it is particularly important for teacher education programs that serve marginalized populations to pay attention to the resources and life stories preservice teachers bring with them. In addition, this study suggests that it is essential to provide experiential situations where preservice teachers are able to make connections with parents of their future students.

This study shows that preservice teachers' own life histories and experiences--and the opportunity for them to find value in the funds of knowledge they bring with them--served as a springboard to understanding how they had internalized dominant deficit views regarding immigrant and low-income Mexican-origin parents. As Ladson-Billings (2006) suggests, "if we are serious about students learning about culture, we need to help them first become careful observers of culture, both in the communities in which they will teach and in themselves" (p. 109). Findings from this study bolster the argument that community-based learning be implemented throughout the curriculum in order to avoid the fragmented and superficial view of multicultural education that still is found in many Teacher Education programs and public schools.

These pedagogical processes and practices are the first steps toward supporting bilingual educators to understand and act against oppression. However, there is much more to be done. Through this action-research project, I also rethought my own teaching practice. I hope to help

future borderland educators to understand the heterogeneous character of the border population, by providing assignments that allow students to identify both the connections and the differences between their own life experiences and their future students' sociocultural backgrounds. In addition, the findings presented here are limited to the preservice bilingual teachers' views and interpretations. In order to develop a more complete image of the SL experience with participants of the M/D and F/S programs, I plan to extend this research to incorporate parents' and children's views as well.

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**Retention of First-Generation Mexican American Paraeducators in Teacher Education:
The Juggling Act of Nontraditional Students**

Amanda Morales, Gabriela Díaz de Sabatés, Cristina Fanning, and Kevin Murry
Kansas State University

ABSTRACT

This paper discusses the dynamics and challenges encountered by *culturally and linguistically diverse* (CLD) paraeducators who are participating in a 2+2, distance-delivered, teacher education program in the Midwest. The theoretical framework that serves as the basis of this case study is Thomas and Collier's Prism Model (Collier, 19878: Collier & Thomas, 1989; Thomas & Collier, 1997), which focuses on the four essential dimensions of the student biography (linguistic, socio-cultural, academic, and cognitive). This case study should be understood as an account of the lived experiences of 30 CLD paraeducators in a unique recruitment and retention program designed to support all four dimensions of the student biography. To these ends, the researcher seeks to understand this pioneering project within a complex socio-political system and its implications for recruitment, retention and graduation of CLD students. Furthermore, the paper provides critical insights to inform the field concerning future program design.

Contact Information:

Amanda Morales
Kansas State University
morales@ksu.edu
(785) 532-2125

Gabriela Díaz de Sabatés
Kansas State University
gabsab@ksu.edu
(785) 532- 2125

Cristina Fanning
Kansas State University
cris@ksu.edu
(785) 532-2125

Kevin Murry
Kansas State University
xmas@ksu.edu
(785) 532-2842

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Retention of First-Generation Mexican American Paraeducators in Teacher Education: The Juggling Act of Nontraditional Students

Introduction

As educational institutions across the United States come to grips with the significant lack of "highly qualified" educators in our nation's schools, leaders and change agents within colleges of education must rethink their traditional roles and modes of operation. The tremendous need for "highly qualified" educators, along with the ongoing increase in the number of retirees and new teachers leaving the field, has prompted institutions of higher education (IHEs) to consider new ways of working to effectively address this dilemma (Darling-Hammond, 1997; Gay, Dingus, & Jackson, 2003; U.S. Department of Education, 1998). It is projected that "over 2.5 million teachers needed in the next ten years will be first-time teachers" (Gutierrez, 2006, p. 17), and the majority of the new students they will be serving will be culturally and linguistically diverse (CLD). For this reason, it is critical that IHEs help to diversify the nation's teaching force and to provide quality teacher education programs to equip future educators with the skills they need to successfully teach all students (Gutierrez, 2006; Hussar, 1999).

Surprisingly, the rural Midwest is experiencing the greatest increase in their CLD student population in some of the most remote areas of the region, in districts where it is often difficult to lure and retain teachers (Darling-Hammond, 1997; Gutierrez, 2006). Traditional models for teacher education fail to support and nurture CLD candidates; as a result they fail the CLD children in our schools. For this reason, it is critical that programs work to diversify the teaching force to more adequately reflect the population we are now educating (Baker, 1996; Gay, Dingus, & Jackson, 2003; Nieto, 1992; Shroyer, 2004; Valenciana, Morin, & Morales, 2005).

Regrettably low graduation rates of CLD students from high school serve as a major indicator of their limited participation in post-secondary education. Community colleges, often located in less populated areas, tend to know their local population well and are now more than ever serving a vital role in providing quality educational opportunities to those who otherwise would not have the opportunity (Gutierrez, 2006; SERVE Policy Brief, 2000, Valenciana, Morin, & Morales, 2005). By joining forces, two-year colleges and four-year universities are able to recruit, retain, and graduate CLD teacher candidates. This paper documents the efforts and results of one such program in which one four-year university and two, two-year colleges collaboratively designed and implemented a 2+2, distance delivered program to recruit and retain CLD Mexican American paraeducators in teacher education.

Literature Review

The current literature depicts a bleak picture of post-secondary retention of CLD students and serves as a grim reminder of the daunting task faced by IHEs. For example, although the number of Latino/as (a broad term used in the literature to describe anyone from Latin American or Mexican decent) entering IHEs is on the rise, they are half as likely as their White peers to graduate with a bachelor's degree (Fry, 2003; Hobson-Horton & Owens, 2004). This comes as no surprise when 66% of Latina/os who attend an IHE enroll in two-year community colleges

and/or vocational-technical schools, as opposed to 45% of their White classmates. Furthermore, of the Latino/as that do enter four-year institutions, 80% will drop out, giving them the lowest college graduation rate of all ethnic groups (Fry, 2003; Ginorio & Huston, 2001).

Struggles

While there are numerous historical, political, economical, and sociocultural reasons behind these statistics, it is clear that the nation's high schools, colleges, and universities must take a close look at Latino/a students' unique biographies to effectively recruit and retain them in higher education. For many reasons, Latino/a students struggle emotionally and psychologically during the first years in college with issues of identity directly related to living *in between two different worlds* of Hispanic and American identity and cultures (Palmer, 2003; Weis, 1992). Learning to navigate the new world of higher education can create feelings of self-doubt, isolation, alienation, distress, low self-concept, and hopelessness for these students as many of them have few Latino/a academic role models to emulate (Jalomo, 1995; Rodriguez et al., 2000; Weis, 1992).

Institutional and academic factors such as limited representation of Latino/a faculty members on campuses and curricula that frequently ignore or devalue multicultural perspectives can add to CLD students' feelings of isolation in college (Gay, Dingus, & Jackson, 2003; Nieto, 1992; Valencia, 1999). Further issues such as small Latino/a student populations at most universities, lack of culturally relevant academic and social activities, rising tuition costs, inadequate financial aid support, and inadequate advising all increase the probability for student attrition from higher education (Jalomo, 1995).

Non-traditional Students and the Role of College Retention Programs

Due to the increase of Latino/a and non-traditional students attending community colleges, these IHEs tend to have a more concentrated experience with these populations than four-year universities. By gaining an understanding of this growing sector of their student body and what strategies work to ensure non-traditional student success, two-year community colleges have a great opportunity to inform universities in the field (Cejda, 2004; Genzuk, Lavadenz, & Krashen, 1994).

Most often, the Latino/a non-traditional students who attend community college are older, work at least part-time, and are of lower socioeconomic status than those who attend four-year institutions (McVay, 2004). Among this non-traditional student population, some of the most noted elements for their retention, in addition to financial support, involve cohort and collaborative groups, mentorships, availability of courses, social activities that involve the family and professional development opportunities (Genzuk & Baca, 1998; Genzuk, 1997). Specifically, opportunities to work with other students in similar life stages, to collaborate in an environment that fosters open communication, and to take coursework via distance education and in the evenings are key to successful retention. Many researchers of recruitment and retention call for IHEs to employ new and alternative strategies to affectively support students in navigating the social and educational terrain (Gay, Dingus, & Jackson, 2003; Genzuk, Lavadenz, & Krashen, 1994; Herrera & Morales, 2005; Ladson-Billings, 1999; Solaranzo et al., 2000). These strategies

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must place CLD students at the forefront of collective efforts to break the static paradigm of traditional programs.

Providing access and ongoing transitional support to CLD students is a complex and highly political topic. Many researchers have addressed these issues in their work from a variety of perspectives (Anderson, 2004; Cejda, 1999, 2001; Ginorio & Huston, 2001; Simoniello, 1981). Although these studies and others address the barriers, tendencies, and plausible factors for the academic success of CLD populations, there is little existing literature that identifies alternative program models that support quality recruitment and retention strategies specifically for non-traditional, Latino/a paraeducators (Brandick, 2004; Flores, 1992; Genzuk, Lavadenz, & Krashen, 1994; Valenciana, Morin, & Morales, 2005; Villegas & Clewell, 1998).

Regional Context

It is important to consider how the issues of CLD student retention and the national teacher shortage play out within a specific region of the Midwest where the CLD population is growing dramatically. The most recent census conducted for the Midwestern state where the current study was situated shows a 241% increase in the number of CLD students attending public schools over the past decade (U.S. Department of Education, 2004). The rapid increase in the CLD population, coupled with the *accountability movement* and the shortage of English as a Second Language [ESL] endorsed educators has left this Midwestern state reeling; a reality that is the norm—not the exception—for many states in the Midwest (McNeil, 2000; Montemayor & Mendoza, 2004). As a result, federal and state agencies are searching for effective ways to support and promote the academic success of CLD populations at all levels in education (Ginorio & Huston, 2001; Herrera & Morales, 2005; Montemayor & Mendoza, 2004).

In schools, traditional roles are being renegotiated as administrators, counselors, and teachers scramble to change with the times. The role of the paraeducator is no exception to this dynamic. Once considered a luxury in select schools to provide supplemental support to a few students, paraeducators now serve a vital purpose in schools across the nation (Black, 2002; Genzuk & Baca, 1998). With the No Child Left Behind (NCLB) legislation in place, requiring all paraeducators to have at least two years of post-secondary education, rural Midwestern districts struggle to hire and retain *highly qualified* faculty to serve the increased language-based needs of their students (Essex, 2006). Career Ladder programs (those that work with paraeducators currently employed by the school to earn an associate's degree and ultimately a bachelor's degree in education) and Grow Your Own programs (those that support or mentor high school students to go into the teaching profession) appear to be two of the few existing strategies for creating and retaining quality educators of all kinds in difficult-to-staff school districts (e.g., remote, rural areas) (Black, 2002; Brandick, 2004; Genzuk & Baca, 1998; Genzuk, Lavadenz, & Krashen, 1994).

For those paraeducators who are place-bound (own homes and/or have families who are unable to move), lack of access to a four-year university has been a major obstacle. Though they desire to earn a bachelors degree, because of location, they are left with few options (Genzuk & Baca, 1998; Hentschke, 1995). Two-year colleges and four-year universities in the state have attempted to address this issue in the past, but due to a long history of unsuccessful partnerships,

the community colleges are skeptical of university programs that promise to provide the upper-level courses required for a bachelor's degree in their communities (Herrera & Morales, 2005). In the past, for a variety of reasons (e.g., distance, weather in the Great Plains, lack of resources), these types of alternative degree programs have proven difficult for universities to implement successfully.

Theoretical Framework

This study explored how one four-year university and two, two-year colleges collaborated to address the CLD teacher shortage in the rural Midwest, the challenges they encountered in the process, and the experiences of the CLD Latino/a paraeducators who were participants in the project. The theoretical framework from which all data collection efforts in this study were derived is Thomas and Collier's Prism Model (Collier, 1987; Collier & Thomas, 1988; Ovando & Collier, 1998) that builds upon the four dimensions of the CLD student biography.

Collier and Thomas provide a holistic model encompassing the differential learning and transitional needs and diverse assets that CLD students (K-16) bring to the schooling process (Collier, 1987; Collier & Thomas, 1988). The Prism Model guided the research through the utilization of the four dimensions: 1) sociocultural, 2) linguistic, 3) academic, and 4) cognitive. These four elements act as distinct but inseparable axes along which the background and educational progress of a CLD student resides. Exclusive focus on one element (such as the linguistic or academic) gives a shallow picture of the student experience and presents an inadequate assessment of the reasons for a student's success or failure within an educational institution. Therefore, this chosen framework is inclusive of the complex interaction among students' ethnicities, languages, and geographical locations and guides the discovery of those elements that may hinder the students' access to and success in innovative postsecondary education programs.

Research Questions

We utilized the Prism Model as a tool to explore our guiding question: What is the lived experience of the Latino/a paraeducators and the project staff members within the context of this particular 2+2, distance-delivered, teacher education program located in the Midwest? Due to the complex nature of the project and its target audience, there are many factors to consider. With this in mind we focused our efforts specifically on a) investigating what role(s) family, project staff members, and peers play in the paraeducators' educational experiences in the project; b) which aspects of the project students felt to be the most helpful or hindering for their success; c) what aspects of implementation proved the most problematic according to project staff members at the three institutions; and d) how all participants (paraeducators and staff) perceived the various dynamics of the project and their relation to them.

Context of the Study

At the onset of the study, the state university (hereinafter referred to as Midwestern State) was in the third year of the collaborative project, which we have identified as Project Synergy.

This project, funded by a Title III grant, sought to recruit and retain bilingual Latino/a paraeducators from the two rural locations where the two-year colleges were located. The main goal of the project was to graduate 30 students with bachelor's degrees in Elementary Education with an ESL/Bilingual endorsement. The project was designed so that the students could remain in their respective rural communities while taking coursework and then stay there after graduation to teach.

Project Synergy was based in a longstanding recruitment and retention model designed specifically for CLD populations (Herrera & Morales, 2005; Herrera & Murry, 1998). Project B.E.S.I.T.O.S. (Bilingual Education Students Interacting to Obtain Success, 1999-2005) was the initial career-ladder project that initiated the CLD students' biographies as the guiding force for all project design and development. While Midwestern State had successfully implemented and sustained the B.E.S.I.T.O.S. model with CLD undergraduates in their College of Education with a 90% retention rate (Herrera & Morales, 2005), it was the first time that this model was modified for implementation on three different campuses across the state or for a more non-traditional audience. As part of this modification, all courses and project activities were offered onsite at the community colleges. A project coordinator and a project manager located at Midwestern State, along with onsite project managers at each community college served as the support and advising staff for students. The CLD paraeducators took their first two years of coursework for community college credit. In the subsequent years, faculty members from Midwestern State offered the upper-level courses required for the degree through a variety of distance delivery and onsite modalities. Students were informed of the study and given the option to participate. The researchers then gleaned general student information from records associated with initial recruitment and retention activities. Mentor-mentee relationships developed between the researchers and students, which served as the foundation for the two primary forms of data collection-reflective journaling and semi-structured focus group discussions.

Methodology

This research was undertaken as a qualitative, microethnographic case study of the lived experiences of non-traditional, Latino/a paraeducators in a unique, 2+2, distance-delivered teacher education program in the Midwest. A qualitative and microethnographic design is appropriate when the outcomes of the study will surround descriptions and interpretations arising from discovery, insight, and analysis (Creswell, 2007).

The study utilized a purposive sample of 30 paraeducators from the two partner community colleges. Of these students, 80% were English Language Learners (ELL) when entering the U.S. school system. In addition, a large majority (93%) of the participants in this study were Latino/a, of Mexican heritage in particular. All but two of the students were female. At the project staff level, we sought to include the voice of both community college project managers (one male, one female, both Mexican American) as well as the project managers at Midwestern State University (two females, one Mexican American, one Argentinean). Both of the lead community college administrators responsible for overseeing the project were interviewed as well (one male, one female, both White). Finally, the two administrators at Midwestern State (both female, one White, one Mexican American) who designed and initiated

the project were interviewed for their understandings of the inter-institutional dynamics at play, the sociopolitical context in which the project exists, and how all these factors ultimately impact the students' success along the four identified dimensions.

In order to develop a holistic perspective, we chose to pull our data from three varying levels or sources: the paraeducators, the project staff, and the college administrators overseeing implementation of the project. Artifacts and documentation for consideration in the study span two years. From the students we utilized weekly reflective journals, focus groups, and project documents. We also gained access to student/paraeducator academic records to contextualize progress during their tenure in the project. These records include—but are not limited to— cumulative GPA scores, ACT scores, and Pre-Professional Skills Test [PPST] scores. From the four project staff members, we utilized project documents and two rounds of semi-structured interviews. From the college administrators we utilized semi-structured interviews, project/grant documents, and phone and e-mail communication. These methods were employed in this study to elicit critical participant reflection and authentic participant voice (Guba & Lincoln, 1985; Bogdan & Biklen, 1992).

We investigated the data germane to the sample group as active observers (Bogdan & Biklen, 1992). All interviews and focus groups were audiotaped and transcribed. We coded each transcription along with student reflection journals according to the procedure offered by Miles and Huberman (1994). Our research team of three also allowed the etic coding (outsider view of the observer), according to our four-dimensional theoretical framework, to guide data analysis via the constant comparative method (Strauss, 1987). Subsequently, these initial etic codes came to suggest emic codes (insider view of the actor or participant), categories, and themes that reflected informants' experiences and outcomes as CLD students and project faculty within the project (Creswell, 2007). Credibility of the data was assessed through member checking (Guba & Lincoln, 1981). Three students, one project manager, and one administrator reviewed the data to ensure the accurate interpretation of participant voice.

Participant data were gathered and analyzed in accordance with the four interrelated dimensions of the Prism Model. Table 1 provides an example of how participant data (in this case reflective journals) were coded and aligned along the four dimensions: sociocultural, academic, cognitive, and linguistic. Out of 363 coded journal responses, 150 (40%) were coded as sociocultural, 127 (35%) were coded as academic, 57 (16%) were coded as cognitive, and 29 (8%) were coded as linguistic.

Table 1.

DIMENSION	CODING INDICATORS (Herrera & Murry, 2004)	EXAMPLES OF EVIDENCE
SOCIOCULTURAL	- Participants' experiences before, during, and after academics - Balancing home life and school demands - Ability for laughter and enjoyment - Familial support	**GUILT** *…trying to juggle school and family…my kids say they never see me anymore, and that makes me feel bad.* **RESILIENCY** *I know that if I work hard enough, I will make it. I am not going to give up.*

		emotionally and physically	
ACADEMIC	▪ Perception of access to higher education ▪ Level of engagement in the academic experience ▪ Evidence of hope and success in future endeavors	**TIME COMMITMENT** *I would like to know ahead of time when classes will be so I can schedule it in my job, but I understand this is not always possible.* **SELF-CONCEPT** *I feel really stupid and really tired, I don't know what to think, say or do anymore. I am just tired.*
COGNITIVE	▪ Level of experiential and academic knowledge ▪ Ability to think creatively by using acquired knowledge ▪ Capacity to build upon current capabilities to go beyond current learning zone	***PERSONAL TO PROFESSIONAL*** *One of these days when I become a teacher I will encounter these types of situations and I will be a little bit more understanding of students going through this ordeal.* **FUTURITY** *I look at when I first started taking classes to where I am today and I have come a long way. I am reaching one of my life goals of becoming a teacher.*
LINGUISTIC	▪ Ability to effectively communicate in the native and second language ▪ Ability to comprehend in the native and second language ▪ Basic communication skills VS cognitive academic language skills ▪ Ability to express themselves in the native and second language	**INADEQUACY** *I was not allowed to speak Spanish in grades 1-12. It was not easy and I know I lost a lot of academic and social information because of it... they [K-12 CLD students] can't utilize their L1 to communicate and ask questions. I believe they feel just as inadequate as I did many years ago.* **TRANSFERABILITY** *One of the hardest things I have ever done was learning another language. Many people are not comfortable making that step. I know it will serve me well and I will be able to help others who struggle to understand.*

Findings

The Prism Model framework was a highly effective tool for data analysis that shed light on the students' complex realities. It also revealed themes that have strong implications for faculty and staff actions regarding recruitment, retention, advisement, course offerings, and encouragement within the post-secondary educational setting. As we explored the various data for patterns and correlations it became evident that within the socio-political, tri-institutional system being studied, there exist two main forces at work. These two overarching forces of influence encompass the findings within each of the four dimensions of the CLD biography. The two forces are 1) *people and personnel* and 2) *process and infrastructure.* For the purposes of this paper, we focused primarily on the *people & personnel* force of influence. Once we coded the data based on the Prism Model, the most salient themes were then organized according to the force that most directly impacted each one (see Table 3).

People & Personnel Force of Influence

With regard to *people and personnel*, three organizing factors arose from the data and which provide its structure. These factors are 1) spouse and family, 2) faculty and staff, and 3) the student network. The quality, intensity, and frequency of the social exchanges among the individuals involved at all levels of the project were strongly related to the success in retention of the participants.

Spouse and family. CLD students' spouses and families exist as the first factor within the *people and personnel* force of influence. When considering the relative newness of attending college for many of the project students and their families, it is easy to understand why spousal and familial support are significant in the study. Students' statements about family most directly related to the sociocultural and cognitive dimensions of the student biography. In this study spouses and families functioned as sources of strength as well as sources of struggle. Indicators for lack of spousal and familial support experienced by the students manifested as guilt, absence of emotional support, emotional and verbal abuse, cultural clashes, lack of understanding of time and cost involved in the pursuance of a degree, and feelings of being neglected as a valuable part of the family. One student noted her experience in this manner.

> Things at home are somewhat tense between me and him [my husband]. My kids are the only factor that has helped me block anything negative. There hasn't been much communication between us… I have high ambitions and am willing to go on with or without him.

Another student described her negative family situation and the *guilt* she experienced as she took on the role of a student.

> I am learning that it is hard for me to let go and let others do for me. They have to come home and cook for themselves. I do not feel good about that. My mom died when I was 17 so my dad had a lot of influence in my upbringing. He believed that a wife's job is to take care of her husband. I think that is why I feel guilty.

Over 70% of the paraeducators in the study associated with the analogy of a *juggling act* to describe how they coped with the alternative and multiple roles they played on a daily basis (e.g., student, mother, child, breadwinner, full-time student) within their nuclear and extended families:

> I have so many balls in the air… My balls are [Midwestern State], campus [courses] and online classes, right? So that [there] are three, but I have more…like [the] PPST, work, and my home life. I see that, I knew that I would have a challenge with three balls, but in actuality I have six!

Although negative gender stereotypes were evident in participant discourse, one third of the participants related various types of positive support they received from their families as they took on the role of a student. These participants shared contrasting stories as their families exhibited understanding and awareness of the rigors of being a student by providing child care support in emergencies, by giving encouragement and reassurance, and through their willingness

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to take on new roles within the family to cover for the student's absence. A statement made by one student echoed the resolve felt by many of the project students as a result of this support, *"My family has sacrificed too much for my dream… To fail now is unthinkable."*

Another example of this positive support was evidenced in the families' understanding of the student's educational goals. One student shared, "*[I] got to see my fiancé for the first time in ages, thank God he understands and supports me. He is my cheerleader, always there when I am feeling down and when people make me feel bad about myself."* Another project participant related her positive family situation in this way: "*I thought things out pretty much before I signed up for my classes and knew it was going to be a heavy load. I prepared my husband by letting him see and know my long-range goal. He understood and asked how he and my godson could help."* This family's understanding of the paraeducator's role as a student and what such a commitment entails (time, financial strains, multiplicity of roles, etc.) proved crucial for sustaining the paraeducator's investment in her future.

Faculty and staff. Related to *faculty and staff*, several themes emerged from the data as influencers of student success in the project, including work demands placed on project staff, the cultural competency of college and university faculty, the level of institutional commitment to students' success, and the quality of management/advising. Students' statements related to faculty and staff coded evenly across all four dimensions, giving slight emphasis to the academic dimension of the student biography.

Faculty and staff expressed feelings of being overwhelmed by the multiple and complex tasks involved in managing the project. Because this project is the first of its kind to be implemented with three institutions across the state, many key features and activities of the project were works-in-progress. All project staff related that they felt like their workload was compounded by the lack of institution-wide support for the project. The lack of campus personnel with the knowledge and willingness to work with CLD students was an issue raised by project staff as well as students in the study. One project manager made this comment with regard to the lack of bilingual and/or bicultural support personnel at one of the community colleges:

> They do have some materials in writing [in the students' native language] and they just hand it out but it is not the same thing… and when somebody [CLD student or parent] has a question, you know they don't feel like they can come to the staff [campus personnel] and ask them a question. If they have a question they would rather not ask because they don't know how to ask it.

A second common factor regarding faculty and staff relates to the lack of cultural competency of instructional faculty and campus personnel. Two project staff members felt frustration with the ongoing responsibility of raising the cultural competency of the instructional faculty. They felt as though they had to help the faculty move beyond remediation strategies to focus more on strategies geared toward acceleration. Herrera (1995) identifies the term *pobrecito syndrome* in her unpublished dissertation, which can be used to describe the assumption held by the majority population that Hispanics are ill equipped and inadequate. In this case, the participants' perceptions of instructional faculty members indicated that the faculty often looked

at students through a deficit lens. Over half of the students talked about their struggles to navigate these tumultuous waters of faculty bias and prejudice. One student recounted a difficult situation that occurred in a science class.

> A group of us [cohort of four] went to class the first day and the instructor asked everyone to introduce themselves. When he found out that we were Synergy students, he said that he had heard about us and that he was not going to let us get off easy. He said that we would have to create a portfolio of our work when we transfer to [Midwestern State] and to be prepared because our work was not going to be good enough.

Faculty academic remediation practices and subtle beliefs in the *pobrecito syndrome* in regards to Latino/a students were evidenced in the data through: low academic expectations of students, language discrimination, lack of commitment to students' success, and/or false certainty of academic failure. These perceived beliefs and behaviors were clear barriers encountered by the project students, as evidenced in the following quote:

> Then we told her [the instructor] that we needed more time to understand the story and she says we have already talked about it long enough... I thought that this was instructional bias, and the students felt their learning was being emaciated.

Conversely, one-third of the students shared positive statements regarding faculty and staff support and cultural competence. One student recalled an instance where a teacher pointed out a quality in her that she did not know she possessed. *"I at least received a compliment from the instructor—she said I am a good writer. That statement was a shock to me."* Another student said, *"Most of my instructors are very friendly and I feel comfortable asking questions in class and they are always willing to support me and every other student that has a need."*

All 30 students saw value in the services that the project staff and faculty provided them. While the full tuition scholarship was highly valuable to the project students, other types of support were discussed in more detail as factors in their success. Access to professional development opportunities such as national conferences, support to attend college/project functions, mentoring, offering advocacy and literacy seminars, tutoring and financial help for taking entrance and exit exams, class and dormitory cohorting, and development and maintenance of long range course plans were all mentioned as strong, positive influences. All but two of the students felt they would not have been able to maintain the high standards of the project (2.78 GPA) if not for the various types of support mentioned above.

As the project had already been implemented for two and a half years when the study was conducted, many of the initial project issues were resolved, but the effects of one issue was still very real for many of the CLD students and project staff. Eighty-seven percent of participants in the study mentioned project staff turnover and inconsistency as a significant issue. At one of the two community colleges (college A), this issue was particularly challenging for a number of reasons. Due to a major tragedy within the administration of the college and two subsequent resignations of individuals in key leadership positions, maintenance and oversight of Project Synergy was at the time seen as a *"relatively low priority in comparison to all that was going on*

during its first and second year," as stated by the college administrator for that site. She added that the distance and time required for project staff to travel between sites, coupled with the breakdown of communication protocols, only amplified the difficult situation.

At the time of the study, stability at the three sites had been regained and relationships were positive, but project staff inconsistency and their lack of adequate training surfaced as one of the most counterproductive influences on program effectiveness at all levels. This was evidenced in a statement made by a project manager at the leading institution, Midwestern State:

> The original project manager [at community college A] was supposedly bilingual and bicultural but he did not see them [project students] as serious students. He kept putting them in the wrong courses, like Pilates and Intro to Theater, claiming that they were not ready to take Algebra and Comp I… because of his low expectations and poor advising, many of the students got behind and a few of them became so discouraged they dropped out.

Student network. The role of the student network is the third factor found within the *people and personnel* force of influence. As previously stated, the CLD students in the project were primarily paraeducators and non-traditional. As a result, they occupied multiple—and sometimes conflicting—roles (e.g., student, spouse, parent, employee). Therefore, the development of tight support networks was a critical element for student success. This study reiterated the findings of previous researchers; that the people and personnel element is a highly valuable factor in the retention of this group of students. By design, the project managers cohorted students in dorms, courses, and seminar activities to encourage collaborative teamwork. This aspect required students to frequently work in groups, to advocate for one another, and to rely on each other. It was interesting to observe the varied and unique modes of communication that the students exhibited toward each other within these networks. The project managers felt that these networks caused conflict at times, yet required students to build new ways of communicating and to acquire new social skills. Many students talked at length about the value that the student network experience had for them and their success. All the project managers in the study made similar value statements. One project manager from community college B stated the following:

> Since they were in seminar together, now they just do it automatically, they communicate with each other to help each other out…to borrow books, or some of them are experts in math, and some of them are pretty good at writing and reading, and they help each other out like that.

Some students had to learn how to work in collaboration with others, while gaining an understanding of their own personal study styles. One student shared,

> I was one that always wanted to work alone when I was younger. I thought that I could do things on my own without asking for help from anyone else... I think that a lot of times I prejudge… I have always know[n] that two heads are better than one, but this time I learned it... Maria and I were able to help each other by solving our problems; even though we had different quizzes, as long as we knew

the steps we could work it out and we checked each other's work before submitting.

Over time, the paraeducators developed strong bonds with one another, which played a role in their retention. Based on these findings, the *people and personnel* involved in the lives of the paraeducators proved to be a key force in their persistence, as faculty and staff, spouse and family, and the student network together act as catalysts for sustaining the students' momentum.

Discussion and Lessons Learned

Through the voices of the paraeducators in this study we learned of their lived experiences as Latino/a non-traditional students in Project Synergy. Through project staff and administrator discourse we gained insights into their experiences as implementers of a pioneering project for a diverse audience. Our understandings of this unique constituency in this context were shaped and clarified as the themes developed from the data. Because of the exponential growth of the CLD student population in schools across the nation and the minimal availability of educators properly equipped to teach them, there is now, more than ever, a great need for IHEs to gain similar understandings in order to develop highly qualified CLD educators (Gay, Dingus, & Jackson, 2003; Montemayor & Mendoza, 2004). Toward these ends, a commitment to rethinking teacher education programs is imperative if IHEs are to effectively equip and prepare a diverse teacher workforce for today's schools.

While this article discusses some of the complexities of implementing alternative programs, it also further established the overwhelming need for institutions of higher education to commit to this cause. It is clear that typical, traditional constructs for teacher education are not fitting for the population we now pursue. CLD paraeducators not only feel and respond differently in monocultural learning environments, but what they bring with them as their student biography is quite different as well. Implementing any new educational program has its challenges and requires problem solving to some degree, but implementing a recruitment and retention program for CLD paraeducators who are part of a population typically not well represented in higher education requires IHEs to think altogether differently. The intricate interplay of the forces of influence (people and personnel, and process and infrastructure) ultimately determines the effective balance of the CLD student.

It is imperative that the faculty and staff, spouse and family, and student network all know and understand their roles in maintaining this balance. Therefore, quality projects must incorporate systems that include and support these intrapersonal forces, raise their awareness of the students' unique biographies, and acknowledge the valuable part that each group plays in the CLD students' success. Furthermore, the ease of utilizing the four dimensions of the Prism Model for data coding suggests that it is critical to take into account each participant's four-dimensional biography in all project decision making for effective program implementation— beginning with the initial contact with potential students and their families and proceeding on through their recruitment, retention, and graduation. In recognizing and working within each student's individual biography, educators will have the capacity to not only appreciate the existing and ever-changing biographical realm of their CLD students, but to be able to cultivate

the seeds of success, hope, and opportunity in *all* students, even in the midst of turbulent and uncertain waters.

   As final parting thoughts, the researchers offer a few lessons learned that echo the findings within this portion of the study. Future designers of such programs might consider some of the following recommendations offered by both the students and the project personnel in this study. These suggestions are offered as strategies to minimize and/or compensate for many of the identified challenges: (a) keep a representative from each educational institution closely involved in the design, development, and ongoing implementation of program goals and objectives; (b) make provisions for offering the faculty and staff involved ongoing professional development opportunities to ensure they understand project goals and can effectively serve the needs of CLD students; c) incorporate ongoing, authentic experiences (literacy and advocacy seminars) that support CLD student networking, reflection, and identity development; and finally (d) consistently evaluate and accommodate for each participant's sociocultural, linguistic, academic, and cognitive biography.

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Table 3

Student Themes	People & Personnel	Process & Infrastructure	
		CATALYSTS OF PROGRESSION	*OBSTRUCTORS OF PROGRESSION*
ACADEMIC			
LOW OR HIGH EXPECTATIONS	**FACULTY, PROJECT ADMINISTRATORS, STAFF**	Advocacy seminar Student professional development opportunity	Remediation vs. Acceleration Lack of cultural competency of faculty & personnel Faculty's poor attendance to multicultural professional development Pobrecito syndrome perspective of faculty
	FAMILY MEMBERS	Attendance at project functions Encouragement and reassurance	Gender role stereotypes Cultural clash "Double jeopardy"
TIME **MANAGEMENT & PLANNING**	**FACULTY, PROJECT ADMINISTRATORS, STAFF**	Maintain long range plans & weekly progress reports Advising	Project requires student to be full-time student Lack of clear communication w/students Staff turnover-discontinuity
	FAMILY MEMBERS	Alternative roles played	Gender role stereotypes
UNCERTAINTY OF SUCCESS/FAILURE	**PROJECT ADMINISTRATORS, STAFF**	Dorm cohorting, Mentoring-trust building Student professional development opportunity, access to conferences, etc. Actively seeking funding	Poor advising Course development/delivery issues Staff turnover Unstable management plan Asynchronous funding plan
FORMAL TESTING & ASSESSMENTS	**FACULTY, PROJECT ADMINISTRATORS, STAFF**	Literacy seminar, financial help for test cost Class cohorting	Cultural bias of standardized tests Non-accommodation by faculty

LINGUISTIC

INADEQUACY (SOCIALIZED & INTERNALIZED)	**FACULTY, PROJECT ADMINISTRATORS, STAFF**	Value of multiple languages by project Counseling Advocacy seminar	Lack of cultural competency of faculty & personnel Cultural/political climate of institutions Effect of previous experience in schools
	STUDENTS	Network of support	Conflicting learning styles
LANGUAGE TRANSFERABILITY	**PROJECT ADMINISTRATORS, STAFF**	Faculty accommodations Literacy seminar, tutoring	Language discrimination by faculty
COMPREHENSION	**PROJECT ADMINISTRATORS, STAFF**	Faculty accommodations Literacy seminar, tutoring	Non-accommodation by faculty Lack of cultural competency of faculty & personnel

SOCIOCULTURAL

RESILIENCY	**FACULTY, PROJECT ADMINISTRATORS, STAFF**	Mentoring-trust building Potentiality-based recruitment and retention Advocacy seminar Maintain long range plans, weekly progress reports	Cultural/ political climate of institutions Inconsistent recruitment standards Lack of cultural competency of faculty Effect of previous experience in schools Institutional investment as a priority
	FAMILY MEMBERS	Encouragement and reassurance	Gender role stereotypes
JUGGLING ACT & STRUGGLES	**FACULTY, PROJECT ADMINISTRATORS, STAFF**	Advocacy seminar Counseling Child care support in emergencies	Project requires to be full-time student Distance/travel time/cost Course development/delivery issues Lack of clear communication w/students
	FAMILY MEMBERS	Alternative roles played Encouragement and reassurance	Guilt/emotional abuse
ISSUES OF FAMILY	**PROJECT ADMINISTRATORS, STAFF**	Full scholarship and monthly stipends Counseling	Project requires student to be full-time student

PEER/COHORT ROLES	**PROJECT ADMINISTRATORS, STAFF**	Academic and dorm cohorting B.E.S.O. Activities/Semester Kick Offs	Synthetic grouping configurations for cohorts
	STUDENTS	Book sharing, study groups Trust building Peer childcare support	Conflicting learning styles Lack of trust in peer competencies
ROLE ASSIGNMENTS	**PROJECT ADMINISTRATORS, STAFF**	Exposure to multiple realities	Lack of cultural competency of faculty & personnel
	FAMILY MEMBERS	Alternative roles played	Gender role stereotypes

COGNITIVE

PERSONAL TO PROFESSIONAL APPLICATION	**PROJECT ADMINISTRATORS, STAFF**	Advocacy seminar Student professional development opportunities, access to conferences, etc. B.E.S.O. activities/semester Kick Offs Maintain long range plans, weekly progress reports	Poor advising Poor management plan Staff turnover- discontinuity
FUTURITY	**PROJECT ADMINISTRATORS, STAFF**	Advocacy seminar Student professional development opportunities, access to conferences, etc.	Cultural/political climate of institutions Poor advising
	FAMILY MEMBERS	Faith Encouragement and reassurance	Gender role stereotypes
ACCOMODATIONS FOR PARTICIPANTS	**FACULTY**	Multicultural professional development Institutional investment- seen as a priority Distance delivery of courses- in various modalities	Course development/delivery issues Faculty's poor attendance to multicultural professional development Cultural/ political climate of institutions Faculty/staff burn-out

Federal Laws Supporting Services for Gifted Hispanic/Latino/Mexican American English Language Learners: Considerations for Policy and Just Practice

Ana Maria Perez Gabriel, Beverly J. Irby, and Rafael Lara-Alecio
University of Texas of the Permian Basin, Sam Houston State University,
and Texas A&M University

ABSTRACT

Even though Texas has a significant English Language Learners (ELLs) population, Hispanic ELLs who are also gifted/talented (G/T) continue to be under-identified and underserved. This situation raises an issue of equity under the Equal Protection Clause of the U.S. Constitution. Based on federal laws and federal case law argued in our paper, parents, teachers, administrators, and advocates can better ensure services for Hispanic G/T ELLs. The changing national and Texas demographics and globalized economy require that not even one Hispanic G/T ELL be left behind.

Contact Information:

Ana Maria Perez Gabriel, Ph.D.
University of Texas of the Permian Basin
gabriel_a@utpb.edu

Beverly J. Irby, Ed.D.
Sam Houston State University
irby@shsu.edu

Rafael Lara-Alecio, Ph.D.
Texas A&M University
a-lara@tamu.edu

Federal Laws Supporting Services for Gifted Hispanic/Latino/Mexican American English Language Learners: Considerations for Policy and Just Practice

Although gifted education at the national level continues to be fiscally supported through capacity-building legislation, historically it has been non-federally mandated (Irby & Lara-Alecio, 2002). Services provided by school districts for children who hold potential giftedness in a variety of areas (e.g., intellectual prowess, musical, artistic, psychomotor ability, mathematical or linguistic capacity) stand the chance to be minimal if gifted education is not mandated and monitored by the states. Furthermore, the lack of non-federally mandated gifted education is particularly limiting for children who are gifted, minority, immigrants, and who have English as their second language.

Even though gifted education is not federally mandated, there are several national laws particularly related to English language learners (ELLs) that guarantee equal protection in matters of participation in appropriate educational experiences that could be interpreted to mean gifted education. The laws discussed in this paper are offered as support for individuals who advocate for the need to have, in particular, more Hispanic/Latino/Mexican American[3] ELLs represented in gifted education. Actions for including Hispanic ELLs in gifted programs should be moving in a positive direction if for no other reason than simply the growing numbers of Hispanic ELLs in the nation's schools.

Texas, Gifted Education, and Hispanics

Texas mandates Gifted/Talented (G/T) programs (Texas Education Code §29.121 - §29.123; §42.156, 1995), and Table 1 reflects the need, in general, for such mandated programs statewide. Even though Texas has a significant Hispanic student population, 45.3% (Texas Education Agency, 2005-06), Hispanic students in G/T programs have traditionally been underrepresented (Castellano, 2002; Irby & Lara-Alecio, 2002). In 2001, for example, Hispanic students accounted for 1,646,508, 40.6% of the total student population, but only 91,896 (5.5%) of the students in Texas who received services in G/T programs. By contrast, 198,384 (11.6%) White students received such services (Texas Education Agency, Fall 2001).

Table 1.

Texas Gifted Education Enrollments, 1993-2006

Year	G/T students	Total Enrollment	% of G/T in Total Enrollment
1993-1994	248,769	3,601,839	7.0
1999-2000	336,532	3,999,783	8.4
2000-2001	342,840	4,059,619	8.4

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[3] For the purposes of our paper, Hispanic/Latino/Mexican American will be referred to, in general, as Hispanic.

| 2004-2005 | 337,650 | 4,383,871 | 7.7% |
| 2005-2006 | 342,353 | 4,505,572 | 7.6 |

Sources: Texas Education Agency. Academic Excellence Information System: 1999-2000, 2000-2001, 2004-2005, and 2005-2006; Council of State Directors of Programs for the Gifted, The 1994 *State of the States Gifted and Talented Education Report.*

      The underrepresentation may be more severe (Castellano, 2002) for Hispanic ELLs because the research rarely makes reference to them related to service Hispanic students receive, nor are Hispanic students able to be tracked by districts' reported data to the State. Castellano alleged that when the topic of exclusion from G/T programs is considered, the references to this exclusion point out ethnic minorities, but very rarely mention ELLs. Irby and Lara-Alecio (2002) found in 1997 that in 11 school districts in a major urban area of Texas, Hispanic ELLs in G/T programs ranged from 1.65%, to .1%. The base population for Irby and Lara-Alecio was 85,000 ELLs, and less than 0.5% (425) on average were identified and served in G/T programs. Comparatively, Perez Gabriel (2002), analyzed the same 11 selected school districts and found Hispanic ELLs in G/T programs ranged from 3.1% to .1 of the total ELLs district wide. As depicted in Figure 1, those percentages changed only slightly from 1997 to 2002. Few Hispanic ELLs in Perez Gabriel's sample, just as in Irby and Lara-Alecio's sample, were identified as G/T students and received services.
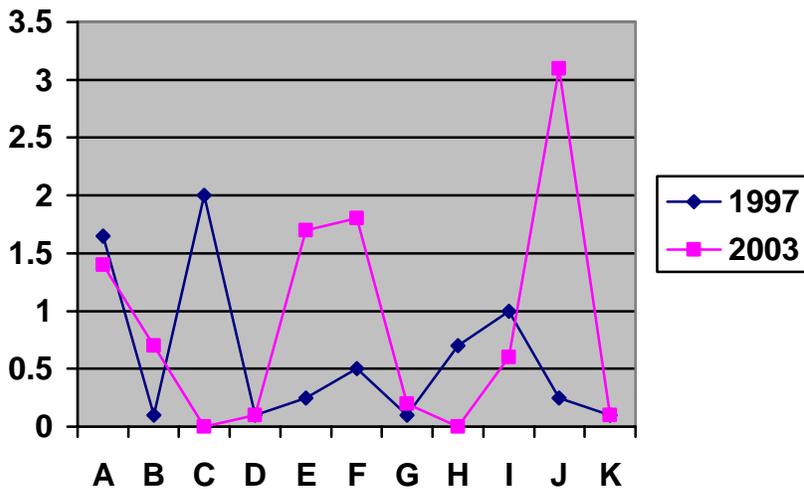

Figure 1. 1997 and 2002 percent comparisons of Texas urban school districts' Hispanic ELLs enrolled in gifted education (Percentages ranged from <1% to 3.5%)

What Laws Can Support Services to Hispanic G/T ELLs?

Among minority populations, in general, underrepresentation of gifted and talented (G/T) students in the United States has been addressed as an equal protection under the law issue (Brown, 1997, 1995; Passow, 1986). Irby and Lara-Alecio (2002) suggested that mandated policy for ELL students--which includes gifted, Hispanic ELLs--emanates from five federal laws or court rulings: (1) *Title VI* of the *Civil Rights Act 1964*, the (2) *Equal Educational Opportunities Act 1974*, (3) *Lau v. Nichols* (1974), the (4) *Individuals with Disabilities Education Act Amendments of 1997* (20 U.S.C. 1400), and (5) *Castañeda v. Pickard* (1981). Each of these supportive federal actions is presented and related to provision of services to Hispanic ELL G/T students.

Title VI of the Civil Rights Act. Within the *Civil Rights Act* (CRA) (1964), §2000d prohibits discrimination under federally assisted programs on grounds of race, color, or national origin. The Commerce Clearing House (1964) noted that the cutoff is limited to the particular federal program or section of a federal program in which the noncompliance occurred, and that any action by federal agencies under these rules may be brought to justice (Commerce Clearing House, 1964, ¶ 13). Further, even if no federal funds are involved, the same nondiscrimination principles apply pursuant to §1:1-101 of the *Civil Rights Act* (1964). Concerned with an invasion of state powers, the legislative debate of *Title VI* (Commerce Clearing House, 1964) concluded that Congress has the fullest power to attach reasonable conditions to grants of financial assistance. In fact, the debate reasoned that states have the option to accept or reject federal assistance and, therefore, the power of the state is not involved. Interestingly, it is found "anomalous" (p. 54) that the 14th Amendment, which supposedly prohibited discrimination, has the federal government aiding and abetting those who persisted in discriminatory practices. The debate further explained that *Title VI* will serve to override law provisions that contemplate federal assistance to racially segregated institutions. Although the foregoing legal tenets apply to federal funding in general, G/T educational programs are no exception to those tenets because, through capacity-building funding and other funding agendas, districts receive federal funds and are subject to non-discrimination principles.

The *Civil Rights Act of 1964* underwent a special implementation in Texas by a Modified Court Order (1971) referred to in *United States v. Texas* (1998). Local education agencies conduct reviews fulfilling the requirements of Title VI of the *Civil Rights Act of 1964*. Since 1971, the Texas public education system has been governed according to a federal court order (*United States v. Texas*, 1998, p. 302) insuring that "no child will be effectively denied equal educational opportunities on account of race, color or national origin." The Modified Order provided, *inter alia*, that the Texas Education Agency, its officers, agents, and employees

> shall not permit, make arrangements for, approve, acquiesce in, or give support of any kind to changes in school district boundary lines—whether by detachment, annexation, or consolidation of districts in whole or in part—which are designed to, or do in fact, create, maintain, reinforce, renew, or encourage a dual system based on race, color, or national origin. (p. 302)

Equally important, pursuant to the Modified Order, the board of trustees of any school district that desires annexation or consolidation with a nearby district must report to the Commissioner of Education of such intentions. The Commissioner is required to investigate "the effects of such a projected change of boundaries on the desegregation status of all the school districts concerned" (*United States v. Texas*, 1998, p. 302). The Commissioner must then report the results of his/her investigation to the appropriate county and local officials, stating whether the proposed change is in violation of law. One may argue that dual systems actually do occur when English-speaking students are served under one system of gifted education and non-fluent English speakers are served under another system that does not include gifted educational programming for the ELLs.

The Modified Order instructed checking on compliance of acceptance policies on student transfers from (a) other school districts, (b) nonsegregated school bus routes, (c) nondiscrimination in extracurricular activities and use of school facilities, (d) enrollment and assignment of students without discrimination on the basis of race, color, or national origin, (e) nondiscriminatory practices relating to the use of a student's first language, and (f) evidence of published procedures for hearing complaints and grievances. A direct violation of the Court Order may be cleared through negotiation, and if not, the sanctions of the Court Order are applied. The nondiscriminatory practices relating to the use of a student's first language is, therefore, protected for the implementation of bilingual education programs, with gifted education for ELLs and Hispanic origin students included. In a related vein, under *Idaho Migrant Council v. Board of Education* (1981), the U.S. Supreme Court found a Civil Rights Act violation for not providing for the linguistic needs of students. This Civil Rights Act provides the guarantee of an equitable education, including that of provisions and access to gifted education.

The Equal Education Opportunities Act of 1974. Sections 1701 and 1703f of the *Equal Educational Opportunities Act*, EEOA, (1974) provide that no state shall deny equal educational opportunity to a person on account of his/her race, color, sex, or national origin by failing to take appropriate action to overcome language barriers. In *Gomez v. Illinois State Board of Education* (1987, [1030, 1037]), the Court of Appeals construed §1703 (f) of EEOA as requiring appropriate action to overcome language barriers of Hispanic ELLs. In *Lau v. Nichols* (1974), the U.S. Supreme Court addressed the problem of the elimination of language deficiencies. However, Kemerer and Walsh (1996) noted as the main problem of *Lau* that the Court did not specify the bilingual programs to be implemented for Title VI of the CRA compliance. In 1975, remedial rather than compliance guidelines were developed by the U.S. Department of Health, Education, and Welfare, DHEW, designated as the Lau remedies (Carrasquillo, 2000). The Equal Educational Opportunities Act provides a further argument for appropriate action to overcome language barriers. Equal educational opportunities must be provided for each child regardless of his/her limited proficiency in English; therefore, this law supports the provision of gifted education for Hispanic ELLs.

The Individuals with Disabilities Education Act Amendments of 1997. The *Individuals with Disabilities Education Act* (IDEA) *Amendments of 1997* (P.L. 105-17) ensures the right of children with disabilities to a free and appropriate public education (FAPE) a concept that emerged since 1975 with the passage of the *Education for All Handicapped Children Act* (1975). In §1401 the *1997 IDEA Act* defined as appropriate public education the one that meets the

standards of the State Educational Agency. These standards include appropriate preschool, elementary, and secondary school education in the state involved. A question arises: Which branch of the government determines what appropriate education is for Hispanic G/T ELLs? In *Valeria v. Pete Wilson* (1998), the U.S. District Court for the Northern District of California confronted the same problem of substantive legal definition and found that the EEOA does not define what is "appropriate action" or provide criteria to evaluate whether a particular educational system constitutes "appropriate action." Whereas the definition for appropriate education is set forth by the *Individual with Disabilities Education Act Amendments of 1997,* it would seem clear that such definition would rule cases regarding Hispanic G/T ELLs who are disabled; but the question is put forward: is it possible to legally apply it to Hispanic G/T ELLs who are not disabled? We answer in the affirmative.

Castañeda v. Pickard (1981). In *Castañeda v. Pickard* (1981), the Fifth Circuit Court found that services to ELLs must include school programs based on sound educational theory, implemented effectively with adequate resources and personnel, and evaluated taking into account not only language learning but also access to a full curriculum. In the case of Hispanic G/T ELLs, these students should also participate in the enhanced curriculum for G/T students, as a special need that has to be satisfied because of their potential giftedness. To further support our position on the protection of ELLs in G/T educational programs, we cite the following legal components including case law.

Castañeda's Progeny. *Castañeda v. Pickard* (1981) has been followed by the court in *United States v. State of Texas Bilingual* (1981). In this case, the court decided that the prescribed relief demonstrated its consistency with *Castañeda* because there was evidence of purposeful discrimination endured by Mexican-American students. In *United States v. Texas* (1982), the Fifth Circuit Court of Appeals, following *Castañeda v. Pickard*, decided that Congress had left the state and local authorities substantial latitude to select programs and techniques of language remediation suitable to meet their individual problems. The foregoing *Castañeda's* progeny speak of the strength of the legal arguments of this decision that began in a federal court in the State of Texas. Equally important, the Seventh, Ninth, Tenth, and Eleventh Circuit Courts of Appeals have honored the holdings of *Castañeda,* which have persuaded the judges of those four Courts to decide in their own jurisdictions, which comprise a significant number of states, that *Castañeda* was the legal path to be followed.

Case law that further strengthened the rationale of Castañeda: In Leandro v. State *(1997), the North Carolina Supreme Court construed the right to education guaranteed by the state constitution as the right to a sound basic education. This line of legal reasoning is congruent with the first principle guiding the evaluation of programs for ELLs in* Castañeda *and we can use it to claim bilingual programs for gifted Hispanic ELLs. In* Flores v. Arizona *(1999), which mentioned the* Castañeda v. Pickard *case, the court alleged that it was unlikely that Congress had in mind that section 1703(f) of the* Equal Educational Opportunities Act *(1974) would allow a school to persist in applying programs that have failed. Just because these programs had the potential to be successful, it does not mean that school districts should insist in using them when the programs are a failure. This is another ground for requesting a change of a program that is failing in preparing ELLs, gifted included, to succeed in English language acquisition and literacy skills along with language across the curricula.*

In related literature, Moran (1988) argued that in interpreting the standard applicable to an EEOA violation, the Fifth Circuit adopted a test to determine whether a school district selected a program based on sound educational theory, implemented it effectively, and carefully monitored its results. Failing results should call for modifying those programs. Moran further contended that the first and second prong of *Castañeda* concerned reasonable programs and their implementation. It was the third prong or evaluation of the program that should be monitored on an ongoing basis. Moran suggested that if the programs for ELL children were not successful, the school districts should modify those programs as needed. Modified programs should aim for successful outcomes for the ELL student population the programs were intended to serve in the first place. Associated with the discussion of *Castañeda*, Moran pointed out that the three-pronged test also was applied in *Gomez v. Illinois State Board of Education* (1987).

Need for Codification

Borden (2001) suggested that codification of the rights of ELLs is needed. The codification, that is an organized arrangement of laws, would pose a stronger case for providing gifted Hispanic ELLs an appropriate education. Borden made a call for a substantive equal education for ELLs in general. Additionally, there is a legislative need for procedural due process rules to allow for effective justiciable (liable for trial) rights of ELLs.

Most importantly, *Castañeda,* as law being ruled by the Fifth Circuit Court of Appeals, is binding for Texas. Furthermore, the persuasive authority of *Castañeda* also comes from its ruling being followed by other Circuit Courts of Appeals. The legal reasoning of the *Castañeda* case convinced the judges of four Circuit Courts to follow that case and rule the same way. The cases brought before the Circuit Courts, which incorporated the legal reasoning of *Castañeda,* are binding for the states forming part of those Circuit Courts of Appeals and include the following:

- Circuit Court Seven: Illinois, Indiana, Wisconsin;
- Circuit Court Nine: Alaska, Arizona, California, Guam, Hawaii, Idaho, Montana, Nevada, Northern Mariana Islands,
- Office of the Circuit Executive, Oregon, and Washington State;
- Circuit Court Ten: Colorado, Kansas, New Mexico, Oklahoma, Utah, and Wyoming; and,
- Circuit Court Eleven: Alabama, Florida, and Georgia.

These Circuit Courts of Appeals have followed *Castañeda v. Pickard* (1981), which speaks significantly of the legal soundness impact of this U.S. Court of Appeals for the Fifth Circuit case. The Circuit Judges that followed the *Castañeda* case could be persuaded to follow it even when they were not required to do so as Texas courts are. The four Circuit Courts of Appeals were persuaded to follow *Castañeda* and ruled the same way. Thus, *Castañeda* has become a persuasive authority and convinced those four Circuit Court of Appeals judges that it was the proper example.

Further Legal Premises for Serving Hispanic G/T ELLs

In 2002, Irby and Lara-Alecio suggested using existing federal mandates to provide appropriate services to linguistically diverse, gifted students. These legal instruments include

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Title VII (P.L. 103-382), *Bilingual Education*, as a capacity-building policy; Title VI of the *Civil Rights Act* (1964 as amended); *Lau v. Nichols* (1974); and *Castañeda v. Pickard* (1981). However, in view of the *No Child Left Behind Act of 2001*(2002), one can now use the mandated *Title III* of ESEA (No Child Left Behind Act of 2001) where equitable and effective practices are at the forefront of every school. Consequently, G/T programs serving G/T students, ELLs included, might be subject to closer scrutiny. This scrutiny would be consistent with *Title III* § 3124 that regulates coordination with related programs. In fact, one of the purposes of the *English Language Acquisition, Language Enhancement, and Academic Achievement Act* (§ 3102 [2]) (2002) is to assist ELLs in achieving at high levels in the core academic subjects. The *Jacob K. Javits Gifted and Talented Students Education Act* (2002) also supports research and has prioritized services to minority students. With such supportive laws in place, it is possible for advocates for gifted Hispanic ELLs to argue for their equal access to, services from, and full participation in gifted education programs in specific districts.

Why is Gifted Education for Hispanic ELLs Important?

The 2000 Census (U.S. Census Bureau, 2000) data reported a Hispanic total population for Texas of 6,669,666 and also of increasing numbers of ELLs nationwide. In 2006, there were 2,040,449 Hispanic students enrolled in Texas public schools (Texas Education Agency, 2006). The Texas Education Agency (2006) reported 711,237 Limited English Proficient (LEP) students and noted that 657,716 (92.5%) were being served in Bilingual/ESL education programs. Moreover, over 90% of the ELLs in Texas reported Spanish as their native language (Texas Education Agency, n.d.). Therefore, with such numbers of students in Texas public schools and with a mandate for gifted education in Texas, fair and equitable educational services are rendered critical.

By not providing appropriate educational services to Hispanic ELLs, a negative message is sent—with the message being—there are few students in this group who qualify as gifted. Quite the contrary is true, based on the estimates of giftedness among any population group. Passow (1986) indicated that in any social and economic segment of the population, wherever they are, there will always be gifted individuals. Therefore, it stands to reason there should be a sufficient number of students being served in gifted programs who are Hispanic and who are ELLs. For example, if the conservative number of five percent gifted in any population is used, then there should be over 102,000 Hispanic students being served in gifted education, which would have represented almost a third of students actually served in all gifted education programs (346,353) in 2006 in Texas. Of those students, according to the ELL numbers in 2006, over 32,000 ELLs (five percent of the 90% of the total ELLs) should have been served in gifted education in Texas in 2006. While the Texas Education Agency has one of the best, if not the best, data systems in the U.S., the system is lacking in data on ELLs who served in gifted education by ethnicity; therefore, it is almost impossible to determine the actual numbers served.

In summary, though there have been investigations in the areas of identification and education of G/T children, there is a paucity of the literature regarding identification and service of gifted Hispanic ELLs not only in Texas, but also in the U.S. No substantial studies have been found on coordination efforts of Texas educators that are related to teachers of ELLs, Multilingual Program Directors, and G/T Education Directors/Coordinators. The last

comprehensive study of gifted education (elementary level) in Texas was conducted by Easterly (2001); currently the Texas Association of Gifted and Talented Research Special Interest Group is in the analysis stage of another statewide study at all grade levels. The lack of literature and of data on Hispanic ELLs in Texas and the U.S., as indicated earlier, push the Equal Protection Clause of the U.S. Constitution.

Furthermore, the paucity of research on federal constitutional litigation initiated by class actions of the underrepresented Hispanic ELLs in gifted programs is compounded by the lack of a definitive federally-mandated policy on G/T education. The federal case law reviewed shows some progress in favor of the underrepresented Hispanic ELLs, but as yet, the case law is not specific enough to suffice for or cover the lost talent of the Hispanic G/T who are found among the ELLs population in Texas.

The U.S. Supreme Court and the federal judiciary tend to defer to local school districts unless there is a gross constitutional violation, which is not probable with our current school decision-making bodies. Presently, the federal judiciary is very clear in upholding that education is a local issue pursuant to Amendment X (U.S. Constitution, Amendment X 1791), and that it is under the purview of each state to decide on the trend that their educational commitment should take. Notwithstanding, armed with the federal case law parents, teachers, and advocates for underserved gifted Hispanic ELLs must move forward in garnering services for these students. The more newly mandated *Title III* seems to point toward viable trends for Hispanic ELLs and immigrant students; i.e., stronger federal control of the education of our student population.

The underrepresentation of Hispanic ELLs in gifted programs merits a revisiting from the U.S. Constitutional paradigm of the equal protection under the law clause, refocusing the issue through federal case law and its progeny related to equal educational opportunity for ELLs. Case law and its progeny are further grounded in two federal civil rights laws that establish the legal framework for serving ELLs: the *Civil Rights Act* (1964) and the *Equal Educational Opportunities Act* (1974). In addition, litigation can further ground a case basing its allegations on the *No Child Left Behind Act of 2001*. Particularly useful will be arguing the application of the mandated *Title III Language Instruction for Limited English Proficient and Immigrant Students* (2002), whose Part A *English Language Acquisition, Language Enhancement, and Academic Achievement Act* (2002) in §3102 [8] specifically sets forth as a purpose to hold state educational agencies, local educational agencies, and schools accountable not only for increasing ELLs' English proficiency but also their knowledge of core academic content.

Today in Texas' globalized and competitive economy, it is a legal and ethical duty to identify, encourage, educate, and utilize the resources of a gifted citizenry. Among this citizenry, gifted Hispanic ELLs should not be left out through underidentification and underservice. As Bernal (2000, p. 159) noted, 21st century socioeconomic requirements "would force the United States [Texas] to find and educate appropriately all of its most able learners." Consequently, no child, including the gifted Hispanic ELLs, should be left behind.

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Definition of Terms

Authority of *Castañeda* – under the power of, that is, grounded on the *Castañeda* case (*Black's Law Dictionary,* 2004).

Binding – that requires obedience, bind to impose one or more legal duties on a person or Institution (*Black's Law Dictionary*, 2004).

Capacity-building – Funding through competitive grants to support programs for gifted and talented students (Irby & Lara-Alecio, 2002).

Case law and its progeny – Progeny: a line of precedents that follow a leading case (*Black's Law Dictionary*, 2004).

Codification – Process of compiling arranging and systematizing the laws of a given jurisdiction or of a discrete branch of the law into an ordered code, the code that results from this process (*Black's Law Dictionary*, 2004).

Constitutional Law Paradigm – This term refers to the constitutional right of equal protection under the law and the right of liberty established by the U.S. Constitution and applicable to all states through the Fourteenth Amendment.

Construe – the act or process of interpreting or explaining the sense or intention of a constitution, statute or instrument (*Black's Law Dictionary*, 2004).

Rule (verb) – to decide a legal issue (*Black's Law Dictionary*, 2004).

Under the purview – Purview: scope, area of application (*Black's Law Dictionary*, 2004).

An Analysis of Elementary Teachers' Attitudes and Beliefs Toward Their Students' Use of
Code-Switching in a South Texas Border Area School District

Guadalupe Nancy Nava and Emma Alicia Garza
Texas A&M University-Kingsville and Texas A& M International University

ABSTRACT

This study attempted to investigate elementary teachers' attitudes and beliefs toward their students' use of code-switching in a south Texas school district. The school district is a border town. The research design included both qualitative (open-ended) and quantitative (closed) data. A discourse analysis was used to interpret the qualitative portion of the data, while the quantitative data were derived from Likert Scale items. Teachers from fourteen elementary schools, seven south and seven north schools, were selected to participate in this study. There were 126 participants in the north schools and 152 in the south schools.

This study utilized a ten-item survey instrument. A non-parametric test including descriptive statistics was used. Each of the items was analyzed in terms of its frequency. The focus of this study consisted of describing the impact of elementary teachers' attitudes and beliefs toward their students' use of code-switching and their implications on instruction and achievement.

Contact Information:

Guadalupe Nancy Nava, Ed. D.
Texas A&M University-Kingsville
kfg00@tamuk.edu

Emma Alicia Garza, Ed. D.
Texas A& M International University
egarza@tamiuk.edu

An Analysis of Elementary Teachers' Attitudes And Beliefs Toward Their Students' Use of
Code-Switching in a South Texas Border Area School District

Introduction

The fields of social psychology and sociology of education have closely examined the effects that teachers' attitudes and beliefs towards their students' code-switching behaviors have on their social and academic development. The minority learner has been identified with underachievement, limitations in language, genetic deficiencies and cultural characteristics that impede academic success. These stereotypes have placed the blame for the minority students' school failure on the students' background rather than on the school environment which is impacted by teacher perceptions and attitudes (Trueba, 1987).

This study investigated elementary teachers' attitudes and beliefs towards their students' use of code-switching in an academic setting. The possible effects that these linguistic behaviors have on their students' academic performance were also examined. Many teachers in this southern U.S. border town are dealing with their students' code-switching behaviors in different ways. The majority of the teachers who participated in this study were born and raised in this same region and therefore are familiar with the speech varieties that are spoken along the border. For some teachers, code-switching implies a negative variable that identifies students as having an inability for learning languages or achieving academically. They often reject code-switching in the academic setting for fear that their students will carry this negative linguistic and social stigma for the rest of their academic lives. Negative attitudes are embedded in social and academic settings when language communities reject bilingualism and all it may imply.

The students in this school district are exposed to Spanish in their everyday lives at home and throughout their community. At school, some of them encounter a situation where their first language is part of their instructional program and in some instances it is not. The linguistic behaviors that are typically observed in the schools in this district often include code-switching from Spanish to English and English to Spanish very easily and without reflective thought. This is a natural phenomenon for many of these students and a part of their linguistic repertoire.

This discussion leads to a further distinction to identify which is the language used for everyday communication and the language used for academics. Code-switching occurs as part of the speaker's linguistic tools that he/she utilizes to connect what is familiar with what is new or unfamiliar. It is the speaker's normal processing of linguistic cues that become prevalent in spoken and at times written language. A linguistic tool can help the speaker transition positively into language consistency once the necessary lexical items and language structure have been mastered (Poplack, 1980). Perhaps if academic settings accepted code-switching as a normal phenomenon of bilingualism/bicognitivism, then a more positive outcome could be experienced by bilingual children, especially those who are exposed to two languages constantly within their communities (Baker, 1988).

Good and Brophy (2003), for instance, also suggest teachers' expectations are inferences that they make about the future behavior or academic achievement of their students, based on what they know about them. The evidence suggests that attempts have been made to relate

teachers' attitudes and perceptions to the social environment from which they come. The society that teachers recreate in their classrooms mirrors the one they lived in.

Statement of the Problem

Along the south Texas borders, Spanish and English are the major spoken languages in these areas. Consequently, code-switching has been the result of this linguistic contact. However, people who speak a variety of code-switching are looked down negatively by their monolingual interlocutors. Moreover, the enrollment of Spanish-speaking monolingual children in United States public schools is increasing nationally. Minority children's overwhelming language needs require that society be more informed and educators be better prepared to meet the linguistic and cultural challenges brought about by diversity. Spanish-speaking children are usually labeled as Limited English Proficient (LEP) or linguistically disadvantaged. They are often transitioned at an early age from their native language to English. As a consequence, it is necessary to investigate the impact and effects of teachers' attitudes and beliefs towards their students' language use, while being transitioned from one language to another. This forced transition does not credit or value the native language for its role in creating a bilingual individual.

Review of the Selected Literature

Social Attitudes and Teachers' Beliefs Toward Students' Native Language

To begin this discussion, it is important to describe briefly the role of social attitudes and beliefs that teachers might have towards their students' native language. Research has shown that teachers who hold negative, ethnocentric or racist attitudes about English language learners, or who believe in any of the numerous fallacies surrounding the education of language minority students, often fail to meet the academic and social needs of these students. Consequently, they work to maintain the hegemonic legitimacy of the dominant social order (Tse, 2001; Valdes, 2001; Youngs & Youngs, 2001). Additionally Krashen (2002) discusses evidence of societal attitudes and its consequences can be observed in Arizona, California and Massachusetts, where voter referendums have banned bilingual education and rejected English Language Learners (ELL) instruction to a single year of structured immersion. Voters in these states have been influenced largely by prevailing societal attitudes, media bias, and propaganda campaigns supported by organizations such as "English for the Children" and "English Only" rather than relying on accurate educational research.

Social attitudes towards languages and speech communities, including one's own, and the language perceptions of members of speech communities have been studied by social psychologists for several decades. Pioneer work was done by a group in Canada led by Lambert (1972) of McGill University in Montreal and by Gardner (1972) at the University of Western Ontario in London, Ontario (Stern, 1983). In this study, it was found that while attitude measures show a slight change of attitude in a positive direction; the data from the interviews show that the participants do not spontaneously produce the stereotypes included in attitude tests. They express an affective response to their immediate experience and expressly refuse to generalize about characteristics of Anglophones and Francophones (Hanna et. al., 1980).

For Lippmann (1992), the distinction between "the world outside and the pictures in our heads" not only led him to the first discussion of stereotypes, but also neatly encapsulated the essence of cognitive social psychology. This emphasis on cognition has been the focal point on the studies of perception, evaluation, interpretation, attribution, among others (Coupland & Jaworski, 1997). As Pettigrew (1978), pointed out, the core idea is that what people perceive as 'real' is in fact, a real social consequence. In other words, when people overgeneralize an idea or concept over a certain category or group, it gradually becomes accepted and transformed into a social norm.

Definitions of Stereotypes

Definitions of stereotypes vary widely and cannot be considered in detail in this study. Moreover, defining stereotypes could be a complex task to do since terms such as prejudices, stereotyping, discrimination, racism, sexism often overlap (Myers, 1996). Stereotypes determine behavior since they are attitudes that predispose human behavior (Halonen & Santrock, 1996). Additionally, Myers (1996) adds that to stereotype is to generalize. Human beings tend to simplify the world by generalizing. Consequently, stereotypes can be overgeneralized, be inaccurate, and be resistant to new information. Stereotypes also involve a combination of feelings, inclinations to act, and beliefs (Myers, 1996). Additionally, he suggests that, "this combination is the ABC of attitudes: affect (feelings), behavior tendency (inclination to act), and cognition (beliefs). People with prejudices dislike those who are different from them and therefore discriminate against them believing that they are ignorant and dangerous (Myers, 1996).

The problem arises when people attribute negative evaluations based on ethnic and linguistic differences producing 'gaps' and establishing barriers among people. As a result, differences in language are subject to social stereotypes. Language is not only the vehicle of communication but it also carries culture, identity and values. The linguistic signals that we unconsciously send to others about ourselves are unique and selective (Crystal, 1997).

Language Characterizes Cultural and Social Identity

Language is a meaningful variable that characterizes an individual's cultural and social identity. Children learn certain stereotypes about speakers of a language other than English in their communities. Therefore, the perception that some children grow up with is that Hispanics have negative socio-economic consequences in this country. The problem with this perception is that school systems often mirror the ethnic and language stereotypes illustrated by the many experiences of Hispanics (Gutmann, 1987).

Education policies set-up on behalf of language minority students aggravate the problem of language role stereotyping. Non-discrimination has been taken to mean or imply that language minority students' accessibility to bilingual programs is the solution to language role, as well as to social and economic stereotyping. These programs have been implemented in an effort to eradicate discrimination but the premise of many bilingual programs is making a quick transition into English. It is the emphasis of monolingualism that further aggravates the problem of

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language role stereotyping. This validates for many that a non-English language is not enough for social or academic success (Gutmann, 1987).

Language gives us a position in this world (Nettle and Romaine, 2000). It is through language that we learn how to communicate and interact with others. Therefore, language helps us to convey meaning about the world around us. It also shapes our identity and personality. Speaking a particular language provides us a sense of uniqueness and defines the way we behave in society (Halonen & Santrock, 1996).

Research has shown correlations between the effect of negative attitudes toward the users of a particular language and the language itself (Labov, 1982; Trudgill, 1983; Milroy & Milroy, 1992). Some of the results have also shown that social categorization embraces a cognitive process by which segmentation and organization of the social world is placed into categories or groups (Tajfel & Forgas, 1981; Mervis & Rosch, 1981). Hamilton (1979), for example, describes those cognitive biases that result from stereotypic conceptions by considering a stereotype as a 'structural framework' having the properties of a schema.

Code-switching: A Linguistic and Social Variation

Speech varieties carry both social and discursive meanings which are lengthy and include extra material that is not essential to what is being written or spoken about through associations with ethnicity, class, or gender. The speaker often claims two or more distinctive roles or social identities by utilizing code-switching as a means of dealing with specific situations. The interactional and sequential levels of code-switching involve code choices that are closely connected to the performance of particular language and discourse tasks (Gumperz, 1982). The code choices selected by speakers often reflect the ideology that their communities embrace with regard to language, culture, values, and politics. The varieties of language alterations found in code-switching behaviors are seen in situational switching, negotiations of identity and nonreciprocal choices. Regardless of the mode of language choices selected by the speaker, the co-occurrence of switching behaviors constitutes communication codes that contextualize meaning (Alvarez-Cáccamo, 1989).

Moreover, studies in various parts of the world (Ryan, et. al., 1984) have shown that speakers of 'high' or 'powerful' speech styles are stereotyped in terms of competence and traits related to socioeconomic status; while speakers of 'low' or 'powerless' speech styles are stereotyped less favorably among these dimensions. Teachers' stereotypes towards their students' use of code-switching impact their academic performance socially, culturally, ideologically, organizationally as well as linguistically. These divisions are stressed by important factors such as economic power, education, prestige, and language status. Additionally, code-switching represents a linguistic strategy that not only helps students to identify themselves as members of a particular community, but also as a communicative strategy to achieve proficiency in both languages. According to Heller (1992, p. 124) "the absence of code-switching can be as significant as the presence of it."

Methodology

The method of data analysis in this study was twofold. First, descriptive statistics were utilized in analyzing the ten-item survey. A quantitative type of research was carried out in the first phase of the study in order to analyze and report the results. Second, a qualitative research method was utilized to analyze the participants' responses. Thus, a discourse analysis was implemented in order to identify the most frequent linguistic patterns in the participants' responses.

It is important to note that the data represented in this study is based solely on teacher perceptions and attitudes about code-switching and whether it affects student learning. The researchers did not obtain students' scores or standardized assessment data to support or dispute teacher discourse responses. The research design was QUAL-QUAN and strictly relied on participant responses.

Instrumentation

This study was conducted in a southern U.S. border region by means of a survey in 14 elementary schools. A ten-item survey from which ten items were selected for this paper using close-open ended questions was developed to elicit responses related to the relationship between elementary teachers' attitudes towards their students' use of code-switching and their impact on the elementary students' achievement. The open-ended questions allowed the researcher to ask participants for opinions based on their experience with code-switching. Survey questions were developed both on the basis of the literature review and on a previous pilot study that served for content and face validity purposes.

District and Participants Profile

The participants for this study were 400 elementary school teachers. The majority of subjects for this study were first through fifth grade teachers who serve mainly Spanish-speaking children in a south Texas border region. The data discussed consisted of a corpus of 2,780 written responses. While the closed questions were analyzed separately, the open-ended questions were carefully designed to elicit more in-depth participants' responses.

The participants for the survey portion of this study consisted of the teaching staff of 14 elementary schools, 7 located in the south, and 7 located in the north side of the community. It is important to highlight that the survey was administered to mainstream teachers. According to the purpose of the study, mainstream teachers were defined as teachers at the elementary school or core content teachers. Additionally, the participants in this study are one sample representation in schools with rapid influx communities, schools in low-income communities, and schools serving immigrant students. Survey participants were proportionately represented across the K-5th grade spectrum. A majority of the students enrolled in these 14 schools (99.7%) are Hispanic and approximately (40%) of them are immigrants from Mexico. The characteristics that best describe the south schools' students include: 1) low to middle socioeconomic status, 2) limitations in English and sometimes in the cognitive academic native language skills, 3) limitations in experiences and background knowledge, 3) limitations in resources, 4) mostly blue collar working families, 5) parents' education levels vary from illiterate to high school graduates only

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to some college graduates, and 6) more immigrants from Mexico non-educated in their country. The characteristics for the north schools' students include: 1) low-middle-upper socioeconomic status, 2) some limitations in English and some education in native language 3) some limitations in resources for few students and an abundance for others, 4) mostly white collar working families, 5) parents' education levels vary from few with little education, high school graduates, many college graduates, and 6) some immigrants from Mexico who have had some schooling in their country.

The school district chosen for this study is a pioneer in implementing bilingual education at the first grade level in 1964. This region is characterized by a highly representative Spanish-speaking community. According to the U.S. Census Bureau, 2000, there are 166, 216 Hispanics or Latinos representing the 94.1 % of the total population from which 133, 185 are Mexican or Mexican descent (75. 4%). Most of the students attending the participating schools are exposed to Spanish at home. The U.S. Census Bureau 2000 reveals that 144,663 (91. 3%) of the population 5 years and over in the area (a total of 158, 427) speak Spanish at home while just 12, 917 (8.2%) speak English-Only. Therefore, this area serves as a gateway through which thousands of Spanish-speakers enter the United States forming a major part of the language communities along these U.S. border regions.

Results

The variables taken into account in the data base were those linguistic patterns that were classified together within groups of "subjects" or "themes". In the questionnaire the participants were asked:
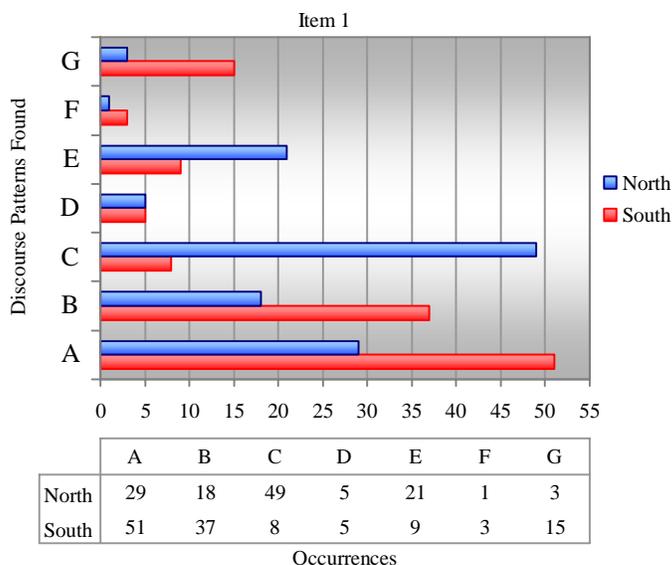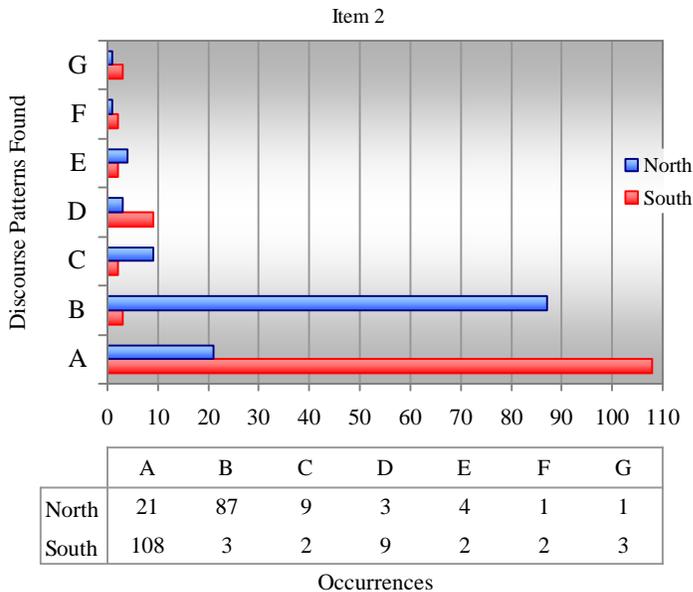

Note.
A=It affects understanding;
B=It affects the students' oral performance;
C=It does not interfere with learning;
D=I do not know;
E=It depends on the students' level of proficiency in both languages;
F=It is the result of the students' low language proficiency in both languages;
G=It is a natural way to communicate which is culturally embedded.

	A	B	C	D	E	F	G
North	29	18	49	5	21	1	3
South	51	37	8	5	9	3	15

Occurrences

Figure 1. Do you feel that code-switching interferes with learning? If so, how does it interfere? Explain.

Figure 1 shows that 40% (n=51) out of n=128 participants from the south schools believed that code-switching affects their students' levels of comprehension compared to 23% (n=29) out of 126 participants from the north schools. In addition, 29% (n=37) out of n=28 participants from the south schools considered that code-switching affects their students' oral

performance compared to 14% (n=18) out of n=126 participants from the north schools. A total of 6% (n=8) out of n=128 participants from the south schools indicated that code-switching does not interfere with learning as opposed to 39% (n=49) out of n=126 participants from the north schools. Finally, 7% (n=9) out of n=128 participants from the south schools indicated that code-switching may or may not interfere with learning depending on the students' level of proficiency in both languages compared to 16% (n=21) out of n=126 participants in the north schools.

Item 2

	A	B	C	D	E	F	G
North	21	87	9	3	4	1	1
South	108	3	2	9	2	2	3

Occurrences

Note.
A=It does affect learning and hold students back;
B=It does not affect learning;
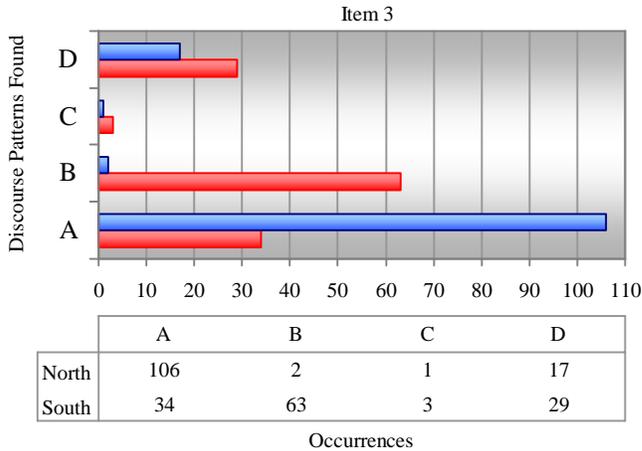**C**=I do not know;
D=It does affect comprehension mainly;
E=It is just a cultural issue;
F=Teachers consider that code-switching necessary for clarification purposes;
G=Sometimes.

Figure 2. Does code-switching affect learning in students? Does code-switching hold students back or interfere with learning concepts? Explain.

Figure 2 shows that 84% (n=108) out of n=129 participants from the south schools reported that code-switching affects learning in students compared to 17% (n=21) out of n=126 participants from the north schools. A total of 2% (n=3) out of n=129 participants from the south schools compared to 69% (n=87) out of 126 participants from the north schools indicated that code-switching does not affect learning. In addition, only 1% (n=2) out of n=129 participants from the south schools believed that code-switching affects comprehension as opposed to 7% (n=9) out of n=126 participants from the north schools. The majority of respondents from the north schools considered that code-switching does not affect learning compared to those respondents from the south schools who consider that it does affect learning.

Item 3

	A	B	C	D
North	106	2	1	17
South	34	63	3	29

Note.
A=Yes, they are;
B=No, they are not successful;
C=I do not know;
D=Some students are academically successful

Figure 3. Are the students who codeswitch successful academically? Explain.

Figure 3 shows that 26% (n=34) out of n=129 participants from the south schools reported that those students who codeswitch are academically successful as opposed to 84% (n=106) out of the n=126 participants from the north schools. Another significant difference is shown in comparing 50% (n=63) out of the n=129 participants from the south schools who considered that those students who codeswitch are not successful academically compared to only 2% (n=2) out of n=126 participants from the north schools. Data also show that 2% (n=3) out of n=129 participants from the south schools reported that they did not know whether or not students who codeswitch are successful academically compared to 1% (n=1) out of n=126 participants from the north schools. Finally, 22% (n=29) out of n=129 participants from the south schools mentioned that only some students who codeswitch are academically successful as opposed to 13% (n=17) out of n=126 participants from the north schools.

Item 4

	A	B	C	D
North	5	97	12	12
South	57	3	19	48
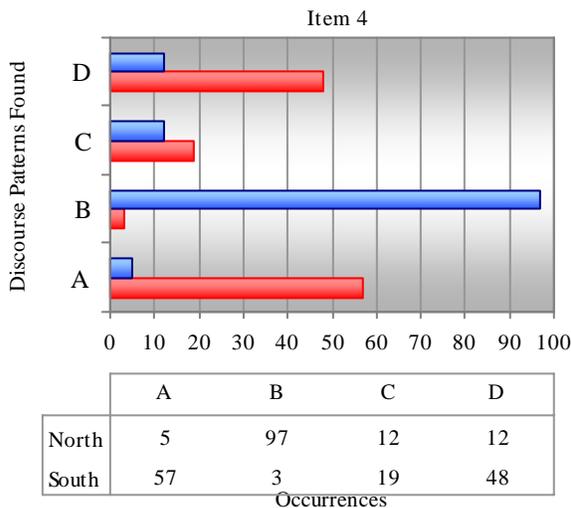
Note.
A=No, students who codeswitch are unable to use language properly;
B=Yes, students who code witch communicate effectively;
C=Sometimes, it depends on the students' language proficiency in both languages;
D= My students never codeswitch.

Figure 4. Do students who codeswitch communicate effectively with others? For example, the student who codeswitches is able to carry on a conversation in an academic setting as well as in an informal setting. Explain.

Figure 4 shows that 45% (n=57) out of n=127 participants from the south schools reported that their students who codeswitch cannot communicate effectively compared to 4% (n=5) out of n=126 participants from the north schools. Data show that 15% (n=19) out of n=127 participants from the south schools indicated that it all depends on their students' proficiency in both languages compared to 10% (n=12) out of n=126 participants from the north schools. Moreover, 76% (n=97) out of n=126 participants in the north schools indicated that their students who codeswitch communicate effectively compared to 2% (n=3) out of the n=127 participants from the south schools. Finally, 38% (n=48) out of n=127 participants from the south schools indicated that their students never codeswitch as opposed to 10% (n=12) out of n=126 participants from the north schools. Results in this item show that the participants from the south schools considered code-switching as a linguistic limitation that prevents their students from communicating effectively with others and carry out a conversation in an academic setting as well as in an informal setting.

Item 5
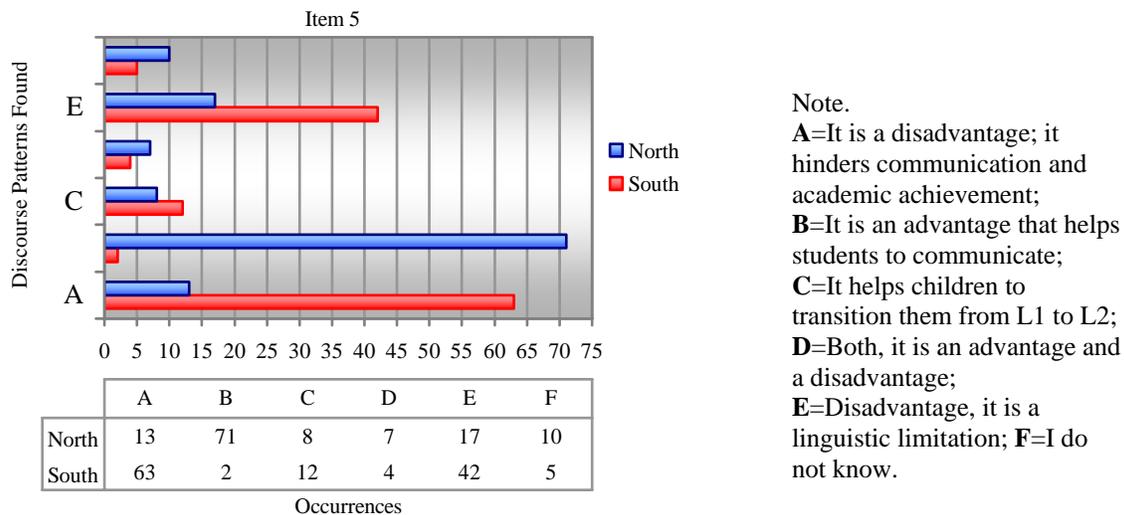
Note.
A=It is a disadvantage; it hinders communication and academic achievement;
B=It is an advantage that helps students to communicate;
C=It helps children to transition them from L1 to L2;
D=Both, it is an advantage and a disadvantage;
E=Disadvantage, it is a linguistic limitation; **F**=I do not know.

	A	B	C	D	E	F
North	13	71	8	7	17	10
South	63	2	12	4	42	5

Occurrences

Figure 5. Is code-switching an advantage or disadvantage? Explain:

Figure 5 shows that 49% (n=63) out of n=128 participants from the south schools considered code-switching as a disadvantage that hinders communication and academic achievement if never treated as opposed to 10% (n=13) out of n=126 participants from the north schools. While 2% (n=2) out of n=128 participants from the south schools reported that code-switching represents an advantage for students to communicate compared to 56% (n=71) out of n=126 participants from the north schools. Finally, 33% (n=42) out of n=128 participants from the south schools considered code-switching a linguistic limitation compared to 13% (n=17) out of n=126 participants from the north schools. Data show a clear difference between 49% of the participants from the south schools who considered code-switching as a disadvantage that

hinders communication and academic achievement if never treated; while 56% of the participants from the north schools reported that code-switching represents an advantage for students to communicate with others. Again, there is evidence the south schools participants disagree with the use of code-switching since it represents a disadvantage for their students' academic performance. This pattern in their responses seems indicate that teachers in south schools are apprehensive about code-switching behaviors because they often feel their students won't be up to par with monolingual or English dominant students if they are inconsistent with language use.
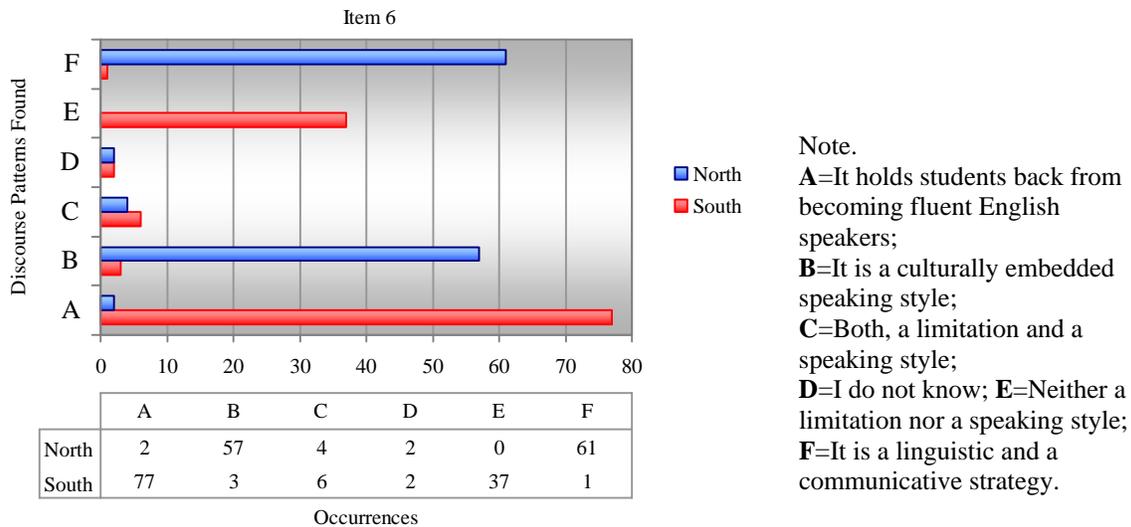
Item 6

	A	B	C	D	E	F
North	2	57	4	2	0	61
South	77	3	6	2	37	1

Occurrences

Note.
A=It holds students back from becoming fluent English speakers;
B=It is a culturally embedded speaking style;
C=Both, a limitation and a speaking style;
D=I do not know; **E**=Neither a limitation nor a speaking style;
F=It is a linguistic and a communicative strategy.

Figure 6. Do you see code-switching as a limitation (hinders communication and/or learning) or as a speaking style? Explain:

Figure 6 shows that 61% (n=77) out of n=126 participants from the south schools indicated that code-switching holds students back from becoming fluent English speakers as opposed to 1% (n=2) out of n=126 participants from the north schools. In addition, 45% (n=57) out of n=126 participants from the north schools reported that code-switching is a culturally embedded speaking style compared to 2% (n=3) out of n=126 participants from the south schools. Data show that 1% (n=1) out of n=126 participants from the south schools considered code-switching a communicative strategy compared to 48% (n=61) out of n=126 participants from the north schools. The results obtained show that 61% of the participants from the south schools indicated that code-switching is considered a deviant linguistic feature that holds students back; while 48% of the participants from the north schools described code-switching as a communicative strategy. These results demonstrate a clear difference between the north and south school participants' view regarding whether or not code-switching represents a deviant linguistic form.
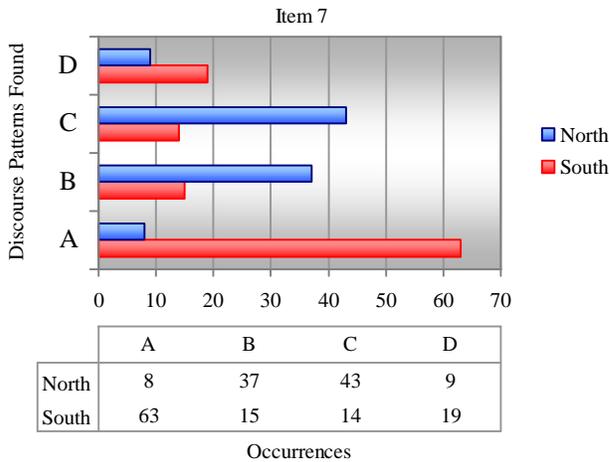
Item 7

	A	B	C	D
North	8	37	43	9
South	63	15	14	19

Occurrences

Figure 7. Do you think that code-switching should be allowed in schools? If so, under what conditions? If not, explain why not. Explain.

Note.
A=No, teachers should "model" the correct way of speaking;
B=It should be allowed as part of the students' linguistic development;
C=It should be allowed to help students transition from their L1 to L2;
D=I do not know.

Figure 7 shows that 50% (n=63) out of n=126 participants from the south schools indicated that teachers should "model" the correct way of speaking as opposed to 6% (n=8) out of n=126 participants from the north schools. In addition, 29% (n=37) out of n=126 participants from the north schools reported that code-switching should be allowed as part of the students' linguistic development compared to 12% (n=15) out of n=126 participants from the south schools. Data also indicate that 34% (n=43) out of n=126 participants from the north schools considered that code-switching should be allowed to help students transition from L1 to L2 compared to 11% (n=14) out of n=126 participants from the south schools. While a significant number of participants in the south schools do not accept code-switching as a linguistic strategy that their students use for communication purposes, the participants from the north schools emphasized using it to help students have a smooth transition from native language to English.

Item 8

	A	B	C	D	E
North	32	13	71	2	8
South	23	16	43	10	34

Occurrences
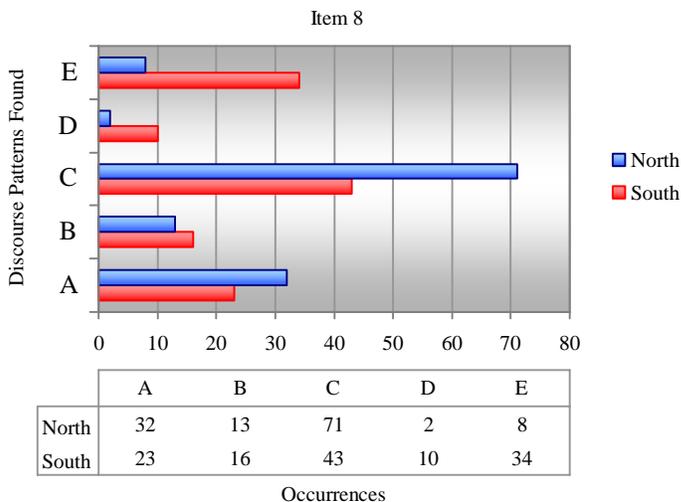
Note.
A= Modeling (paraphrasing);
B=Repeating (expanding and proving examples with correct forms of language);
C=Redirecting language to English only;
D=Giving instructions is either language;
E=Describing what they want to say in English (using pictures, etc).

Figure 8. Do you attempt to eliminate code-switching in the classroom? What type of strategies do you use? Explain:

Figure 8 illustrates that 18% (n=23) out of n=126 participants of the south schools use modeling as opposed to 25% (n=32) out of n=126 participants from the north schools. In addition, 34% (n=43) out of n=126 participants from the south schools redirect language to English-Only compared to 56% (n=71) out of n=126 participants from the north schools. Data indicate that 27% (n=34) out of n=126 participants from the south schools ask their students to describe (or draw) what they are trying to say in English as opposed to 6% (n=8) out of the n=126 participants from the north schools. The majority of the participants agreed on using re-directing to English-Only as the type of approach they use in their classrooms with their students when they use code-switching.
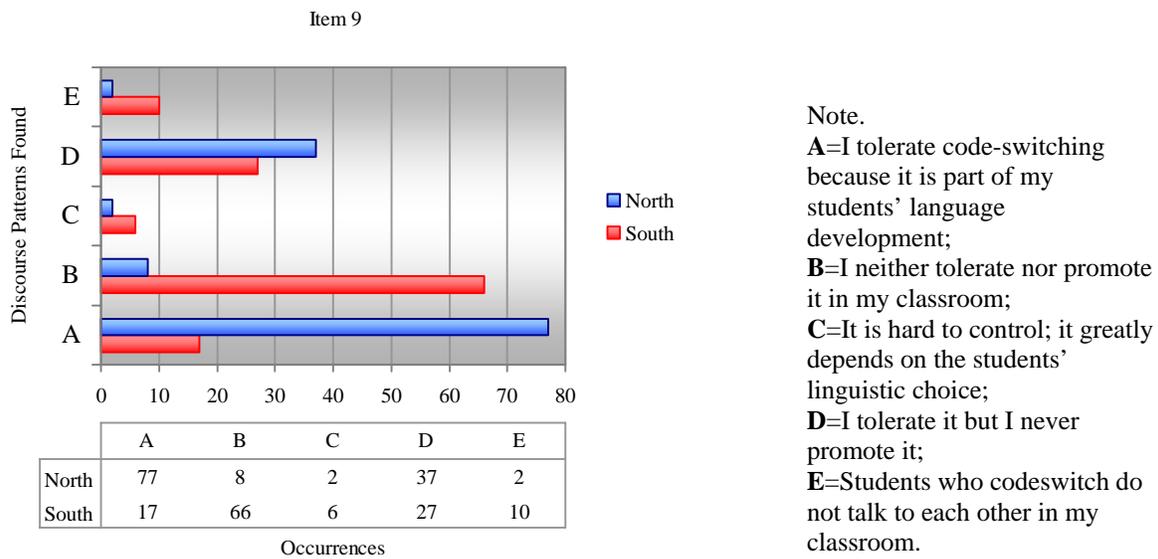
Item 9

	A	B	C	D	E
North	77	8	2	37	2
South	17	66	6	27	10

Occurrences

Note.
A=I tolerate code-switching because it is part of my students' language development;
B=I neither tolerate nor promote it in my classroom;
C=It is hard to control; it greatly depends on the students' linguistic choice;
D=I tolerate it but I never promote it;
E=Students who codeswitch do not talk to each other in my classroom.

Figure 9. Do you tolerate or promote code-switching in your classroom? Is code-switching tolerated or promoted at your school? Explain:

Figure 9 shows that only 13% (n=17) out of n=126 participants from the south schools tolerate code-switching as part of their students' language development compared to 61% (n=77) out of n=126 participants from the north schools. While 52% (n=66) out of n=126 participants from the south schools neither tolerate nor promote code-switching as opposed to 6% (n=8) out of n=126 participants from the north schools. Data indicate that 21% (n=27) out of n=126 participants from the south schools tolerate but never promote code-switching compared to 29% (n=37) out of n=126 participants from the north schools. It was found that 61% of the participants in the north schools indicated that they tolerate code-switching because it is part of their students' language development; while the majority of participants from the south schools (52% out of n=126) neither tolerate nor promote its use. Again, data shows that participants from the south schools seemed to be against the use of code-switching for reasons discussed previously in other sections.

Item 10
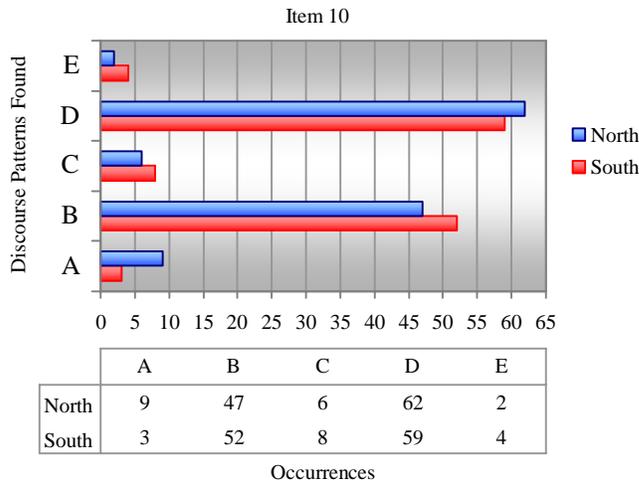
Note.
A=Some teachers do it due to their lack of linguistic skills;
B=I do not know;
C=The district tolerates it but they do not promote it;
D=The school district neither tolerate it nor promote it;
E=Yes, code-switching is tolerated.

	A	B	C	D	E
North	9	47	6	62	2
South	3	52	8	59	4

Occurrences

Figure 10. Do other teachers in the school tolerate or promote code-switching? Does your school district tolerate or promote code-switching? Explain:

Figure 10 illustrates that 41% (n=52) out of n=126 participants from the south schools do not know whether or not other teachers tolerate or promote code-switching compared to 37% (n=47) out of n=126 participants from the north schools. Data show that 46% (n=59) out of n=126 participants from the south schools stated that the school district neither tolerates nor promotes code-switching as opposed to 49% (n=62) out of n=126 participants from the north schools. Data revealed that 46% of the participants from the south schools and 49% of the participants from the north schools agreed on accepting the fact that the school district neither tolerates it nor promotes the use of code-switching. Consequently, findings obtained in both parts of the study reflect that code-switching is not part of the school district's agenda.

Conclusions

The findings in this study revealed that teachers' perceptions regarding their students' code-switching behaviors may have an impact on student's academic performance. The discourse patterns found in teachers' responses cannot be directly connected to student academic performance since students' scores were not considered as part of this study. Nonetheless, the discourse patterns observed throughout the survey items seem to reinforce the ideology that code-switching is perceived as a negative consequence of bilingualism. In addition, there are some observations to be made regarding the effects of teacher's attitudes and beliefs toward children's use of code-switching at the elementary level. First, teachers' negative attitudes (implicit and explicit) may not only have an impact on minority children's education, but they may also have powerful consequences on their lives. Societal stereotypes produce a reduction in value of language and culture differences for immigrant children. Second, derogatory expressions and thoughts provide the appearance of a logical rationale for dismissing immigrant children's linguistic, social, and cultural background. Third, by institutionalizing a negative array of social mirroring of minorities, there will be very little room for academic success. Furthermore, negative attitudes are grounded on many teachers' and administrators' low expectations. As mentioned previously, this social mirroring could have different sources such as

color, ethnicity, social status, and language. In this case a particular language variety was considered.

It was found that there is more resistance toward code-switching expressed by the majority of teachers from the south side of the region than those teachers from the north side of the region. According to the geographical data collected, a significant number of teachers from the north schools have more contact with people with different ethnicity. In contrast, teachers from the south schools work daily with a representative Spanish-speaking community. Geographically, the teachers from the south schools have a larger concentration of immigrants from Mexico in their classrooms. Needless to say, these teachers have higher political pressures and accountability issues that force them to transition their students from their native language to English as quickly as they can.

On the contrary, the teachers from the north are more open to diversity due to the geographic distribution of the population in the area. This openness to diversity could possibly be attributed to factors discussed in the district profile which outlined issues such as socioeconomic status, language proficiency and limitations, accessibility or lack of accessibility to resources, background experiences, family educational levels, etc. Another important factor to be considered is whether or not the participants from both sides of the area were ESL/Bilingual certified. The findings obtained in the demographic data analysis showed that the majority of the participants from the south schools were Bilingual certified compared to those participants from the north schools.

Research on code-switching such as Gumperz, 1982, Heller, 1992, and Poplack, 1980, has highlighted the role of language choices in managing the speakers' ambiguous roles and social identifications. What often looks like a linguistic code for the linguist may not always be taken into account as a communication code by the practitioners. Bilinguals and developing bilinguals participate in code-switching behaviors at times when they are conscious of such behaviors but purposefully use code-switching by choice. Code-switching may be used to accomplish filling a linguistic or conceptual gap or for multiple communicative purposes (Gysels, 1992). While in some parts of the world and in some cases code-switching is the exception, in many bilingual communities it is and is often seen as the norm. It seems that wherever code-switching is accepted as a norm it is perceived as uneventful, and it is readily acknowledged by the speakers in the community. In the future, code-switching will inevitably be seen as a language all its own in bilingual or multilingual communities.

Undoubtedly, code-switching behaviors do make an impact on the perceptions of community members and educators. Traditionally, the attitudes and beliefs that educators working with bilingual students have towards code-switching is usually that it is a random process that could be explained by first language interference and the inability to separate languages to carry on a so-called "meaningful conversation." What is imperative to this study is that the participants hold this traditional view of code-switching. Many educators do not accept the notion that code-switching serves important communicative and cognitive functions because it is in direct conflict with normative or conventional forms and attitudes about what "good language" is, thus it is neither appreciated nor supported.

As a final remark, we consider that the first step toward recognizing and accepting others is linguistic tolerance. Nowadays we live in a multicultural society, where no one is identical, even when we belong to a particular group. We are different from each other. Schools are clear examples of culture contact where people from diverse ecosystems get together and exchange their experiences constituting the richness of communication.

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TABE JOURNAL
Spring 2008, Volume 9, Number 3
Invitation to Submit Manuscripts

Editors:
Dr. Josie Villamil Tinajero & Dr. Judith 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 in Texas with a special focus on data-driven decision-making in bilingual education. Qualitative and quantitative studies that can contribute to the growing knowledge base on 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**.

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