

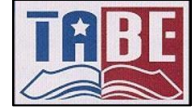
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Editorial Introduction

Dear Colleagues,

The *Journal of Bilingual Education Research and Instruction* is committed to the exchange of educational data, studies, ideas, practices and information with researchers, practitioners and policymakers in this public forum. It is published online once a year and can be accessed at the TABE website homepage, TABE.org.

In this issue readers are invited to an in-depth examination of research, best practice, and advocacy topics that frame our work as bilingual educators. The lead article, *Pre-Service Bilingual Teachers and their Spanish Academic Language Proficiency as Measured by the BTLPT: Perceptions and Performance*, Alma D. Rodriguez and Sandra I. Musanti explore the factors and experiences that influence the development of academic Spanish proficiency of bilingual teacher candidates. Next, Mariana Alvayero Ricklefs present a case study of educators' ideologies and their influence in an educational program for ELs. Her article, *(In)Compatibility between Educators' Linguistic Ideologies and its Influences in the instruction of Latina/o Students in a Bilingual Program*, includes implications for teacher training and future research. Joan R. Lachance's case study features practicing dual language teachers' perspectives regarding the importance of authentic classroom materials for biliteracy development in *Case Studies of Dual Language Teachers: Observations and Viewpoints on Authentic, Native-written Materials for Biliteracy Development*.

In *Examining Teachers' Knowledge as it Relates to Professional Development Activities in Dual Language and ESL Programs in Texas School Districts*, Susana E. Franco-Fuenmayor, Yolanda N. Padron, and Hersh C. Waxman investigate DL and ESL teachers' knowledge pertaining to a number of areas that are important to teacher preparation. In *Contextualization in Culturally and Linguistically Diverse Classrooms: Bridging between Students' lives and the School Curriculum*, Kevin Murry, Melissa Holmes, Shabina Kavimandan and Glenda-Alicia Leung offer teachers and teacher educators a compelling and thorough discussion to deepen their understanding of the art and science of contextualization. Next, Hector Rivera and Jui-Teng Li examine the home and classroom environments of academically at-risk Hispanic children in their article, *Studying the Significance of the Home and Classroom Environments on Bilingual Hispanic Students' Academic Development*. Zenaida Aguirre-Muñoz and Magdalena Pando examine three domains of effective teachers and teaching in their article *Knowing and Teaching Elementary Math to Bilingual Students: Examining the Role of Teaching Self-Efficacy on Content Knowledge*. Finally, in *Bilingualism, Disability and What it Means to Be Normal*, María Cioè-Peña, presents a review of the literature and explores a number of gaps.

Special thanks are due to Editorial Assistant, Cinthia Meraz Pantoja and Technical Assistant Jerry Urquiza. In addition, this issue would not be possible without the members of the Editorial Advisory Board (our manuscript reviewers) and individuals who submitted manuscripts for publication consideration—a 34% acceptance rate for this issue.

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Pre-Service Bilingual Teachers and their Spanish Academic Language Proficiency as Measured by the BTLPT: Perceptions and Performance

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Abstract

A mixed methods case study was conducted by bilingual teacher educators to explore the factors and experiences that influence the development of academic Spanish proficiency of bilingual teacher candidates in south Texas as measured by the Bilingual Target Language Proficiency Test (BTLPT), a required examination for bilingual teacher certification. Results show that schooling experiences prior to admission into the bilingual education program greatly influence the development of academic Spanish. Therefore, quality bilingual programs are needed at the P-12 level to develop competent bilinguals who are equipped with the necessary language skills to become bilingual teachers. In addition, findings suggest the need to infuse the development of academic Spanish across bilingual education coursework. Moreover, differentiated interventions are recommended to address the varied academic Spanish development needs of diverse pre-service bilingual teachers. Further research on the factors, experiences, and challenges faced by bilingual teacher candidates to achieve bilingual teaching certification is suggested.

Keywords: bilingual teacher preparation, Spanish language proficiency, Spanish academic language, BTLPT

Introduction

The numbers of emergent bilingual¹ students, or students whose first language is not English, have been steadily increasing in the United States (U.S.). There was an increase of over 50% in emergent bilingual students in the first decade of the 21st century with total numbers surpassing 5 million students nation-wide (Ballantyne, Sanderman, & Levy, 2008; Batalova & McHugh, 2010). Most emergent bilinguals are Latino/a students of Mexican descent (Kohler & Lazarín, 2007; Krogstad, & Gonzalez-Barrera, 2015). It is important to pay special attention to the educational needs of Latino/a emergent bilingual students, not only because of the growing numbers of students, but because their performance on standardized achievement tests has been consistently low (Genesee, Lindholm-Leary, Saunders, & Christian, 2005). In addition, emergent bilingual students drop out of high school at higher rates than English proficient students (Ballantyne, Sanderman, & Levy, 2008). The issue becomes more serious considering the lack of teachers who are adequately prepared to teach emergent bilingual students in United States schools (Blum Martinez & Baker, 2010).

Despite the evidence that shows that teacher preparation influences teacher effectiveness (Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005), and that bilingual instruction positively affects academic achievement and literacy development in English (Genesee et al., 2005), not all states in the United States require training for beginning teachers on how to adequately instruct emergent bilingual students. “States’ requirements vary considerably, with some peripherally mentioning ELLs in their standards for pre-service teachers, and others (Arizona, California, Florida, and New York) requiring specific coursework or separate certification on the needs of ELLs.” (Ballantyne, Sanderman, & Levy, 2008, p. 9) California, Florida, New York, and Arizona are among the 6 states with the largest population of emergent bilingual students in the United States along with Texas and Illinois (Batalova & McHugh, 2010). In fact, Texas is the state with the second largest emergent bilingual student population, surpassed only by California (Batalova & McHugh,

¹ Emergent bilinguals are students who are acquiring English in school and are in the process of becoming bilingual as they become able to function in both their home language and English (García, Kleifgen, & Falchi, 2008). Although the Texas Administrative Code refers to these students as English Language Learners (ELLs) we use the term emergent bilinguals to emphasize the importance of both English and native language proficiency.

2010; U.S. Department of Education, 2016). In addition, over half of the students in the state of Texas are Latinos/as (52%), this being the largest student ethnic group in the state (Texas Education Agency, 2014).

Although the state of Texas does not require all teachers to be trained in teaching emergent bilingual students (Ballantyne et al., 2008), it requires that all students who are emergent bilinguals receive instruction in bilingual or English as a second language programs (19 Texas Administrative Code § 89.1201). The number of emergent bilingual students in the state of Texas increased by over 35% from 2003 to 2013, making bilingual and ESL programs the instructional programs with the largest increase in student enrollment (Texas Education Agency, 2014). In addition, the home language of the majority of emergent bilingual students is Spanish (Davis, n.d.; Texas Education Agency, 2012-2013). Therefore, it is of utmost importance for bilingual teacher education programs in Texas to target the development of academic Spanish as one of their program goals, especially for teacher education programs on the US-Mexico border.

Teachers who have strong language proficiency both in English and Spanish are needed. However, the 2014-2015 average reported state-wide score for the Texas certification exam required of all bilingual teacher candidates, the Bilingual Target Language Proficiency Test (BTLPT), was 243.12 when the minimum score required to pass is a 240 (Texas Education Agency, 2015a). A review of the literature shows a scarcity of studies that explore the outcomes of language proficiency tests and the challenges test takers confront to achieve teacher certification in the U.S. To address the research gap, we designed a case study to explore bilingual teacher candidates' perceptions of their Spanish academic language development and their performance on the Texas Bilingual Target Language Proficiency Tests (BTLPT). The study was aimed to inform us, as bilingual teacher educators, of the factors and experiences that influence the development of Spanish academic proficiency of bilingual teacher candidates in our region, the Rio Grande Valley, and to identify strategies to help them increase their Spanish academic proficiency in their bilingual teacher preparation program.

Literature Review

Academic Language Proficiency in Spanish

Projections indicate that the U.S. will be only second to Mexico in the total number of people who speak Spanish by the year 2060 (Instituto Cervantes, 2015). The Instituto Cervantes (2015) estimates that 52.6 million people in the U.S. speak Spanish. Nonetheless, Spanish is taught in the U.S. mostly as a foreign language at the secondary and postsecondary levels. This instructional approach emphasizes the academic Spanish spoken in Spain and Latin America, instead of the Spanish spoken by millions of Latinos/as defined as U.S. Spanish (Cashman, 2009; García, 2014a). Spanish, as a minority language, is still undervalued and most Latinos/as in the U.S. feel their Spanish is inadequate (Cashman, 2009; Showstack, 2012). Spanish speakers and Spanish as a language have been associated with low socio-economic status, creating stereotypes that contributed to relegate the use of Spanish to private and social domains (Achugar & Pessoa, 2009; Proctor, August, Carlo, & Barr, 2010). Historically, schools have contributed to the cultural assimilation of Spanish-speaking students by immersing them in English and, when Spanish instruction is available, it imposes the Spanish of Spain or Latin America, which does not resemble the local bilingual language practices (García, 2014b). Moreover, bilingual programs still operate under the premise of separation of languages and a monoglossic understanding of bilingualism that sees bilingual individuals as the sum of two monolinguals compartmentalizing language instruction (García, 2009, 2014a). On the other hand, dynamic views of bilingualism understand languages are closely and naturally intertwined in bilingual language practices (García & Kleifgen, 2010).

In south Texas, an area on the border with Mexico with large numbers of Latinos/as, Spanish has been spoken since the late 16th century when Spanish colonization began (Hult, 2014). Despite that long history, the language varieties spoken by bilinguals in south Texas are viewed from a deficit perspective as informal and as an indicator of lack of education (Achugar & Pessoa, 2009). Moreover, bilingual speakers in this region do not seem to value the variety of Spanish they speak or their bilingualism (Showstack, 2012).

Systematic efforts to support the development of academic Spanish language within the bilingual population of the U.S. have been scarce to non-existent. As Zwiers (2007) explains,

Academic language, whether it is academic Spanish, Arabic, or English, forms a vital foundation for this eventual branching of language into workplace registers. Academic language is shaped by both home and school factors, and the processes by which it develops are complex, particularly in classroom settings with students of diverse backgrounds (p. 94).

It is important to consider the implications and challenges of teaching Spanish to Spanish speakers in the U.S. and how different it might be from teaching the language to those with scarce or no experience with the language (Peyton, Kreeft-Lewelling, & Winke, 2001). A critical factor is to understand the different levels of language proficiency as well as the diversity of schooling experiences and cultural backgrounds of Spanish speakers as well as the varieties of Spanish spoken (Guerrero, 2003; Guzmán Johannessen & Bustamante-López, 2002; Peyton, et al., 2001) in the U.S. and Texas. For instance, while many pre-service teachers have strong oral Spanish skills, some might display less proficiency in written and academic Spanish (Guzmán Johannessen & Bustamante-López, 2002). That is, many pre-service bilingual teachers have developed basic interpersonal communicative skills (BICS), but not cognitive academic language proficiency (CALP). Cummins (1999) explained that while BICS develops in about 2 years, CALP requires anywhere between 5 and 10 years of academic instruction. Moreover, it is essential to understand that for many members of minority groups, school often is the only place where they acquire academic language (Bartolomé, 1998; as cited in Egbert & Ernst-Slavit, 2010). The emphasis on English instruction in U.S. schools therefore limits the opportunities that students have to develop academic language proficiency in Spanish.

Bilingual Teacher Preparation

One of the factors contributing to the success and effectiveness of bilingual education program implementation in public schools is to have qualified bilingual teachers who have the academic language skills needed to teach all content areas (Blum Martinez & Baker, 2010). Bilingual teachers must have the ability to provide instruction in English and in the first language of their students using academic language. Alanis and Rodriguez (2008) assert that effective dual language programs require bilingual teachers who are able to “adjust the language of instruction; teachers must adjust their philosophy, their teaching strategies, and their view of ELs” (p. 316). These teacher abilities are particularly relevant for Spanish-English bilingual programs if we consider that historically, Spanish has been devalued as a language of instruction and schools have contributed to the loss of the Spanish language, in many cases by immersing students in English-only programs (Ek & Sanchez, 2008). Blum Martinez and Baker (2010) explain that two factors contribute to the difficulty of finding qualified bilingual teachers who can effectively teach in two languages. On one hand, most U.S.-born teachers who are fluent in English and in the students’ home language, Spanish, have been schooled in English-only programs with limited or non-existent opportunities to develop academic competence Spanish. On the other hand, those bilingual teachers who completed their schooling experience in another country encounter many different challenges fulfilling teaching responsibilities because they are not familiar with the culture, systems, and structures of public schools in

the United States.

Research that explores the effectiveness and quality of bilingual teacher preparation is scarce and highlights the need to look at how bilingual teachers are prepared to understand language and culture as integral to teaching and learning (e.g. Flores, Sheets, & Clark, 2011). Ekiaka and Reeves' (2010) study reveals the need to further explore how bilingual teacher education programs aim at increasing pre-service teachers' cultural competence. It is important that teachers understand language as dynamic and always changing and intrinsic to students' identity. In this regard, Saavedra (2011) affirms that we need teachers who comprehend that "to have language is to be in the process of becoming and being. It is not a final end point, but rather a vehicle for making sense of the world around us" (p. 265).

Research on teacher preparation in south Texas shows that the level of teacher candidates' Spanish academic proficiency is an outcome of the limited opportunities to develop literacy in their native language during their K-12 years and the lack of bilingual education programs in the region (Ek & Sánchez, 2008; Guerrero, 2003; Sutterby, Ayala, & Murillo, 2005). Guerrero (2003) affirmed that

the few academic Spanish-language development opportunities provided during pre-service training have not been empirically generated. In short, teachers have very little access to academic Spanish, and what is available is not grounded in a tradition of research. Related language-testing policies, where in place, generate test scores of unknown validity (p. 652).

Moreover, many pre-service bilingual teachers have constructed a negative perception of their own Spanish proficiency (Rodríguez, 2007), and have been exposed to practices that explicitly or implicitly devalue the variety or dialect of Spanish they speak (Smith, Sánchez, Ek, & Machado-Casas, 2011). Therefore, it is important for bilingual teacher educators to explore the perceptions of pre-service bilingual teachers concerning their own levels of Spanish proficiency, as well as the factors and experiences that have influenced the development of bilingual pre-service teachers' academic language development in Spanish.

Teacher Certification and Bilingual Teacher Language Proficiency

Kane, Rockoff, and Staiger (2006) found that classroom performance during the first two years of teaching is a better predictor of teacher effectiveness than certification status. Darling-Hammond, et al. (2005) define certification as "a proxy for the real variables of interest that pertain to teachers' knowledge and skills" (p. 23). The push for accountability and the need to certifying bilingual teacher competences to teach in bilingual settings has resulted in states developing different types of assessments including language proficiency assessments. States like New Mexico and Texas have developed and implemented Spanish language proficiency tests for bilingual teacher certification or endorsement, La Prueba and the Bilingual Target Language Proficiency Test respectively. An important assumption underlying these tests is that bilingual teacher candidates have been prepared to meet the demands of the test by teacher preparation programs (Guerrero, 1998).

Research that explores bilingual teacher language proficiency certification is insufficient and dated and focuses almost exclusively on describing test components and assessing test validity and reliability (Guerrero, 1998; 2000; Guzmán Johannessen & Bustamante-López, 2002). In this regard, Guerrero (2000) questioned the validity of the Four Skills Exam, used to assess bilingual teachers' Spanish proficiency in New Mexico for 18 years. Insights from this study informed the development of La Prueba, a test presently required in New Mexico for bilingual teaching endorsement. In a similar study, Guzmán Johannessen and Bustamante-López (2002) studied the Bilingual Cross-Cultural Language Development (BCLAD) test used in California for bilingual teacher endorsement. They argue the importance of designing valid and reliable language assessments that reflect the complexity of language skills required by effective bilingual teachers

and provide suggestions for the development of this type of tests. They “emphasize that consideration of linguistic tasks that bilingual teachers generally perform in academic settings is crucial in the design of appropriate assessment instruments” (p. 573). Researchers conclude that bilingual teacher education programs should consistently provide quality opportunities for bilingual teachers’ academic language development.

In the state of Texas, pre-service bilingual teachers must demonstrate high levels of academic language proficiency in Spanish in order to obtain a bilingual certification by passing the Bilingual Target Language Proficiency Test (BTLPT) since 2009 (Texas Education Agency, 2016). Prior to BTLPT implementation, Texas required the Texas Oral Proficiency Test (TOPT) for bilingual teacher certification. Stansfield (2009) explained that the TOPT replaced the Language Proficiency Interview (LPI). Since 1979, the LPI had been used to assess the oral proficiency of bilingual teachers in Texas. Due to validity and reliability issues with the LPI, the TOPT began to be developed in 1990 and was first implemented in 1991. The TOPT was a 45-minute test in which examinees listened to directions in English and recorded their responses in Spanish. The responses amounted to approximately 20 minutes of speech in Spanish. The TOPT consisted of picture-based items that required description or narration, items in which the examinee was required to speak about various topics, and items that required responding to particular situations. The TOPT was developed according to the standards of the American Council on the Teaching of Foreign Languages (ACTFL). According to the Texas Education Agency and the Educational Testing Service (2010), the TOPT assessed the ability of bilingual teacher candidates to communicate in Spanish in everyday situations. However, oral language proficiency for everyday purposes is not sufficient to provide instruction in Spanish in bilingual classrooms. Therefore, the Texas Education Agency formed a committee of experts to develop a new assessment of language proficiency for bilingual teacher certification that included reading and writing in addition to oral language: the BTLPT.

Despite this study not discussing the potential BTLPT limitations to adequately measure teachers’ academic Spanish proficiency, it is important that bilingual teacher education programs provide quality opportunities to develop and strengthen pre-service bilingual teachers’ academic Spanish (Guerrero, 1998; 2003; Sutterby et al., 2005). Bilingual teacher preparation programs need to develop and strengthen teachers’ linguistic repertoire, so they can, in turn, help their future emergent bilingual students develop academic Spanish proficiency as they acquire academic English and content area knowledge for academic success. Bilingual teacher educators, then, must inform their practice using performance results of their bilingual teacher candidates in the BTLPT to identify strategies to better support pre-service bilingual teachers throughout their bilingual teacher education program in the development of the Spanish academic language proficiency that will be assessed for certification.

Method

Research Questions

The overarching question that guided this study was the following:

What are bilingual pre-service teachers’ perceptions of their academic language proficiency in Spanish and their performance on the Bilingual Target Language Proficiency Test?

In order to answer that question, we explored four more specific sub-questions:

1. How do pre-service bilingual teachers perceive their academic language proficiency in Spanish in the four language domains (listening, speaking, reading, and writing)?

2. What factors and experiences have shaped the development of academic language proficiency in Spanish of pre-service bilingual teachers?
3. What are the perceptions of pre-service bilingual teachers of the Bilingual Target Language Proficiency Test?
4. What strategies and experiences do pre-service bilingual teachers perceive can better support their development of academic language proficiency in Spanish during their teacher preparation program?

Setting and Participants

The study was conducted in the Spring 2015 semester at a Hispanic serving institution (HSI) located on the Texas-Mexico border with over 95% of Latino/a population of Mexican descent. The institution prepares many bilingual teachers in the region. The Bachelor of Arts in Interdisciplinary Studies – Early Childhood-6th Grade Bilingual Generalist degree was in place at the time of data collection required that teacher candidates complete 126 credit hours, pass the generalist content and the pedagogy Texas certification examinations, and complete their student teaching practicum before graduation. Passing the Bilingual Target Language Proficiency Test (BTLPT) Spanish (190) test was a requirement for bilingual teacher certification, but not for graduation because teacher candidates could become certified as elementary generalist teachers without the bilingual certification.

At the time of the study, the program of study that these candidates were following required two lower-level Spanish courses taken before admission to the educator preparation program, followed by two upper-level Spanish courses and three bilingual education courses taught fully in Spanish once they were admitted into the educator preparation program. The courses included readings in Spanish to the extent possible, including the supporting materials developed by instructors. All assignments were completed in Spanish, and instruction was delivered in Spanish by instructors who were native Spanish speakers. The last course in the three bilingual education course sequence, Content Area Methods in the Bilingual Classroom, required bilingual teacher candidates to write content area lesson plans in Spanish. This assignment required teacher candidates to use academic language specific to the content areas. The expectation was for bilingual teacher candidates to engage in instructional planning to teach language through content paying special attention to the academic language that would be needed by their bilingual students to learn content.

The sample for the study consisted of one cohort of undergraduate bilingual education students enrolled in EDBI 4608 – Student Teaching EC-6 Bilingual Generalist during the Spring 2015 semester. There were 29 bilingual teacher candidates who agreed to participate in the study. They were completing a 14-week student teaching in bilingual classrooms. Participants were all female.

Test Description

The Bilingual Target Language Proficiency Test (BTLPT) is designed to assess listening comprehension, oral expression, reading comprehension and writing expression in Spanish as required for an entry-level educator in Texas public schools. The test includes 84 multiple-choice questions and 7 constructed-response tasks. Some of the questions do not count toward the final score because they are inserted in the assessment for field-testing purposes. Questions are organized in four domains: Domain I – Listening Comprehension; Domain II – Reading Comprehension; Domain III – Oral Expression; and Domain IV – Written Expression. The BTLPT test administration sessions are designed to last 5 hours

(Texas Education Agency, 2015b). The following table, adapted from the Texas Education Agency BTLPT preparation manual, indicates the competencies assessed, the test domains, and the type and number of questions per domain.

Domain	Competency	Type and number of questions	Weight
I	Listening comprehension (32 points)	36 multiple choice (32 scorable plus 4 nonscorable)	21%
III	Oral Expression (45 points)	4 constructed-response tasks: 1. Simulated conversation 2. Question & answer 3. Oral presentation 4. Support a situation/opinion	29%
II	Reading Comprehension (40 points)	48 multiple choice (40 scorable and 8 nonscorable)	26%
IV	Written Expression (36 points)	3 constructed-response tasks: 1. Response to letter/email/memo 2. Lesson plan 3. Opinion/position essay	24%

Figure 1. Structure of the Bilingual Target Language Proficiency Test (BTLPT).

Source: Texas Education Agency (2015b). Texas Examination and Educator Standards (TExES) program. Preparation Manual. Bilingual Target Language Proficiency Test (BTLPT). Spanish (190).

Data Sources

Bilingual student teachers were invited to participate in the study during the first week of their student teaching as they gathered for an informational meeting. The goals of the research were explained, and consent forms were signed.

Questionnaire. The first data source consisted of a 10-item questionnaire that explored pre-service teachers' perceptions of their academic language proficiency in Spanish as well as of the factors and experiences that have shaped such proficiency. All 29 participants completed the questionnaire ($n=29$). The results of the questionnaire were analyzed using basic descriptive statistics and contrasting data for students who had already taken the BTLPT exam and students who were scheduled to take the BTLPT during their student teaching.

Interviews. Students who had taken the BTLPT prior to student teaching were invited to participate in individual semi-structured interviews. There were 27 interviews conducted ($n=27$). The interviews were conducted face-to-face by the researchers. The researchers interviewed different participants separately. The interviews focused on pre-service teachers' perceptions of the test. The researchers offered each participant to conduct the interview in their language of preference. Each semi-structured interview lasted approximately 20 minutes. All interviews were audio-recorded and then transcribed by an assistant fluent

in Spanish and English. As both researchers were fluent in Spanish and English data was later analyzed in its original language.

BTLPT scores. The third source of data consisted of bilingual student teachers' BTLPT scores. At time these data were collected, scores were available for 24 of the participants ($n=24$). Overall test results and partial results per domain were collected from the college certification office.

Focus group. Before the end of Spring 2015, six participants were invited to participate in a focus group ($n=6$). The focus group was formed based on the results of the semi-structured interviews and student performance on the BTLPT. Participants were selected to represent the variations in the sample including students who had identified themselves as Spanish native speakers or English native speakers, who had passed and not passed the test, and who had completed most of their schooling in the U.S. and in Mexico. Guiding questions for the focus group were developed based on the results of the individual interviews and participant performance in the BTLPT. The focus group discussion was held in both English and Spanish and lasted approximately one hour, was audio-recorded, and then transcribed by an assistant fluent in English and Spanish. The transcription included students' responses verbatim, maintaining the language of choice, and a decision was made not to translate to minimize distortion. Focus group transcriptions were later read and analyzed by researchers who are fluent speakers of both languages.

Data Analysis

Participant scores on the BTLPT and Likert-type items in the questionnaire were analyzed using descriptive statistics. All other data sources were analyzed through multiple readings by both researchers in order to look for patterns and themes. Responses to open-ended items in the questionnaire as well as individual interviews and focus groups transcripts were preliminary coded and then grouped into themes (Miles & Huberman, 1994). Each researcher coded every source of data independently before comparing their analyses to reach consensus about patterns and themes.

Results

Spanish Language Proficiency

The participants in this study were Latina teacher candidates completing their bilingual teacher preparation program in a Hispanic serving institution. They were asked to complete a questionnaire where they reported their perceived language proficiency in English and Spanish as well as the experiences that led to develop such proficiencies.

As indicated in Table 1, most of the participating teacher candidates reported Spanish to be their first language (76%). Nevertheless, most participants considered their writing skills to be stronger in English (69%), while about half of them considered having about the same ability to engage in academic reading in both languages (48%).

Table 1

Perceived Language Skills

Language Skills	Spanish		English		Both	
	<i>n</i>	%	<i>N</i>	%	<i>n</i>	%
First language	22	76%	3	10%	4	14%
Dominant language	8	28%	8	28%	12	41%
Stronger writing skills	7	24%	20	69%	1	3%
Reading for classes	3	10%	12	41%	14	48%

Note. Higher percentage for each language skills is presented in boldface. $n=29$ When subtotals do not add to the total number of participants, it reflects a student skipping answering a survey question or choosing more than one option.

Similarly, reported use of Spanish at home was very common among most participants. As shown in Table 2, about half of the participants indicated using mostly Spanish to interact with their family members (48%). Most participants who lived with their parents spoke Spanish at home because their parents or close relatives did not speak English. In fact, 38% of teacher candidates reported in the questionnaire that neither one of their parents spoke English, 38% of teacher candidates reported that only one of their parents spoke English, while only 24% of participating teacher candidates reported that both of their parents spoke English. However, participants reported that English is generally spoken among the younger generations in their families. Because of that, most participants who were parents were trying to maintain the Spanish language with their children.

In addition, more than half of participants reported using English and Spanish when interacting with friends, as can be seen in Table 2, which is evidence of the high level of bilingualism in the community. A distinction was made between how English and Spanish were used. More than half of the participants reported alternating languages when interacting with different friends (59%). That is, they spoke English with some friends and Spanish with others. However, about one fourth of the participants reported mixing both languages with friends (24%). In other words, these teacher candidates had bilingual friends with whom they could use both languages in a single conversation. Many participants reported mixing English and Spanish regularly. Although some participants reported mixing English and Spanish with co-workers, Spanish use at work was not as common as Spanish use at home. Participants reported using Spanish at work when customers or co-workers were more fluent in Spanish or did not speak English.

Table 2

Reported Language Use

Context	Spanish		English		Both (mixing)		Both (alternating)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Family	14	48%	3	10%	6	21%	6	21%
Friends	1	3%	5	17%	7	24%	17	59%

Note. Higher percentage for each context is presented in boldface. *n*=29 When subtotals do not add to the total number of participants, it reflects a student skipping a survey question or choosing more than one option.

Teacher candidates' language proficiency in English and Spanish was greatly influenced, not only by the language spoken at home, which generally contributes to conversational proficiency, but also by their schooling experiences, which greatly impact academic language proficiency. The following quote from an interview clearly explains how Spanish dominant individuals become English dominant after being schooled predominantly in English:

Well... I was born in Mexico. Until I was about 7 or 8, we moved to over here, to the US. So, I do talk Spanish but I only talk it with my parents... So then in the schools it's English too... I think I've been losing some of the Spanish. Even though I do try to practice it, but like sometimes I would be talking to my parents in Spanish and I try like express myself and it's hard for me to find something to say in Spanish.

However, the majority of teacher candidates in this study were not schooled exclusively in English. In fact, 62% of these participants received formal instruction in Spanish at some point. Most of them received Spanish instruction in their early years of schooling (Pre-Kindergarten to 3rd grade), but others received Spanish instruction until 5th grade, and 3 received Spanish instruction from kindergarten to grade 12. Most importantly, from the 18 participants who had passed the BTLPT at the time the study was conducted, 12 (67%) had received at least some formal schooling in Mexico. Spanish instruction received in Mexico resulted in these participants feeling very comfortable with every aspect of the Spanish language.

Yo desde, bueno, desde kinder en México. Y después primaria estuve en el colegio en México también y secundaria también. Terminando secundaria me vine aquí y entre, iba a 10 pero me regresaron a 9. Pero yo venía con puro español. Yo aprendí a leer el español. Yo aprendí a escribir en español. Tomaba mis matemáticas, ciencias, todo en español.

[I was since, well since kinder in Mexico. And then elementary I was also in school in Mexico and also in middle school. When I finished middle school I came here and I should have come to 10th, but they put me back in 9th. But I came with only Spanish. I learned to read in Spanish. I learned to write in Spanish. I would take math, science, everything in Spanish.]

Four participants (22% of those who had passed the BTLPT at the time of the study), had received some Spanish or bilingual instruction in the United States in their elementary grades. They did not remember the quality of the instruction, although they knew they received some instruction in both languages. The remaining 2 participants who had passed the BTLPT at the time of the study (11%) only took Spanish in middle school and/or high school, which they described as ‘basic.’ Of those two participants, one did not pass the BTLPT on the first attempt.

On the other hand, of the six participants who had not passed the BTLPT at the time of the study, five (83%) had only received Spanish instruction at the secondary level. The sixth participant (17%) received Spanish instruction in Kindergarten and first grade, but was then submersed in all-English instruction. She described her schooling experiences in the questionnaire as follows:

My experience in my elementary years were [sic] very stressful due to the language barrier not permitting me to learn and enjoy school. In my kinder and 1st grades instruction was given to me in all Spanish, but when I passed to 2nd grade it was then when the ‘sink or float’ experience came to my life. Instruction was given to me only in English which then I had to repeat 2nd grade.

Participating candidates indicated their perceived level of social and academic proficiency in Spanish in the questionnaire. Table 3 displays their perceived proficiency levels (4 being very proficiency, 3 being proficient, 2 being somewhat proficient, and 1 being not proficient). As shown in Table 3, most participants perceived their social Spanish proficiency in three domains (listening, reading, and speaking) as very proficient (76%, 62%, and 55% respectively), and their ability to write for social purposes in Spanish as proficient (48%). While most participants also perceived their academic Spanish proficiency in listening and reading as very proficient (66% and 52% respectively), they perceived their ability to speak academically in Spanish as proficient (34%) and their ability to write academically in Spanish as somewhat proficient (41%).

Table 3

Perceived Social and Academic Spanish Proficiency

Language Domain	Social Proficiency Level				Academic Proficiency Level			
	4	3	2	1	4	3	2	1
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>
	%	%	%	%	%	%	%	%
Listening Comprehension	22	7			19	9	1	
	76%	24%			66%	31%	3%	
Reading Comprehension	18	11			15	12	2	
	62%	38%			52%	41%	6%	

Oral Expression	16	10	1	2	9	10	8	2
	55%	34%	3%	7%	31%	34%	28%	7%
Written Expression	9	14	6		6	11	12	
	31%	48%	20%		20%	38%	41%	

Note. Higher proficiency levels for each language domain are in boldface. Proficiency levels: 4= Very Proficient; 3= Proficient; 2= Somewhat Proficient; 1= Not Proficient

Performance on the BTLPT

At the time the study was conducted, BTLPT scores for 24 teacher candidates were available. Of those 24 bilingual teacher candidates, 18 of them had passed the BTLPT, resulting in a 75% passing rate. Six teacher candidates had failed the test, 5 of whom had taken it twice and one three times. Tables 4 and 5 display participants' average scores in each domain of the exam, as well as the range of scores (highest and lowest score) for students who passed or failed the test. We also included the average score as a percentage to allow for comparison across domains given that each domain has a different number of possible points. Among students who passed the test, the scores indicate higher performance in reading comprehension (85%), with listening comprehension and oral expression following closely with 84% and 82% respectively. The domain in which participants who passed the BTLPT showed lower performance was written expression (75%). Overall, the average score on the BTLPT was 259 points, 15.88 points above Texas average score of 243.12 points for 2014-2015. It is important to note that only a score of 240 is needed to pass the BTLPT.

Students who did not pass the test struggled in all domains but especially in oral expression and written expression (62% and 64% respectively). This finding raises questions supported by recent research regarding the impact of oral language skills for literacy acquisition (Kim, Al Otaiba, Wanzek, & Gaitli, 2015). The authors claim that oral language is important and correlates with the improvement of writing.

The BTLPT is designed so that each category includes a different number of items; therefore, comparing absolute scores would not render an accurate description of teacher candidates' struggles and would prevent the comparison between categories. Therefore, we decided to identify the percentage of students who answered correctly at least 75% of the items in each category. Setting this arbitrary measure of achievement helped us identify the domains in which our students required more support. As noted in Table 6, written expression was the domain in which fewer teacher candidates who passed the BTLPT got at least 75% of the items correct (44%). It was also the domain with the lowest average score as shown in Table 4.

Table 4

BTLPT Average Scores in Points and Percentage by Domain for Students with Passing Score.

Test Domain and Possible Points	Average score		Lowest score		Highest score	
	points	%	points	%	points	%
Listening comprehension Possible Points 32	27	84%	22	69%	31	97%
Reading comprehension Possible Points 40	34	85%	28	70%	38	95%
Oral expression Possible Points 45	37	82%	27	60%	42	93%
Written expression Possible Points 36	27	75%	18	50%	36	100%

Note. n= 18

Table 5

BTLPT Average Scores in Points and Percentage by Domain for students with failing score.

Test Domain and Possible Points	Average score		Lowest score		Highest score	
	points	%	points	%	points	%
Listening comprehension Possible Points 32	21	66%	17	53%	25	78%

Reading comprehension Possible Points 40	27	68%	22	55%	32	80%
Oral expression Possible Points 45	28	62%	21	47%	36	80%
Written expression Possible Points 36	23	64%	14	39%	28	78%

Note. n=6.

Table 6

Performance of Teacher Candidates Who Passed the BTLPT.

Domains and Tasks	75% of correct responses out of total possible points	Number of students with 75% or more correct (n=18)	Percentage of students with 75% or more correct
Listening Comprehension	24/32	15	83%
Reading Comprehension	30/40	17	94%
Oral Expression	34/45	14	77%
Simulated Conversation	7/9	14	78%
Questions & Answers (1 of 2)	7/9	9	50%
Questions & Answers (2 of 2)	7/9	17	94%
Oral Presentation	7/9	10	55.55%
Support a situation or opinion	7/9	14	78%

Written expression	27/36	8	44%
Response to letter, memo, email	9/12	9	50%
Lesson Plan	9/12	9	50%
Opinion or Position Essay	9/12	10	55.55%

Note. $n=18$ students who passed the test. Percentage of students with 75% or more correct for each domain are presented in boldface.

Reading comprehension (94%) and listening comprehension (83%) were the domains where the highest percent of teacher candidates got at least 75% of the items correct. It is evident, then, that these bilingual teacher candidates had higher receptive skills than productive skills in Spanish.

Table 7 presents the performance of teacher candidates who did not pass the BTLPT. As can be noted, these participants struggled in all domains but mostly in listening comprehension and oral expression, in which only 17% of candidates got at least 75% of the items correct. On the other hand, 33% of bilingual teacher candidates who did not pass the BTLPT got at least 75% of the items correct in both reading comprehension and written expression. An unexpected finding was that written expression was not the domain in which candidates who did not pass the BTLPT struggled more even when they perceived their writing skills were stronger in English than Spanish. Higher performance in reading and writing could be attributed to the transfer of their literacy skills from English to Spanish and possibly also to the bilingual education coursework taught in Spanish.

Table 7

Performance of Teacher Candidates Who Did Not Pass the BTLPT

Domains and Tasks	75% correct responses out of total possible points	Number of students with 75% or more correct ($n=6$)	Percentage of students with 75% or more correct	Minimum and maximum score
Listening Comprehension	24/32	1	17%	17 - 25
Reading Comprehension	30/40	2	33%	22 - 32

Oral Expression	34/45	1	17%	21 - 36
Simulated Conversation	7/9	1	17%	3 - 7.5
Questions & Answers (1 of 2)	7/9	1	17%	1.5 - 7.5
Questions & Answers (2 of 2)	7/9			1.5 - 6
Oral Presentation	7/9	2	33%	6 - 9
Support a situation or opinion	7/9	2	33%	4.5 - 6
Written expression	27/36	2	33%	14 - 28
Response to letter, memo, email	9/12	1	17%	4 - 12
Lesson Plan	9/12	2	33%	2 - 10
Opinion or Position Essay	9/12	4	67%	6 - 10

Note. $n=6$ students who did not pass the test. Percentage of students with 75% or more correct for each domain are presented in boldface.

Perceptions of the BTLPT

The results of the individual interviews showed that most participants who passed the BTLPT felt confident they would do well before taking the exam, and they felt prepared. This confidence was mainly due to being native speakers of Spanish. However, most participants reported feeling nervous at the time of the test, especially during the speaking portion, because they had to improvise, they had to record themselves, and it was timed. Many participants were caught by surprise with the timing for each section of the BTLPT. Moreover, they had not practiced answering questions in Spanish following the format of the exam. That is, they did not have opportunities to record themselves in timed situations or write spontaneously under time pressure about topics they had not researched and studied carefully, which indicates that test preparation regarding the format and testing conditions for the BTLPT was insufficient.

I felt... I was prepared when I took it, but... I wasn't expecting that format. So, it did take me by surprise... I thought they were going to give you a little bit more time when... we had the multiple choice, like, the reading, the passages. And then when they jumped into the lesson plan they just say, okay, "*Ahora vas a empezar la parte de la lección, beep.*" *O sea, es todo muy rápido y como que me tomó eso de sorpresa. Como que eso me asustó.* ["Now you will begin the lesson portion, beep." That is, everything is very quick, and like, that took me by surprise. Like that scared me.]

On the other hand, participants who passed the BTLPT indicated their bilingual teacher education coursework was helpful in preparing them for the content of the exam. They expressed they had positive experiences with courses taught in Spanish in their teacher preparation program. They distinguished between their bilingual education courses taught in Spanish, which they felt prepared them to write lesson plans and develop academic vocabulary in Spanish and their Spanish courses, which they felt helped them in grammar and *acentos* [Spanish accents].

Las clases de BLS son las que más me ayudaron porque nos pedían... ,hacer lesson plans en español. Entonces yo siento que eso ayuda mucho porque en la hora del examen te piden un lesson plan escrito en español... Me ayudó también otras que eran como español 1, español 2... porque era de puro lenguaje. Yo decía "ah está bien fácil," pero pues me ayudó con los acentos...

[The BLS classes are the ones that helped me the most because they would ask us... to write lesson plans in Spanish. That is why I feel that helps a lot because at the time of the exam they ask for a written lesson plan in Spanish... Others also helped me like Spanish 1 and Spanish 2... because it was all language. I used to say, "oh it's so easy," but it helped me with the accents...]

Although many of our teacher candidates performed satisfactorily on the writing portion of the BTLPT, they still found it challenging due to the time constraints and the pressures to think and write under stress with a limited amount of time to process the prompts and gather ideas.

Yo cuando quiero hacer un lesson plan lo trato de hacer lo más formal que puedo para escribir todo detallado, usar palabras mas elevadas, que suene profesional. Y había palabras que donde estaba escribiendo tan rápido se me olvidaba... Lo único, lo mas difícil se me hace que fue el essay. Y también porque, pues, te pones a pensar "¿Qué hago? ¿Qué hago?" Porque te dan un topic ellos para que tu lo sigas. Entonces no siempre uno entiende bien lo que te están, bueno al menos yo, no captaba bien lo que me estaban pidiendo. Y tienes que reaccionar rápido porque nada más tienes unos cuantos minutos para hacerlo.

[When I want to write a lesson plan I try to make it the most formal possible, to write everything in detail, using higher words that sound professional. And there were words that when I was writing so fast, I would forget... The only most difficult part, I think, was the essay. And also because you start thinking "What do I do? What do I do?" Because they give you a topic to follow. Then, not always is it understandable what they are, well, at least I did not understand well what they were asking. And you have to react quickly because you only have a few minutes to do it.]

Oral expression was another domain of the BTLPT that teacher candidates found challenging. The reasons given by participants for making this domain difficult were also the times allowed for each section of the test and having to produce ideas spontaneously.

La parte oral porque no sabes que te van a preguntar. Porque tienes una grabación, entonces te empiezan a preguntar cosas y tienes solo 30 segundos para pensar en tu respuesta. Entonces esa es la más... challenging.

[The oral part because you don't know what they are going to ask. Because you have a recording, and then they start asking things, and you only have 30 seconds to think of your response. Then that is the most...challenging.]

Bilingual teacher candidates who did not pass the BTLPT reported they lacked the necessary academic vocabulary to both understand and express themselves to a required level. They also found the format of the test difficult.

Hmm... I guess the most challenging was... some of the... vocabulary was pretty advanced...It was hard to comprehend some of the stuff. And also... the fact that you had to answer orally. It, like, threw me off.

Bilingual Teacher Candidates' Recommendations

During the individual interviews, participants were asked for recommendations on how the bilingual teacher preparation program could better prepare teacher candidates for the BTLPT. In general, participants asked for more challenging opportunities to practice oral expression and writing in academic Spanish.

I think to challenge us... when it comes to these bilingual courses to only allow the Spanish language to be used in the course... we need that push, for that, for that language. You know, to... just keep learning from... what we already know.

The most salient suggestion was to provide a class or tutoring sessions where students practice with the format of the exam.

Maybe have, like, a course where we review, like, those types of scenarios in class, you know, like having different type of dialogue.

I feel, like, if they offered some kind of tutoring, somewhere you can practice, like practice test, to prepare you...Like, time myself answering the questions or something like that.

Discussion

The results of this study showed that the participating bilingual teacher candidates used Spanish regularly at home and in the community. However, their schooling experiences varied greatly in the amount of Spanish or bilingual instruction they experienced before entering the bilingual teacher preparation program. Spanish proficiency levels were not assessed at admission in this bilingual teacher preparation program. However, results of this study showed that 89% of the bilingual teacher candidates who passed the BTLPT reported receiving Spanish or bilingual instruction in their elementary school years, while only one participant (17%) who did not pass the BTLPT reported receiving instruction in Spanish in Kindergarten and first grade followed by submersion in English instruction. These results suggest that bilingual teacher candidates benefit from extensive instruction in academic Spanish. As research has shown, academic language takes anywhere from 4 to 10 years to develop (Cummins, 1999; Genesse et al., 2005). Moreover, the time it takes to develop academic language proficiency in a second language is prolonged when students receive only monolingual instruction in the second language (Ovando & Combs, 2006). Because not all bilingual teacher candidates in this study experienced quality bilingual or Spanish

instruction before entering the teacher preparation program, the results of this study suggest the importance of identifying the language skills of bilingual teacher candidates to build on their strengths while addressing their needs (Aquino-Sterling, 2016; Guzmán Johannessen & Bustamante-López, 2002).

Results show that bilingual teacher candidates perceived their academic writing ability to be ‘somewhat proficient,’ compared to the rest of the language domains being ‘very proficient’ or ‘proficient.’ They also reported that they perceived the written expression and oral expression domains of the BTLPT to be the most challenging. These perceptions are congruent with their BTLPT scores, which showed that the domains with the lowest average scores were written expression and oral expression. These results suggest the importance of further understanding the interconnections between oral language and literacy skills. Recent research has provided evidence that “oral language (discourse level skills in particular) is increasingly more important to reading comprehension beyond the beginning phase of reading development” (Kim, Y. –S., 2016, n/p). Kim et al., (2015) also state the importance of oral language development for quality of writing and stress the relationship between reading and writing.

Participating teacher candidates acknowledged that their bilingual education coursework was helpful for the development of content knowledge and to some extent to strengthen their academic Spanish competencies. In fact, they were able to identify content and language skills acquired in their courses when taking the test. For instance, they found the opportunity to write lesson plans in Spanish in their coursework especially helpful. However, factors that seemed to interfere with their performance on the exam were timing, format, and testing conditions. At the time the study was conducted, the bilingual teacher preparation program did not integrate organized opportunities for teacher candidates to prepare for the BTLPT in test-like situations. Participating teacher candidates emphasized their lack of familiarity with the format of the test. They reported not having opportunities to practice recording themselves when answering to prompts before they took the BTLPT. In addition, they were not fully aware of the timing constraints of the exam, which provided limited time to prepare their oral and written responses. These results bring to light the issues surrounding teacher certification exams that assess language proficiency and raises questions about what this type of tests are really measuring, and whether they are effectively measuring the language competencies bilingual teachers need (Davis, n.d.; Guerrero, 1998; 2000; Guzmán Johannessen & Bustamante-López, 2002).

Limitations

Conducting this case study gave us the opportunity to explore in more depth the strengths and challenges of our bilingual teacher candidates. However, the small sample constitutes a limitation in this study. The sample for this case study consisted of 29 Latina bilingual teacher candidates completing their student teaching in the Spring 2015 semester. The majority of the participants reported that Spanish was their first language. They also reported high levels of bilingualism both for social and academic purposes. Results could be different with a sample that includes more English native speakers pursuing bilingual certification. In addition, the participants in this study were receiving their education in a Hispanic serving institution located in a highly bilingual community and received instruction in Spanish as part of their bilingual teacher preparation. Further research is required to examine the performance in and perceptions of the BTLPT of bilingual teacher candidates from different ethnic and linguistic backgrounds and from different cultural and educational contexts.

Conclusion

The results of this study shed light on the systemic changes that are needed across educational levels to implement effective bilingual programs that will contribute to the development of a pipeline of bilingual teachers with solid bilingual and biliterate competencies in both languages of instruction. That is, given the length of time that is required to develop academic language proficiency, effective bilingual programs are needed to provide bilingual students with the opportunity to develop academic proficiency in Spanish and equip them with the necessary bilingual and biliteracy skills to join the teaching profession as bilingual educators.

The Spanish proficiency of bilingual teachers is key to their success in bilingual classrooms and to the success of their students (Guerrero, 2003; Guzmán Johannessen & Bustamante-López, 2002). Historically, teachers with inadequate levels of Spanish proficiency have been placed in bilingual classrooms (Aquino-Sterling, 2016; Blum Martinez & Baker, 2010). Therefore, raising the standards required for bilingual teacher certification is a step forward in addressing the need to place qualified teachers in bilingual classrooms who have demonstrated academic Spanish proficiency beyond oral proficiency, a need well documented in the literature (Guerrero, 1998, 2000, 2003; Guzmán Johannessen & Bustamante-López, 2002).

Raising the bar for bilingual teacher certification is not enough without the proper preparation of bilingual teacher candidates. Therefore, it is essential that bilingual teacher preparation programs focus specifically on addressing the academic language development needs of candidates in both of the languages of instruction (Guerrero, 1998; 2003; Sutterby et al., 2005). Based on the results of this study, we make the following recommendations for bilingual teacher preparation programs:

- Assess Spanish language proficiency at admission to more effectively identify the supports necessary for bilingual teacher candidates to continue to develop their academic language proficiency in Spanish both in and outside of coursework.
- Leverage the strengths and target the specific needs of bilingual teacher candidates taking into consideration their schooling experiences in Spanish, or lack thereof.
- Challenge bilingual teacher candidates to produce academic Spanish both orally and in writing to approximate the linguistic demands they will face in the BTLPT as well as in their future bilingual classrooms.
- Couple coursework delivered in Spanish with professional development opportunities about the type and format of the BTLPT to minimize the influence of factors other than language proficiency on their test performance.

We contend that further research is necessary to fully understand the complexity of factors that impact the preparation of bilingual teachers. It is our goal that a continued analysis of and reflection on the factors, experiences, and challenges faced by bilingual teacher candidates to achieve their bilingual teaching certification will help to better support them in their journey to make an important contribution to the ever-growing population of emergent bilingual students in K-12 schools.

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19 Texas Administrative Code § 89.1201

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**(In)Compatibility between Educators' Linguistic Ideologies and its Influence in
the Instruction of Latina/o Students in a Bilingual Program**

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Abstract

This is a qualitative research case study of educators' ideologies and their influence in an educational program for English Learners (EL) at an elementary K-5 public school in the Midwest. The purpose of the study was to explore the linguistic ideologies of school administrators and teachers working with EL students, and to analyze how these linguistic ideologies facilitate or hinder the design and implementation of the program for ELs. The findings suggest that multiple and juxtaposed linguistic ideologies of practice were embodied in this program, and also fueled power struggles among different stakeholders. These power struggles were centered on differential status of teachers and lack of adequate professional collaboration. This article also covers implications for teacher training and for future research.

Educators' Conflicting Linguistic Ideologies Misshape an Educational Program for English Learners

Educators and the general public typically do not understand that the solutions to many of the educational challenges facing subordinated students are not purely technical or methodological in nature, but are instead rooted in typically unacknowledged discriminatory ideologies and practices (Bartolomé, 2008, p. ix)

As referred to in the epigraph by Lilia Bartolomé, educators' ideologies are at the root of school programs for minority students, including Latina/o English Learners (EL). Linguistic ideologies affect how school administrators and teachers work with EL students. Educators may overlook, or be unaware of, such ideologies and how they affect EL children's learning. In light of this, the purpose of this research study is two-fold: 1) to explore the linguistic ideologies of administrators and teachers working with EL students at a Midwestern urban elementary school, 2) to analyze how these linguistic ideologies facilitate or hinder the design and implementation of an educational program for EL students (EPEL) at this school.

The issues addressed in this study are not only relevant for Latina/o EL children at a particular institution, but for the growing number of EL students in many schools across the nation. According to the most recent report of the U. S. National Center for Education Statistics, the percentage of ELs at K-12 public schools increased from 8.8% to 9.3% in the last decade (Kena et. al., 2016). The report also indicates that 9.3% constitutes 4.5 million of EL children. In addition, according to this report EL students constitute 14.1% or more of the school population in large cities, such as in metropolitan areas in the District of Columbia, Texas, New Mexico, Nevada, Illinois, Colorado, California, and Alaska (Kena et. al., 2016). These statistics raise concerns, since historically schools have not appropriately responded to the needs of EL students (e.g., *Lau v. Nichols*, 1974; *Castañeda v. Pickard*, 1981; *Gómez v. ISBE*, 1987). The marginalization of EL children has been perpetuated in society through ideologically-laden practices taking place in the daily life of schools (Darder 2011; 2012). Thus, in the words of Bartolomé (2008) we need to "see through the disorienting fog of ideology and unmask its oppressive elements" (p. xxviii) to work towards more just schools for all children.

State Laws Regulating the Education of EL Students

Federal and state laws frame the design and implementation of school programs for EL children. In this section, I summarize legal requirements for the education of ELs in the state where the study took place. According to Illinois state law, which at the time responded to the No Child Left Behind federal act, students identified as Limited English Proficient (or LEP, terms used in the law) could be enrolled in two school program options. These options were a Transitional Bilingual Education (TBE) program and a Transitional Program of Instruction (TPI). These programs were intended to quickly meet the needs of EL children, and to accelerate their transfer to the regular school curriculum (www.isbe.net/bilingual/htmls/tbe_tpi.htm).

Illinois law established that if a school has 20 ELs from the same language group a TBE is required. EL students do not necessarily have to be in the same grade level. Although this is the preferred option, the state permits that ELs of different grade levels be combined in a TBE, as long as students receive instruction to state level of educational attainment. A TBE must include content-area instruction in English (L2) and in students' native language (L1), as well as instruction in history and culture of the native country or regional area of EL students' parents along with US history and culture. TBE programs last three years maximum according to state law. Teachers in TBE programs must be certified in bilingual education.

In addition, Illinois law stipulated that schools provide a TPI program when there were 19 or fewer EL students from any single non-English language. A TPI must include instruction in English as a Second Language (ESL), and in history and culture of the United States. A TPI usually functions as a pull-out format. Teachers in TPI programs must be ESL certified. These laws are pertinent to the study because the number of EL students with the same L1 (Spanish) surpassed 20 in each grade level K-5, at the Midwestern school where the study took place. Yet, the school did not implement a late-exit (Ramírez, 1992), or long term, or maintenance bilingual education program. These issues will be explained in the findings section.

Theoretical Framework

The theoretical framework of this study is informed by critical literacy and linguistic ideologies. Regarding critical literacy theory, Freire (1970, 1985) asserted that literacy teaching is always political, whether it is domesticating (banking education) or liberating (liberatory education). Freire and Macedo (1987) added that literacy learning is about “reading the world always precedes reading the word, and reading the word implies continually reading the world” (p. 35). Indeed, language and literacy for EL students cannot be understood apart from classrooms, programs, and school contexts, as well as the societal and political conflicts in which programmatic and educational policy decisions take place (Darder, 2012; McLaren, 2016). In this manner, critical literacy brings arguments about ideologies of language (Martínez-Roldán, 2005) (or linguistic ideologies, which is the term I use in this study). The field of linguistic ideologies (LI) developed from anthropological linguistic research (Gal, 1998; Kroskrity, 2016; Woolard, 1998), and has been used as an analytical frame in social science research including education (e.g., Bartolomé, 2008; Darder, Torres, & Baltodano, 2003; Henderson & Palmer, 2015; Mariou, 2017). In the study, the term LI is used encompassing different aspects of this construct, and for that reason, I use Kroskrity's (2010) definition of linguistic ideologies as “beliefs, feelings, and conceptions about language structure and use which often index the political economic interests of individual speakers, ethnic and other interest groups.... These conceptions, whether explicitly articulated or embodied in communicative practice represent attempts to rationalize language usage” (p. 192). This definition points to three layers of LI that

are pertinent to understanding the design and implementation of the Midwestern school's EPEL in this study.

The first layer is that LI represent the perceptions of language and discourse that support the interests of different sociocultural groups. For example, in the study there is the sociocultural group of EL Latina/o low-income Spanish-native speaking students and their families, and the larger sociocultural group of White middle-class English-native speaking school administrators, teachers, students and families. According to the frame of LI, language becomes the site to promote, protect, and legitimize sociocultural groups' economic and political interests (Kroskrity, 2016). These interests are supported in notions of truth, morality, and worth, as evidenced, for example, in the privileged discourse of standard languages or in a country's official language policy (Cummins, 2016; Flores, 2013). Also, the power of dominant LI resides in their ability to constitute social positionality. That is, to valorize a social group and its language practices over those of other groups. This ideological power justifies the appropriation of some forms of action and the exclusion of others (Gal, 2016).

The second layer of LI is that they are multiple and in contestation. The multiplicity of language perspectives in the members of sociocultural groups, have the potential to produce conflict and contestation. In fact, LI create alternate realities (Gal, 1998). This view on the contention of LI is not a systemic reproduction of ideological domination per se (Bourdieu, 1991; Willis, 1977). But it is an intricate juxtaposition of divergent ideologies (Kroskrity, 2016). Also, the notion of juxtaposed ideologies debunks the myth of a unique and monolithic dominant ideology. The LI of elite or powerful groups are not homogenous. Certainly, Gal (1998) argues that "hegemony is never absolute nor total. Rather it is a process, constantly being made, partial, productive of contradictory consciousness..., therefore fragile, unstable, vulnerable to the making of counter-hegemonies" (p. 321). Thus, the notion of juxtaposed ideologies also undermines a simplified view of a dichotomy of rival ideologies, dominant and subordinate. Finally, multiple LI, not only across but also *within* sociocultural groups, can result in inconsistency, confusion, and contradiction (Kroskrity, 2016).

The third layer of LI is that group members have different degrees of awareness and expression of ideologies. LI are explicit in educational policy. Other local LI are not explicit and must be read from actual usage; they are implicit in practice and their users are probably oblivious of their embodiment (Kroskrity, 2016). Indeed, when ideological practices have been naturalized, or relatively unchallenged, the level of awareness appears as minimal (Bartolomé, 2008; Halcón, 2001). When LI have been naturalized, they are unconsciously internalized and manifested at the individual level. Darder, Torres, and Baltodano (2003) explained that ideology must "be understood as existing at the deep, embedded psychological structures of the personality" (p. 13) and that LI "manifests itself in the inner histories and experiences that give rise to questions of subjectivity as they are constructed by individual needs, drives, and passions (p. 13). Finally, varying degrees of awareness and expression of local LI are discernible from the relationships among macro and micro levels of social phenomena (Darder, 2012; Hill, 2001; Kroskrity, 2016).

Literature Review

Research using the construct of LI to study educational and schooling experiences of EL students has had different foci. Studies have focused on children's language choice (Mariou, 2017; Volk & Angelova, 2007), gender and identity development (Hruska, 2004; Martínez-Roldán, 2005), parents' ideologies (Farr & Barajas, 2005; Relaño-Pastor, 2008) bilingualism and ELs instruction (Alfaro & Bartolomé, 2017; Saldaña & Mendez-Negrete, 2005), and teacher ideology (Bartolomé, 2004; 2010; Cadiero-Kaplan, 2008; Henderson & Palmer, 2015; Hruska, 2000; Martínez, 2013; Palmer, 2011).

However, no study has analyzed how educators' ideological compatibility and incompatibility permeates the design and ongoing implementation of educational programs for Latina/o EL students in upper elementary grades. The study, then, fills in this research gap and addresses relevant issues impacting the education of EL children, as cultural and linguistic minoritized and marginalized students in American schools.

Method

Research Design

The research design was a qualitative case study. Qualitative research describes and analyzes naturally occurring phenomena, and unlike quantitative research, it does not try to control or predict variables (Merriam & Tisdell, 2015). Hence, a valid reason to conduct qualitative research concerns the characteristics of the phenomenon itself under investigation (Mertens, 2015). The fundamental nature of qualitative research matches the type of phenomenon, and research purpose and focus guiding this investigation. Case study methodology was also appropriate to investigate educators' linguistic ideologies influencing a school EPEL, from the participants' perspectives, and how they create and assign meaning to their shared experiences (Dyson & Genishi, 2005).

Research Site

The research site alluded to, and data reported, in this study were part of a larger ethnographic research project (Ricklefs, 2012). The research site was Jones Elementary (pseudonym), a K-5 grade school, located in an urban, and predominantly White, community in Illinois. At the time of the study, Jones school had 400 students which included a large group (41.4 %) of ethnic minorities. In addition, Jones Elementary was the school in the district with the largest percentage (39%) of ELs who were Spanish-native speakers.

Participants

The participants in this study were six teachers and two school and district administrators. Specifically, the participants were the ESL teacher, Spanish language teacher, homeroom teachers in third and fourth grades, art and Title I teachers, school principal, and district coordinator of bilingual education (BE) programs. See names (all proper nouns used in the study are pseudonyms for confidentiality) and characteristics of participants in Table 1 in Appendix.

Data Collection Procedures

Data collection procedures encompassed different types of data and from various sources to ensure a comprehensive and trustworthy data set. Data collection procedures included interviews, observations, and documents. Interviews were semi-structured, an initial and a final interview with all participants: Six teachers and the principal of Jones school, and the BE district coordinator. The interviews were audio-recorded and took place based on participants' availability lasting 30-60 minutes. In addition, several weekly short informal interviews took place with the school ESL teacher and Spanish language teacher. These informal conversations were recorded with notes as well. The observations were conducted in the ESL classroom, and in the English language arts class of grades three to five, in the Spanish language classroom, and in school wide events. Observations lasted 45-90 minutes, depending on the class being observed. These were weekly observations that took place during one semester. Observations in classrooms

were documented with field notes, and participants' voices were recorded with audio-tape devices. The documents used in this study included the school English curriculum, data from the district including students' test scores, and information from the state board of education website.

Data Analysis Procedures

Data analysis procedures comprised open coding and focused coding (Emerson, Fretz, & Shaw, 2011) and were based on discourse analysis. First, open coding was an initial sorting of data, done by examining field notes of the observations and transcribed scripts of the interviews, trying to identify major patterns of data. Next, analytic or focused coding was done as a fine-grained analysis of the notes and initial sorting of patterns and codes. The categories that developed from this detailed analysis were further developed into recurring themes. The themes and subthemes that emerged from the data helped me to understand the workings of the school's EPEL, according to all participants' voices and multiple perspectives. Therefore, since this was a qualitative research case study, these data analysis procedures facilitated an understanding of how participants made meaning of their experiences in particular contexts (Dyson & Genishi, 2005).

Findings

The findings of the study evidence that the linguistic ideologies (LI) of the district BE coordinator, and of school principal and teachers, were multiple and in contestation. The findings demonstrate that these LI were embodied in the school EPEL, by enabling opportunities and constraints in this program design and implementation. The findings also showed that teachers' ideological compatibility or incompatibility with the principal's linguistic ideologies, ignited power struggles. These struggles were centered on teachers' differential status at the school and lack of professional collaboration (see Figure 1 in Appendix). I proceed to examine first the LI of school principal and district coordinator of bilingual education (BE).

School and District Administrators' Linguistic Ideologies

The linguistic ideologies held by the school principal affected the design of Jones School's EPEL making it a distorted mixture of different modalities. Also, each specific instructional modality, classroom location, EL students, and teachers working with ELs, varied while being influenced by the principal's competing linguistic ideologies on L2 learning and teaching, L2 literacy development, native language instruction, and integration.

First of all, Mr. Parker the school principal described the school EPEL in the following manner, "We have self-contained Spanish for primary kids up to 2nd grade, and at the intermediate they have ESL as warranted pull-out or within their grade level, and separate native language instruction pull-out for that". When I asked the principal to explain what he meant by "self-contained Spanish" he replied, "we have the Spanish bilingual program for [city] elementary schools... and provide native language instruction in reading and language arts. We have our reading series in both English and Spanish." The data showed that the EL students in Kindergarten, first and second grade were taught in an early-exit TBE model (Ramírez,

1992). These ELs received content instruction in Spanish (L1) as it was gradually reduced up to second grade, and correspondingly English instruction was increased.

However, the number of English Learner Spanish-native speakers (ELSPAN) in grades three, four, and five was greater than 20 students per grade level, the minimum number required by the state for schools to provide them with bilingual education. The data demonstrated that numbers of ELSPAN were 21 in third grade, 29 in fourth grade, and 28 in fifth grade. Thus, these ELSPAN could have been provided a late-exit bilingual education (Ramírez, 1992) program, based on state regulations (www.isbe.net/bilingual/htmls/tbe_tpi.htm). Instead, as the principal stated, older ELs received “ESL instruction as warranted.” Based on classroom observations and teachers interviews, data showed that ELs in third and fourth grade received all content-area instruction in English with their homeroom teachers. Mr. Parker explained that these ELs were not in bilingual classrooms because their homeroom teachers were “willing to try out sheltered instruction.” However, these teachers had not received professional development on sheltered instruction for ELs, nor were they TESOL or ESL certified. In short, Mr. Parker confused ESL instruction and sheltered instruction, and ignored the importance of, and state requirement of, having trained and certified teachers in charge of these EL students’ instruction, and the requirement to providing these ELSPAN children with bilingual education as well.

The findings showed that ELSPAN students in grades three and four had a separate optional Spanish language arts class, 60 minutes every day. These ELs did not receive content-area instruction in Spanish. Mr. Parker was also confused about native language instruction, and again overlooked state requirements for the education of all ELSPAN children at his school.

Also, data findings showed that ELs in fifth grade daily received science-based sheltered English in a 90- minute class, and an optional 60-minute Spanish language arts class. They also received English instruction in the rest of content-area classes (math, social studies, language arts), and in specials (music, art). As we can see, the EPEL designed by the principal provided some native language instruction but separated it from a bilingual model. When I asked him about this situation, Mr. Parker said that he wanted to create a good foundation for English academic skills. Mr. Parker asserted that “having strong academic skills in the native language in our K-2 grades will facilitate those skills in English, in the long run we provide them with a much firmer foundation” Certainly, research shows that strong literacy skills in the first language aid in second language literacy learning (e.g., August & Shanahan, 2006; García, 2003; Green, 1998; Ramírez, Yuen, Ramey, Pasta, & Billings, 1991). Research also shows, though, that ELs’ academic skills do not stop developing in second grade. Academic language skills continue developing throughout several years (Cummins, 1979; Collier & Thomas, 2009; 2010). However, Mr. Parker’s LI focused on language support during early school years, since he implemented a K-2 TBE program at his school. Mr. Parker had limited understanding of, and contradictory linguistic ideologies, about second language (L2) learning and literacy.

This understanding seemed influenced by the principal’s past teaching experience with EL students. Mr. Parker commented that during his student-teaching in a fifth grade classroom, he happened to teach “ESL students” including a girl from Denmark who progressed quite fast in her English reading. He said, “I had one student from Denmark comes speaking no English in September and was in a regular English group by January. She was a good student in Denmark, knew how to read, you know in Danish, used those same skills to acquire English reading, and it was just a matter of vocabulary at that point. So, it transferred.”

Again, Mr. Parker’s comment alludes to conflicting ideologies about second language literacy. On one hand, he believed in the benefits of native language instruction and linguistic transfer to aide in the development of second language literacy, which align with research in bilingual education (August &

Shanahan, 2006; Jiménez, García, & Pearson, 1995; García, 2003; Green, 1998; Ramírez, Yuen, Ramey, Pasta, & Billings, 1991). On the other hand, Mr. Parker oversimplified the complexity of cross-linguistic transfer, and of L2 literacy teaching and learning. He believed that ELs can learn to read in English in a short period of time by sole virtue of their good reading skills in their native language, and that L2 literacy merely requires expanding on English vocabulary. Such linguistic ideologies resonate with myths or misconceptions about bilingual education (Crawford, 1989; 1992; Samway & McKeon, 2007; Soto, 1997; Zentella 1997). One of these misconceptions is that once ELs “are able to speak reasonably fluently, their problems are likely to be over at school” (Samway & McKeon, 2007, p. 30). Another misconception is that EL “children who come from literate homes are bound to do well in literacy” (Samway & McKeon, 2007, p. 60). However, research on second language learning shows that even though basic social skills in English can be achieved in about two to three years, the ability to use English for academic purposes, and with success, takes much longer to develop (Cummins, 1979). Also, children without prior schooling and without native language (L1) support may take seven to ten years to develop academic skills (Collier & Thomas, 2009, 2010).

Additionally, Mr. Parker’s design of the school’s EPEL was influenced by linguistic ideologies of integration. When I asked him to further explain his EPEL design, he stated, “We could certainly have self-contained classes up through fifth grade, but that has ramifications for other things. Well, it’s not only costly, but it’s not that necessary, you know, you lose that school wide sense of community.”

Once again, Mr. Parker’s comment alludes to misconceptions about bilingual education. On one hand, his view of bilingual education for older EL students seems “costly” which alludes to the myth that “bilingual education is a luxury we cannot afford” (Samway & McKeon, 2007, p. 13). Mr. Parker also wanted to preserve the “school wide sense of community” as if having bilingual education for ELs in grades three to five would disrupt it. When I asked why these ELs were taught all content-area classes in English with their homeroom (untrained) teachers, he replied,

We have competing interests in that, you know, a firm grounding in the first language helps students acquire the second language. However, we are also a school, and we are not looking to create a school within the school, and have the bilingual students essentially separated from the rest of the population. So, we feel an important component is at the intermediate level, like in third, fourth, and fifth grade, is to have those students mixing with the English peers, integrating as much as possible, and that will prepare them for what happens in the middle school and the high school where the bilingual programs are more limited.

As we can see, Mr. Parker struggled with what he considered “competing interests.” He allowed bilingual education for ELs in K-2 in order to provide them with a strong L1 foundation. But, he did not see the possibility, and advantages, of continuing with bilingual education for ELs in grades three to five, because this would not integrate them. He did not want to “create a school within a school” So, integration was oversimplified as, and confused with, segregation. Again, his beliefs resonate with misconceptions of bilingual education. Samway and McKeon (2007) explain that regarding the integration of EL children “educators become confused by what constitutes segregation. The segregation of African American students in the U. S. was intended to keep African American students separate from White students. It was not a carefully designed program to enhance the learning of African Americans” (p. 136).

In order to better understand what was happening at the school, I interviewed several teachers. One of them, Mrs. Williams, the school ESL teacher, affirmed that at Jones school “just throwing the Spanish

speakers in with the English speakers is not integrating, and what happens, I think, is the Spanish speakers don't learn as much as they could". Also, Mrs. Davis asserted that "at Jones there's so much emphasis on integration. So, if the Spanish speakers are not integrated with the English speakers all the time, they are not integrated" and then she said, "just having kids together does not integrate them." Mrs. Davis added, "I told Parker "this is not right" but he ignored me." Even though Mrs. Davis' views matched the state regulations, she did not insist on them because Mr. Parker's ideologies were in conflict with hers. I will further discuss these issues in the following sections.

Teachers' Linguistic Ideologies

The EPEL designed by the school principal, which was influenced by underlying and juxtaposed LI, fueled contradictory ideologies and power struggles between teachers. These struggles focused on teachers' differential status at the school and lack of professional collaboration. Regarding the differential status of teachers, the third and fourth grade teachers, Mrs. Brown and Mrs. Smith respectively, who agreed with the principal's EPEL design, acquired a symbolic higher status at the school. These teachers' compatibility of ideologies with the principal's linguistic ideologies, afforded them with more power over other stakeholders, including the district coordinator of bilingual education. Instead, Mrs. Williams, the ESL teacher, who overtly disagreed with the principal's EPEL, was forced into a symbolic lower status at the school. The ESL teacher incompatibility of ideologies with the principal's linguistic ideologies situated her in a powerless position among her colleagues.

The data showed that Mrs. Brown and Mrs. Smith were free (without guidance from the BE district coordinator) to constantly change their instruction with ELs, several times in the same year. Initially, based on Mr. Parker's school EPEL design, the plan was Mrs. Brown and Mrs. Smith would implement sheltered instruction in their classrooms. Mrs. Williams, disagreed with this plan. She believed that this was not the best arrangement to meet the needs of EL students. She complained about it to Mr. Parker, who ignored her. Mrs. Williams explained, "He won't listen, he doesn't listen when I talk to him, he interrupts and then he shuts me up "I gotta go now."" Mrs. Williams added that this plan was a "done deal" between the principal and Mrs. Brown and Mrs. Smith, as agreed late in summer prior to the beginning of the school year. This information was confirmed by Mrs. David, the BE district coordinator. Mrs. David also commented that she was upset for "not having been consulted about it" but felt like her "hands were tied up, since Parker was responsible for evaluating his teachers".

Later, after some experimenting with their own assumed sheltered instruction, Mrs. Brown and Mrs. Smith made changes to send to the ESL classroom a few EL students who were newcomers. These ELs were one student from third grade, and two students from the fourth grade. Mrs. Williams believed that "they did not know what to do with them." Facing this unexpected situation, Mrs. Williams felt like being put in a lower remedial status. Mrs. Williams elucidated, "I felt like I was a remedial teacher because I was meeting with one kid at a time in here, and we actually gave up that model, many years ago." This situation made her feel like she was tutoring one-on-one EL children. She added, "they decided that without me, I had no input on that. Here I come and, uh, I find the kids in my classroom, first thing in the morning! They [these teachers] walked all over me!" Mrs. Williams felt disrespected and powerless.

Sometime later, in October of that year, Mrs. Smith made again a major change in her instruction with ELs. She decided to share all her students, EL and non-EL, with the ESL teacher. She split her class in four groups: English native speaking students were divided in two halves, and the EL Spanish native speakers were divided in two halves. Mrs. Smith took one half of each group of students and asked Mrs.

Williams to work with the other half of each group of students, pulling them out to the ESL classroom. Mrs. Williams expressed her disagreement, but it was ignored again. When I interviewed Mrs. Smith and asked about this type of instruction, she believed that she “did well” forming the four groups and splitting them with Mrs. Williams, and that “the students were integrated learning together”. Also, she added that “Mrs. Williams couldn’t do it. She couldn’t integrate students that way” and that “that was her problem.” Interestingly, the parents of all these students (EL and English native speakers) were not informed or requested their consent for this type of split-groups instruction. The data showed that some parents of English-native speakers found that their children were going to the ESL classroom along with some EL peers to be taught by Mrs. Williams. These parents were upset and complained to Mrs. Smith. Because of that, another change was made in the instruction of the ELs in fourth grade. Mrs. Williams recalled that before the Christmas break, Mrs. Smith “agreed to let me have only the ESL students”. Mrs. Williams was to pull-out these ELs during the English language arts class time, for 50 minutes daily, until the end of the school year.

As we can see, the disparate status of teachers at Jones school permitted several drastic and continuous changes in the instruction of older EL students during the same school year. This situation seemed to have affected their learning of English, since test scores showed that ELs in grades three and four did not perform at expected levels of English proficiency, as measured by the state ACCESS test. The average score of third grade EL students in this test was 3.1 overall composite. The average score of fourth grade EL students in this test was 2.8 overall composite. The test scores ranged from 1.0 to 6.0. The minimum composite score to exit students from language support services, and to be considered English proficient, was 4.0 at the time of the study. Currently, the state requires a minimum 4.8 overall composite score for ELs to exit language support programs and to be English proficient (<https://www.isbe.net/Pages/EL2017-2018AccessforELL.aspx>). These issues will be addressed in the discussion and implication sections. In short, the teaching of ELs in grades 3-4 by teachers who did not have proper training, was influenced by underlying misconceptions on what is sheltered instruction, second language (L2) learning and teaching, L2 literacy, native language (L1) instruction, and about the particular needs of EL children. These teachers, Mrs. Brown and Mrs. Smith, possibly unaware of such linguistic ideologies, made radical changes in instruction at the expense of the EL students they wanted to integrate and help. Being favored by the school principal in their integration efforts (since these teachers’ ideologies were compatible with the principal’s ideologies), Mrs. Brown and Mrs. Smith acquired a higher status at the school. This situation empowered Mrs. Smith to make several changes in her work with ELs during a short period of time, without consulting with the BE district coordinator, and disregarding the school ESL teacher. Moreover, the ESL teacher often complained about the school’s EPEL design and volatility. She did not agree with its apparent focus on integration either. Mrs. Williams’ ideological incompatibility with the principal, made her feel underrated and ignored. She felt like having a lower and powerless status at the school.

Interestingly, even though Mrs. Williams the ESL teacher was White, middle-class, and monolingual like Mrs. Brown and Mrs. Smith, she was not perceived as their equal (nor did she behave like them). She was perceived as “the Other” along with the ELSPAN students she advocated for. Also, Mrs. Williams had worked at Jones school less time (seven years) than Mrs. Brown (10 years) and Mrs. Smith (13 years). In fact, these two teachers had seniority over several educators, including the school principal and BE district coordinator. Their seniority status afforded them with more power and privilege too.

Along with the ideological incompatibility between the school principal and the BE district coordinator, and between the ESL teacher and the classroom teachers in grades three and four, previously explained, the principal’s linguistic ideologies, reinforced lack of adequate collaboration between other

teachers at Jones elementary school. Specifically, support and specials teachers (e.g. art, Title I, and Spanish language teachers) had conflicting views on integration which in turn affected their work with ELSPAN students, and hindered teacher collaboration as well.

First of all, regarding issues of integration and how it was misinterpreted and implemented at Jones school, Mrs. Davis commented that according to the state ELs “should get appropriate instruction and they should be integrated for fine arts and stuff like that, but the teacher didn’t want to do that, and Parker didn’t make her, since that was not how he read the law.” The data evidenced that the state board of education in terms of “program integration” established that in “courses of subjects in which language is not essential to an understanding of the subject matter, including, but not necessarily limited to, art, music, and physical education, students of limited English proficiency shall participate fully with their English-speaking classmates” (www.isbe.net/bilingual/htmls.tbe_tpi.htm). Fine arts is indeed a class that involves sensory motor and hands on activities that would facilitate the participation of EL students in joint activities with their English-speaking peers; thus, integration could easily occur during this class. But the apparent reluctance, from the art teacher, to integrate EL students, profited Mrs. Brown and Mrs. Smith who wanted to try out their own sheltered instruction. Mrs. Davis commented that at Jones elementary it was expected that EL students would be “integrated throughout the day, but the art teacher didn’t want to be the only one to integrate.” From the data, I found that Ms. Johnson the art teacher, was actually confused about integration. She had seen EL students in K-2 being taught in self-contained classrooms. Ms. Johnson expressed, “I saw young ESL kids together, uh, you know, and I wondered why they the other [older] ESL kids were mixed with the non ESL kids in my class?” As we can see, the school EPEL with its mixture of different modalities was unclear to this teacher. She also felt like having a lower status at the school and reacted against that. Ms. Johnson continued, “Besides, I go sometimes to the classrooms, uh, I go to help Mr. Mueller [fifth grade teacher] in projects for language arts, and to give ideas to make the projects more creative, and the ESL kids are there.” I did confirm this situation during my observations in the school. I observed Ms. Johnson going to the fifth grade on different occasions, and also to grades three and four, where Mrs. Brown and Mrs. Smith were doing their own assumed sheltered instruction, as explained in previous sections. Hence, the art teacher’s ideology was to show cooperation with the school principal, and only with the teachers that were in agreement with him.

Moreover, lack of adequate collaboration occurred between the Spanish language teacher and Title I teacher. This situation negatively affected the Spanish (L1) class for ELSPAN students. During my classroom observations, I noticed that several of these EL students were pulled-out from Spanish language arts class, by Mrs. Taylor the Title I teacher. When I spoke with Mrs. Perez, the Spanish teacher, she explained, “she [Mrs. Taylor] said that this was the only time she was available to work with my ESL students”. Then I asked if they tried to work out something else. Mrs. Perez added, “I had no input on that; she came with her schedule already done, and I didn’t want the kids to miss getting more help in English.” Mrs. Perez felt powerless in this situation, and even if in the wrong manner, she tried to help the EL students. Mrs. Perez was also unsure of her role, and of the importance of native language instruction for ELSPAN students. Another factor that may have influenced Mrs. Perez’s lack of assertiveness was that Mrs. Taylor had seniority over her. Mrs. Taylor had been working at Jones school for 11 years, whereas Mrs. Perez had only been three years at the school.

Furthermore, limited teacher collaboration was evidenced when school activities promoting integration and a sense of community were only supported by a few people working directly with EL students. The Spanish teacher recalled that she and a few others organized the school multicultural night. These were K-2 grade bilingual teachers, ESL teacher, and social worker (a native English speaker who was married to a Mexican American). As I attended this event, I did observe that a lot of teachers were

absent and most participants were Latina/o EL children and family members. Ironically, Mr. Parker's attempt to keep the school's "wide sense of community" was not evident in the very activities that were supposed to accomplish it, and these activities were not supported by the majority (White, middle-class, English native speakers) of the school educators, students and parents population.

Discussion

The educational program for English Learners (EPEL) at Jones Elementary School was influenced by multiple linguistic ideologies (LI). The study, consistent with literature in the field (Kroskrity, 2010, 2016), showed that ideologies are multiple, and are often in conflict. The study also evidenced that the EPEL was influenced by juxtaposed ideologies, not in a direct cause-effect relationship, but by indirectly enabling opportunities and constraints in the instruction of the EL students at the school (see Figure 1 in Appendix). The school EPEL included opportunities for native language instruction (Spanish language arts pull-out for EL students in third, fourth, and fifth grade), and some specialized English instruction (ESL pull-out for EL students in fifth grade). Another opportunity of the EPEL was that K-2 ELs were in self-contained bilingual education classrooms. In this manner, Jones school partially followed state law with its K-2 TBE. However, the sheltered instruction assumed to be happening for English Learners who were Spanish native speakers (ELSPAN) in grades three and four, with their untrained classroom teachers, who wanted to "try out" sheltered instruction, and without content-area instruction in these ELSPAN native language, placed this school program out of compliance. As we can see, the interests of different sociocultural groups (e.g., one group was White middle-class school principal and teachers, and the other group was Latina/o ELSPAN low-income students) were at stake at Jones school. These interests were represented in the linguistic ideologies (Kroskrity, 2016) that underlie the design and implementation of the school EPEL. In addition, the school principal and mainstream teachers in grades 3-4 doing their own sheltered instruction, were not aware of their dominant LI and how these negatively affected the learning of ELSPAN children (based on their scores on the ACCESS test of English language proficiency). The study aligns with research demonstrating that educators are often unaware of their own LI (Bartolomé, 2004, 2010; Cadiero-Kaplan, 2008, Cadiero-Kaplan & Billings, 2008). These data also supports research showing that whether LI are verbally articulated or embodied in practice, LI are overlapped and intertwined (Henderson & Palmer, 2015).

One major constraint of the school EPEL design was that beyond the second grade, EL students received specialized instruction only "as warranted," as Mr. Parker, the school principal, had explained. From these older EL students, the third and fourth graders were taught by their regular classroom teachers who were "willing to try out sheltered instruction". These teachers did not have TESOL or ESL endorsements, nor had completed ESL professional development or training. Also, instruction for ELSPAN in the fourth grade classroom went through various changes in just one school year, becoming unstable and ineffectual for these students (based on their scores in the ACCESS test). ELSPAN students in grades three and four, and even in grade five, should have had a non-limited TBE. In fact, the number of ELSPAN children in each of these grades three to five, allowed for late-exit or maintenance bilingual education either separately or in a multi-grade format, or better yet, these students could have been in dual-language classrooms. However, the principal's EPEL design did not include any of these options. The rationale for his EPEL design was influenced by multiple and contradictory linguistic ideologies. For example, Mr. Parker's ideology on L1-L2 cross-linguistic transfer for ELs in grades K-2 (which he supported) contradicted with his ideology on content-area native language instruction for ELs in grades three to five (which he did not support). These findings align with research that suggests that contradictory linguistic

ideologies exist not only between people but also *within* individuals (Cadiero-Kaplan, 2008; Martínez, 2013). Also, Mr. Parker had his own ideology on L2 literacy teaching and learning which oversimplified these complex and long-term processes. He believed that ELSPAN could learn to read in English in a short period of time by sole virtue of their good reading skills in their native language, regardless of teacher training and quality of instruction. He also believed that L2 literacy merely requires expanding on English vocabulary. Another ideology of Mr. Parker's multiple linguistic ideologies was about integration. The principal's EPEL design and implementation centered on integrating EL and non EL students, but in the classes whose teachers wanted to integrate these children (e.g., mainstream teachers in third and fourth grade). So, contradictorily, Mr. Parker did not require ELs to be integrated in classes where the teachers did not want to integrate them, for example in art class with Ms. Johnson. However, integration in subjects where language is not essential for the understanding of content, such as in art class, is what the state required. Again, Mr. Parker's linguistic ideologies were contradictory and misled some teachers at the school. In short, the findings showed that the principal's linguistic ideologies reflected several misconceptions (e.g., time needed for ELs to learn L2 academic language, role of native language instruction, cost of bilingual education, integration of EL students, placement and programmatic issues) that have permeated language policy (Crawford, 1989, 1992; Wiley, 2000) and the education of linguistic minority students in the U. S. throughout decades (Darder, 2012; Samway & McKeon, 2007; Soto, 1997; Zentella, 1997).

Moreover, the findings demonstrate that teachers' ideological compatibility and incompatibility with the school principal's linguistic ideologies ignited several power struggles. These struggles centered on differential status of teachers and lack of adequate professional collaboration. Specifically, differential status of teachers placed the ESL teacher, in a symbolic lower and powerless standing at the school. Because of that lower status, Mrs. Williams's professional competence was devalued and wasted at Jones school. Contrary to the two untrained homeroom teachers implementing their own, assumed, sheltered instruction, Mrs. Williams had completed her ESL endorsement several years ago. She had more than 25 years of successful teaching experience with EL students. Also, Mrs. Williams had lived in Mexico in a short-term immersion experience, to better understand the culture and language of ELSPAN students. The research findings support research showing how linguistic ideologies position ESL and bilingual teachers, and their work with EL children, in a lower status in comparison with mainstream teachers (e.g., Hruska, 2000; Palmer, 2011).

Finally, these findings uncovered the assumed "neutrality" (Bartolomé, 2008) in beliefs and practices of *specials* and *support* teachers. The ideology of integration held by specials and support teachers' as Jones school, enacted perhaps unconsciously, was not neutral. This LI fueled lack of adequate professional collaboration, not only with the ESL teacher, but also with that Art teacher, and between Title I and Spanish language teachers. Ironically, the very activities and events that were supposed to promote integration between students, and collaboration among teachers, were not supported by the majority White, middle-class, monolingual school teachers, students and parents. This situation resonates with Giroux's ideas of the interplay of pedagogy, power, and the specificity of place, in this case the context of Jones Elementary School, its EPEL, and underlying linguistic ideologies. Giroux (2016) affirmed, "Pedagogy is always about the specificity of place: How power shapes and is reinvented through the prisms of culture, politics, and identity" (p. xvii).

Implications

This research study covers relevant issues to consider for educational and research implications. These issues relate to the formation of pre-service teachers and training of in-service teachers and school administrators. Since, the findings of the study showed that the school principal and teachers held compatible and incompatible linguistic ideologies, future training efforts should be directed at creating awareness of educators' own ideologies and how they influence their work with EL students. Furthermore, school administrators and teachers need to develop critical consciousness (Alfaro & Bartolomé, 2017; Willis et. al., 2008). A critical consciousness allows for the examination of power issues that permeate teaching and learning in schools, which are also embedded in societal and political macro-level contexts (Freire, 1970; 1985; McLaren, 2016). Indeed, power issues underlie historical and interpersonal inequities that intersect with notions of race, social class, and gender (Darder, 2011; Flores & Rosa, 2015; Woolard, 1998).

In particular, teacher education programs must include an ideological component, in the quest for critical consciousness, and to enable future teachers to envision and work towards more just and equitable schools. Pre-service teachers must realize that even "best practices" are insufficient in the hands of teachers whose ideologies about second-language learners are compatible with negative stereotypes, dismissive attitudes, and reductionist teaching.

Moreover, we need to strengthen professional development (PD) for in-service teachers by incorporating a critical consciousness component as well. In addition to the basic underpinnings of second-language literacy teaching and learning, in-service teachers and administrators must become aware of how their own linguistic ideologies, articulated or embodied in practice, influence school dynamics and power hierarchies. Long-term PD should encourage ongoing self-evaluation and self-reflection processes within in-service teachers and administrators working with EL children and their families. Even well-meaning in-service teachers (e.g., Mrs. Brown and Mrs. Smith in the study) and school principals (e.g., Mr. Parker), need to realize how linguistic ideologies permeate school programs for EL students, and how these ideologies also stem from society's cultural and political macro level contexts.

In addition, minority language teachers, such as Ms. Perez, the Spanish language teacher in the study, must resist dominant and restrictive linguistic ideologies in their daily work with EL students, even if they have less seniority and status when compared with their colleagues. Minority language teachers should engage in a transformative and empowering ideological and pedagogical process (Darder, 2015). These teachers should also exert agency, by inviting linguistic and culturally minority parents to join them in their efforts to interrupt hegemonic ideologies (García, 2009) and the power of privilege encountered in schools.

Furthermore, the study also raised questions that could be undertaken in future research. The research implications include issues of leadership and quality instruction for EL students. Since principals are responsible for overseeing the work of teachers at their school, future research could use an organizational-systems approach to studying "principalship" and leadership styles, and their impact in educational programs for linguistic and cultural minorities.

Finally, since the focus of the study was not program evaluation, but educators' linguistic ideologies, future research could analyze the quality of instruction of the educational program for EL students at Jones elementary, and of programs at other sites, allowing for comparisons and contrasts in a multiple-case study design.

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Appendix

Table 1

Characteristics of Participants

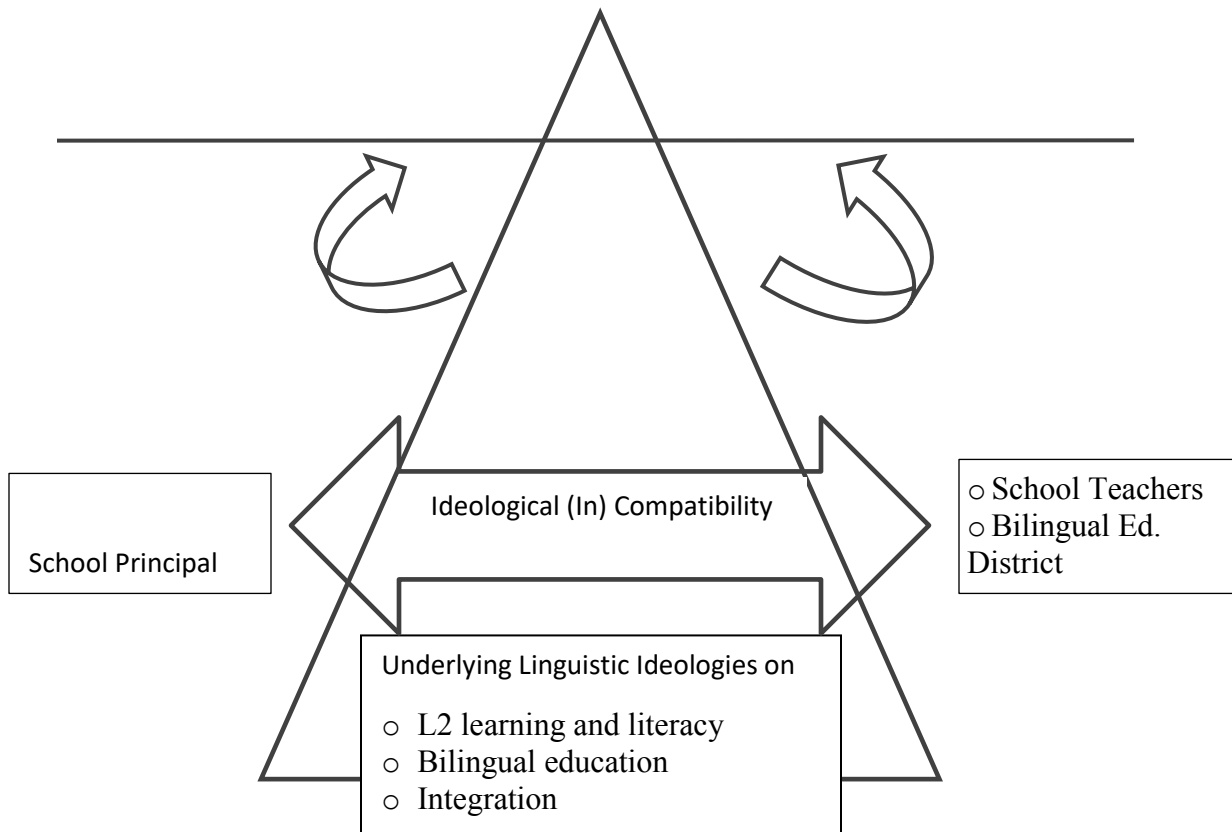
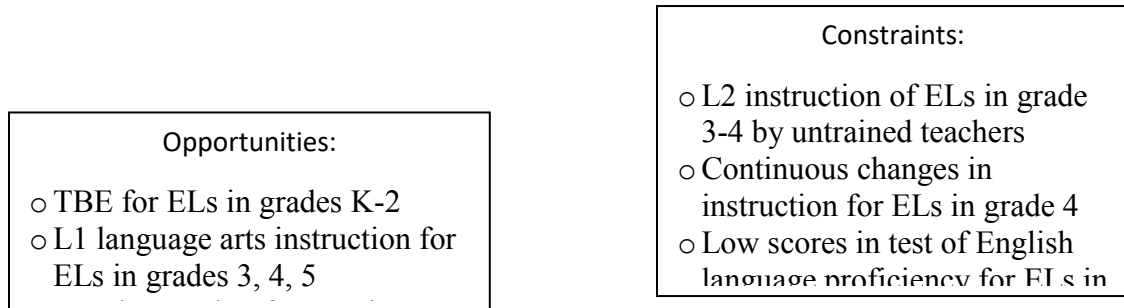
Name (pseudonym)	Gender	Age	Race	Native Language	Bilingual	Current position/job	Yrs. in current job	Licensure, Endorsement
Mrs. Williams	Female	Early 60s	White	English	No	ESL teacher	7	PEL ² , ESL ³
Mrs. Perez	Female	Late 40s	White	Spanish	Yes	Spanish language teacher	3	PEL, Spanish
Mrs. Brown	Female	Early 50s	White	English	No	3 rd Grade teacher	10	PEL, elementary
Mrs. Smith	Female	Early 50s	White	English	No	4 th Grade teacher	13	PEL, elementary
Ms. Johnson	Female	Late 30s	White	English	No	Art teacher	9	PEL, elementary
Mrs. Taylor	Female	Late 30s	White	English	No	Title I teacher	11	PEL, elementary
Mr. Parker	Male	Early 50s	White	English	No	School principal	6	PEL, administrative
Ms. Davis	Female	Early 60s	White	English	No	BE ⁴ district coordinator	3	PEL, administrative

² PEL = Professional Educator License

³ ESL = English as a Second Language

⁴ BE = Bilingual Education

Figure 1. Design and Implementation of the Educational Program for English Learners (EPEL) at Jones Elementary School





Case Studies of Dual Language Teachers: Observations and Viewpoints on Authentic, Native-written Materials for Bilingual Development

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Abstract

Dual language education programs are proven to be highly beneficial for literacy and academic language development with all students, and especially with English learners (ELs). That said, there are also significant pedagogical challenges associated with developing and fostering successful reading comprehension in students' first (L1) and second (L2) languages (Bunch, Walqui, & Pearson, 2014; Lindholm-Leary, 2012). One such challenge is the lack of readily available authentic, multidisciplinary classroom materials written by native-speaking authors in languages other than English. Dual language teachers are consistently faced with the complexities of teaching and learning for students' biliteracy development while simultaneously grasping for ample rigorous, culturally relevant text materials to compliment those available in English. In response, this qualitative case study features practicing dual language teachers' perspectives regarding the importance of authentic classroom materials for biliteracy development. The study and its findings also glean insight on how the participants' viewpoints may serve as recommendations for dual language teacher preparation.

Introduction

Research has long established the extraordinary linguistic and cultural benefits of dual language learning in K-12 classrooms. Literature confirms bilingual and biliterate students' academic, cognitive, sociocultural, and economic advantages over their monolingual peers (August, Spencer, Fenner, & Kozik, 2012; Thomas & Collier 2012). More significantly, dual language programs are especially vital given the numerous academic and sociocultural successes with English learners (ELs) and emergent bilinguals (Lindholm-Leary, 2012, Collier & Thomas, 2009; de Jong, 2004). To this point, historical and current research argues that ELs in dual language programs master academic English skills better than traditional English as a second language (ESL) programs even though only half or less of the instruction is delivered in English (August & Shanahan, 2010; Collier & Thomas, 2009; Lindholm-Leary, 2001). However, there is an increased need for native-written⁵ materials that are fully attentive to the numerous sociocultural and linguistic nuances of written text, limiting teachers' access to authentic materials for academic use in the context of K-12 dual language education (Gámez & Levine, 2013; Guerrero & Valadez, 2011)).

Along with myriad benefits of dual language education comes significant linguistic, sociocultural and pedagogical challenges (Castro, García, & Markos, 2013; Lindholm-Leary, 2012). Decades of research provides emphasis on the point that literacy and academic language development in two languages is vastly complex and exceedingly challenging, especially in the context of content-based teaching and learning. Moreover, in the current era of standards-based instruction and systems of high stakes testing, there is surging attention given to disciplinary literacies and teachers' use of complex texts across grade levels in all subject areas. High expectations with cross-curricular, mainstream literacies intensify the need to consider first (L1) and second (L2) language reading theory and the use of authentic informational text materials to genuinely support ELs' and emergent bilinguals' biliteracy development (Beeman & Urow,

⁵ For the purpose of this study, the term native-written refers to text and text materials written in a language by an author whose first language is that of the text. The term also refers to texts where the author is bilingual, biliterate, and multicultural to the extent of composing text mirroring native systems of writing, literary practices, registers, and contextually relevant communication patterns in the text language. The term intends to capture and represent a broad scope with a wide variety of dynamic linguistic repertoires.

2013; Bunch, Walqui, & Pearson, 2014; Calderón, Slavin, & Sanchez, 2011; van Lier & Walqui, 2012). Unique pedagogical considerations related to reading and text materials are especially poignant given dual language learners’⁶ dynamic, vast linguistic repertoires.

Relevant literature stipulates that successful literacy development with ELs and emergent bilingual students is an intricate and multidimensional process, requiring new considerations beyond modifying colossal quantities of existing texts and materials (Bunch, et. al., 2014). Often times schools and districts approach the adaptation of curricular materials with purchasing a text book series, written originally in English, and the translated Spanish versions of the same text. While this may seem like a viable solution, recent theory cautiously advises that in effect there is a multifaceted relationship between “the reader” and texts with which they are interacting. Aspects including text features, the context of the reading materials, and the reading tasks themselves greatly shape students’ overall reading comprehension (Calderón, 2007). In the case of ELs and emergent bilinguals, with multilayered, dimensional language ranges, literacy development is even more intensified when texts and materials are presented in languages the students are still developing (Schleppegrell, 2004). Therefore, pedagogical solutions to these complex learners’ needs must honor varying linguistic ranges and adapt materials in authentic ways (van Lier & Walqui, 2012).

Studies also confirm the importance of sustained use and development of ELs’ and emergent bilinguals’ home languages (Guerrero & Valadez, 2011). In practitioners’ terms, dual language teachers are uniquely positioned with needing a wide-range of academic text materials to sincerely support students’ constructions of meaning while reading (Wong Fillmore & Fillmore, 2012). Text materials combined with specialized pedagogical skills are necessary to facilitate students’ comprehension and rich application of two languages while also attending to students’ increased academic language proficiency in both (DeFour, 2012; Freeman, Freeman, & Mercuri, 2005; Lindholm-Leary, 2012). Dual language teachers are charged with recognizing the significance of sociocultural elements that influence ELs’ and emergent bilinguals’ successful literacy development. Dual language teachers are also obliged to demonstrate a wide repertoire of scaffolding techniques and pedagogical supports related to students’ identities, reading comprehension, textual challenges, academic language development, and sociocultural communicative domains of language (Echevarria, Vogt, & Short, 2016; Walqui & van Lier, 2010; Zwiers & Crawford, 2011).

Relevant literature further reveals challenging historical patterns for bilingual education in the U.S. as transitional (García, 2009). Regrettably, language-minority students were obliged to develop knowledge and language according to monolingual dominant-language norms (August & Hakuta, 1997; Ovando & Collier, 1998; Wong-Fillmore, 2014). Fortunately, more recent trends with dual language program design and development, give rise to the notion that programs for biliteracy development should honor both broad ranges of language learning students with equality and equity (Howard, Sugarman, Christian, Lindholm-Leary, & Rogers, 2007; Lindholm-Leary & Genesee, 2014; Thomas & Collier, 2009). With these points in mind, dual language education programs continue to be highly effective for students’ academic, sociocultural, and cognitive gains (Boyle, August, Tabaku, Cole, & Simpson-Baird, 2015). Consequently, dual language programs continue to increase in numbers nation-wide (Steele, Slater, Zamarro, Miller, Burkhauser, & Bacon, 2015; U.S. Department of Education [USDE], 2012).

The purpose of this qualitative case study (Yin, 2014) was twofold. First, to closely examine a focus group of practicing dual language teachers’ observations and viewpoints regarding the importance of

⁶ The term dual language learner is used throughout the research and is meant to be an inclusive term. To address the wide scope of dual language programs across the United States, the researcher recognizes that dual language learners may include English learners, emergent bilingual students, and also monolingual native English-speaking learners all of whom are participating in programs with the goal of biliteracy.

using authentic, native-written materials with their dual language learners. Second, to discover how these teachers' articulations may serve to make recommendations for pre-service and in-service teacher education programs. The corresponding research questions were:

- 1) What observations and viewpoints do practicing dual language teachers make regarding the importance of authentic, native-written materials to enhance dual language learners' biliteracy development?
- 2) What should future dual language teachers be prepared for in connection to authentic materials for their instruction?

Theoretical Constructs

Equity and Equality in Biliteracy

The study's construct was framed for biliteracy development with dual language learners giving emphasis to equitable bilingual education paradigms with ELs and emergent bilinguals that shape academic language and literacy development in two languages (Collier, 1992; García, 2009; Guerrero, 1997; Wong-Fillmore, 2014). As Cummins (1991) conveyed it is vital to avoid deactivating learners' primary, home languages when they are adding another language in their learning experiences. Similarly, students' successful comprehension and construction of meaningful language is dependent upon pedagogical supports that facilitate biliteracy via valuable text access (Wong Fillmore, 2014). ELs and emergent bilingual students need frequent reading and writing with engaged peer-to-peer interactions involving varying linguistic repertoires in changing sociocultural contexts for biliteracy development (Marting-Beltran, 2012; RAND, 2002). Expanding upon the constructs of additive biliteracy, two transected concepts within the study's framework that supported the investigation of dual language teachers' viewpoints on authentic, native-written materials were: 1) conceptions of academic Spanish and L1 text complexity and, 2) sociocultural constructs that support biliteracy

Conceptions of academic Spanish and L1 text complexity. Guerrero's (1997) historical research on the importance of contextualized, cognitively demanding learning experiences for Spanish academic language proficiency solidified this study's construct. It stands to reason that additive biliteracy in the context of dual language schooling requires teachers to understand subject matter, text complexity, and the relationships between readers and text materials while simultaneously attending to the significance of students' native language linguistic complexities. Some of Guerrero's points include: "Academic language proficiency is more than mere lexical representations associated with different aspects of the curriculum. It is an internalization and automatization of dealing with cognitively complex language at the level of discourse." (p.68). Expanding on this work, Guerrero and Valadez (2011) continue to emphasize the connections between constructing new knowledge in academic Spanish and the importance of texts written in Spanish by authors whose first language is Spanish. To date, far too often students and teachers alike are faced with limited resources that were authentically written in academic Spanish. Given the noteworthy relationship between the reader and text materials, it stands to reason students' reading comprehension is negatively impacted by this limitation of accessible authentic text materials. The diminished result may in fact be the misguided and over-amplified translation of new knowledge constructed in English into Spanish concepts (Ada, 1976). Ultimately, dual language teachers must demonstrate knowledge and pedagogical

skills to facilitate the use of culturally and linguistically relevant materials for students' expanded pragmatic conventions, and sociocultural layers of academic discourse development in two languages.

Sociocultural theory. Language learning in education has been framed for several decades on Vygotskian Sociocultural Theory (SCT) (Lantolf & Thomas, 2006; van Lier, 2009; Vygotsky, 1978). An integral element in SCT is the notion that language learning with higher order cognition is developed through meaningful, contextual interaction. Students' successful language development is dependent upon language use in varying contexts, all essential for cognitive, metacognitive, and linguistic advancements (Cummins, 2014; Manning & Bucher, 2012). Similarly, with dual language, biliteracy development requires specialized pedagogies, including student engagement and peer interaction supported by complex text with structured language functions (Gibbons, 2015; World-class Instructional Design & Assessment [WIDA], 2012). In the context of content-based dual language instruction, collaboration and dynamic activities within students' Zones of Proximal Development (ZPD) are key points to support increased language demands associated with language-dense materials (Schleppegrell, 2004; Guerrero, 1997). ELs and emergent bilingual students are entirely capable of highly complex analytic thinking, yet they need specialized support inclusive of rigorous texts and culturally relevant materials to accommodate increasing academic cargo at school (Clark, Jackson, & Prieto, 2011; Lindholm-Leary, 2012). Dual language classrooms require sociocultural literacy learning with empowering pedagogies to support students' comprehension of content concepts and dense texts (Calderón, 2007).

Language, culture, and identity. In conjunction with Vygotskian SCT, van Lier (2009) maintains that students' self-concepts of identity greatly impact the learning and thinking processes. Students see themselves in one fashion, forming an internal sense of self. On the other hand, students are also considering the external sense of self, simultaneously giving merit to others' opinions of how they are seen (Ryan & Shim, 2008). For dual language learning, connecting culturally relevant learning materials to students' intellectual development and broad spectrums of thinking serves to fundamentally support biliteracy development (Moore & Schleppegrell, 2014; Robertson, 2007). Based on these concepts of sociocultural development, teachers must look for ways to integrate students' cultures, histories, and language varieties into daily learning experiences via academic Spanish and English (Guerrero & Valadez, 2011).

Parallel to García and Guerrero's research, the study's construct was also supported by Thomas and Collier's Prism Model for Bilingual Learners (2007). The Prism Model's four components of sociocultural, linguistic, academic, and cognitive processes indicate that sustained responsiveness in these developmental areas is necessary for biliteracy development. The Prism Model's sociocultural tenet suggests that both language-minority and language-majority students as dual language learners need particular attention to cultural relevancy in order to fully comprehend linguistic constructs in two languages, especially with increased textual complexity and subject-specific, literacy related tasks (Gottlieb & Ernst-Slavit, 2014).

With a focus on equitable bilingual education paradigms for ELs and emergent bilinguals that shape academic language and literacy development in two languages, this study was framed with theoretical constructs regarding academic Spanish and L1 text complexity partnered with sociocultural theory. Ultimately, the study's frame supported the research questions in order to glean clarity on dual language teachers' observations and viewpoints regarding the importance of using authentic, native-written materials in their classrooms.

Research Methods

Seeking to gain clarity from participants' perspectives, the study's focus was on the importance of using authentic materials written to consider depth and breadth in language learners' dynamic linguistic and cultural ranges. Meaning, dual language teachers were asked about the significance of using a wide gamut of literature selections that capture unique cultural and linguistic aspects such as folklore, illustrations, metaphors, and culturally relevant characters to cultivate students' deeper meanings for biliteracy development. An example of this would be a dual language teacher working in a Spanish-English program selecting the book *El verde limón* written by Alma Flor Ada and Francisca Isabel Campoy in place of a story like *Charlotte's Web* written originally in English by E.B. White and then translated into Spanish. Another example may include a dual language teacher using an adopted math text book, originally written in English with native English-speaking students in mind rather than having access to a math textbook written by a native Spanish speaker to be used in Spanish-speaking classroom contexts. The researcher conducted a qualitative, interpretive case study with a focus group including six dual language teachers (Erickson, 1986; Yin, 2014). With structural tenets from the Center for Applied Linguistics Guiding Principles for Dual Language Education research (Howard, et. al., 2007) the study's purpose was two-dimensional. Accordingly, the following research questions related to authentic native-written materials and biliteracy guided the investigation:

- 1) What observations and viewpoints do practicing dual language teachers make regarding the importance of authentic, native-written materials to enhance dual language learners' biliteracy development?
- 2) What should future dual language teachers be prepared for in connection to authentic materials for their instruction?

Context

This study was situated in the southeastern state of North Carolina where dual language programs are expanding (The State Board of Education, North Carolina [NCSBE], 2013) and the southwestern state of New Mexico where dual language programs have been in place for decades. Both states also have some form of bilingual endorsement for high school graduates (New Mexico Public Education Department [NMPED], 2016a, 2016b; Public Schools of North Carolina [NCDPI], 2015a; 2015b; US Department of Education Office of English Language Acquisition [OELA], 2015). The six focus group teacher participants (Yin, 2014) from both states taught in dual language programs with English and Spanish speaking students. While other target languages were available in both states' dual language programs, this study focused on language-minority students and language-majority students in Spanish/English classroom settings. More specifically, both states had program models that supported varying structures for time percentages in target languages (i.e. 90/10, 80/20, 70/30, and 50/50).

Participants

For the purpose of this research, purposeful sampling (Merriam, 1998) resulted in a participant focus group consisting of six dual language teacher participants (see Table 1). Via personal recruitment and participant interest, the researcher was able to include three participant teachers from North Carolina and three from New Mexico. As part of a larger study conducted in both states, the participants for this focus group identified the research topic as an area of special interest. Participants' program sites represented dual language models with ELs, emergent bilingual learners, and some native English-speaking students. The languages of instruction in all participants' programs were Spanish and English. The teachers'

classrooms also represented a mixture of times spent in English and Spanish within their program models. For example, some programs represented 90% of the instructional day in Spanish and 10% of the day in English. Others were 70% of the day with instruction in Spanish and 30% in English (see Table 1).

Study sampling invited native speakers of Spanish and native English-speaker participants, all with qualifications to teach in dual language classrooms as required by the states where they worked. More specifically, the study participants all taught in elementary dual language programs. The focus on elementary level programs allowed for specific nuances to emerge relating to early developmental emergence of biliteracy and academic language in content-based instruction. The participating teachers were all biliterate and had a minimum of five years of experience in dual language classrooms. Additionally, all six participants were female. Some participants in the focus group self-identified themselves as Caucasian and some as Hispanic or Latina. In three cases with the participants whose first language was English, details were revealed in the demographic portion of the data set (Seidman, 2013) to indicate they had studied abroad to Spanish-speaking countries either during or after their teacher preparation programs. Parallel to this, one participant, a native speaker of Spanish, also self-identified as having attended a bilingual school in her home country for her elementary and secondary education experiences. These nuances are so noted on Table 1.

Table 1: Teacher participants

Table 1

Teacher Participants

Pseudonym	Teaching In	Native Language	DL Program Time Structure
Emily	North Carolina	English	90/10
Patricia	North Carolina	Spanish	90/10
Caroline	North Carolina	Spanish	70/30
Samantha	New Mexico	English	70/30
Rebecca	New Mexico	English	50/50
Cristina	New Mexico	Spanish	90/10

Note. Emily, Caroline, and Samantha all participated in extensive language training in some form of study abroad programs for at least a semester or more. Cristina attended a bilingual school for her K-12 education outside the U.S.

Data Sources

With purposeful sampling (Merriam, 1998), the study’s approach allowed for the exploration of the research questions in various dual language classroom settings, reflecting the communities where the school research sites were situated. The participants represented a deliberate sample with the goal of surfacing the views of each person in the focus group (Krueger & Casey, 2009). To maintain the initial larger study line of inquiry, the focus group included practicing dual language teachers as a result of the

researcher's fostered relationships with dual language educators in both states (Stringer, 2014). For case study data triangulation (Corbin & Strauss, 2008), multiple sources of on-site evidence were examined in the context where the data were collected over a 12-month period. The data sources from each of the six participants were face-to-face interviews, artifacts and documents analysis, as well as participant observations in their classrooms. The researcher gave special considerations related to focus group reflexivity via the interview protocol and specific measures to soundly capture participants' viewpoints. Said considerations were vital to avoid mutual influences between the researcher and the focus group participants resulting in unintended methodological threat (Yin, 2014).

Interviews. Focus group semi-structured, audio-recorded interviews were conducted on-site in all six teachers' classrooms. Each on-site interview ranged from 60 to 90 minutes in duration. Interview recordings for each participant were transcribed, resulting in data transcriptions of 13-24 pages per participant. The semi-structured interview protocol (Seidman, 2013) was based on the tenets of the CAL Guiding Principles for Dual Language Education to explore current dual language teachers' perspectives regarding the importance of authentic, native-written classroom materials for biliteracy development. The interview protocol included a portion dedicated to participants' voicing open-ended responses to special interest topics, . The interviews were conducted in the participants' language of choice and transcribed in both languages as the researcher is fully biliterate in English and Spanish.

Artifacts and documentations. 375 photographs of artifacts and documentations regarding curricular materials, classroom-seating configurations with dual language learners, and classroom language supports were examined, coded, and analyzed as part of the data triangulation. The artifacts and documentation were in both program languages of English and Spanish, and encompassed varying content-area subjects including language arts, math, and science. Some artifacts were teacher-generated while others were supporting books and documents from site-based textbook adoptions. Artifacts and documentation also included text examples, classroom rubrics, and language supports across the content areas, in both languages.

Participant observations. Data sources also included participant 60-90 minute observations in all six participants' schools and classrooms both in North Carolina and in New Mexico. The purpose of the face-to-face observations was to view the teachers in the context of their own environment, to capture deeper understandings of the participants as they were in the community and schools where they taught. In some cases the observations took place while students were present and in other cases, the classroom observations were done during participants' planning periods. Each of the six participants self-selected the time of the observations based on their individual schedules and time constraints and for the purpose of this study to focus on teachers' observations and viewpoints, the researcher did not interact with the students. Anecdotal records, including photographs without students from literacy resource rooms, teachers' classrooms were kept capturing myriad details regarding classroom configurations, ancillary language supports, and other visible resources for literacy in both languages. The on-site observations provided a familiar environment for the participants, allowing for research observations while the participants accessed their own lexical schema based on where they teach and the dual language students with whom they work. This added more depth while examining the classroom materials and the relationship between languages with dual language teachers as, from a research perspective, these teachers were considered linguistically sophisticated professionals (Merriam, 1998).

Data Analysis

In the interpretive case study (Merriam, 1998; Yin, 2014), the data were analyzed for case descriptions to gain clarity and construct explanations (Denzin & Lincoln, 2008; Yin 2014). With multiple, contextualized and triangulated data sources representing Spanish and English, numerous details for in-depth descriptions emerged for interpretation (Corbin & Strauss, 2008). Data analysis via open-ended coding (Saldaña, 2016) resulted in preliminary data categories. Continued data analysis for refinement implored categorical culling, grouping, and re-coding processes leading to more precise emergent data patterns with distinct code markers. The integration of thematic and categorical structures from coding each participant's data led to data categories and sub-categories within the holistic data set to respond to the research questions (Corbin & Strauss, 2008). The results included details and participants' observations and viewpoints associated with authentic, native-written materials for biliteracy development in dual language classrooms.

Findings

The study's findings address the research questions of 1) What observations and viewpoints do practicing dual language teachers make regarding the importance of authentic, native-written materials to enhance dual language learners' biliteracy development? And, 2) What should future dual language teachers be prepared for in connection to authentic materials for their instruction? The study's findings also reinforce existing literature on learning academic language in two languages as highly complex and significant (Calderón, Slavin, & Sánchez, 2011; Guerrero, 1997; WIDA, 2012).

Likewise, study results directly link to new pedagogical implications for teacher preparation programs. Findings also correlated with the sociocultural tenet from Thomas and Collier's Prism Model (Collier & Thomas, 2007) suggesting that authenticity and cultural relevance in dual language learning materials are fundamental for biliteracy development and second language acquisition. The study's findings include amplified details from dual language teachers' viewpoints regarding the significance of authentic, native-written materials for biliteracy development. Participants also described ways in which they have compensated for the shortage of readily available materials meeting said descriptions, therefore extending pedagogical guidance for explicit dual language instruction. Data analysis conveyed details related to cultural variations in language, students' identities, language status, and the relationships between content concepts, communicative language forms, and the role of translation in the process (Calderón, 2007; Krashen, 1985, Reyes & Klein, 2010).

The study's findings as they relate to the research questions resulted in the formation of three data categories as connectors to a predominant thematic axis of: Preparing Teachers for Dual Language Classrooms (Saldaña, 2016; Corbin & Strauss, 2008). The data categories were: 1) the significance of authentic, native-written materials, 2) connections to sociocultural complexities in biliteracy development, and 3) recommendations for preparing dual language teachers. All three categories had corresponding code markers from the data sources, supporting the streamlining of codes-to-assertions in the data set (Denzin & Lincoln, 2008; Saldaña, 2014). Given the nature of the data categories, the emergent code markers from triangulated data sources were predominantly connected to the first data category of the significance of authentic, native-written materials and research question one on teachers' viewpoints. The emergent, corresponding code markers for this data category were a) materials with an emphasis on translated vocabulary; b) a relationship between content concepts and language; and c) concepts lost in translation. The prominent code marker's sources in this data category were primarily artifacts and documents,

including curricular materials, photographs, classroom supports, and exemplary text materials (see Figure 1). Participant interview transcripts were the principle data source for the additional code markers (see Appendix A).

Within the triangulated data coding, other noteworthy details emerged to include: 1) 100% of the participants had access to materials written in both Spanish and English, 2) in the case of Spanish language arts materials, in one instance 100% and collectively over 60% of the literature-based materials were translated stories available in both Spanish and English with a majority of native English-speaking authors, and 3) other content-based materials such as texts, posters and graphic organizers represented an emphasis on vocabulary-level Spanish language development.

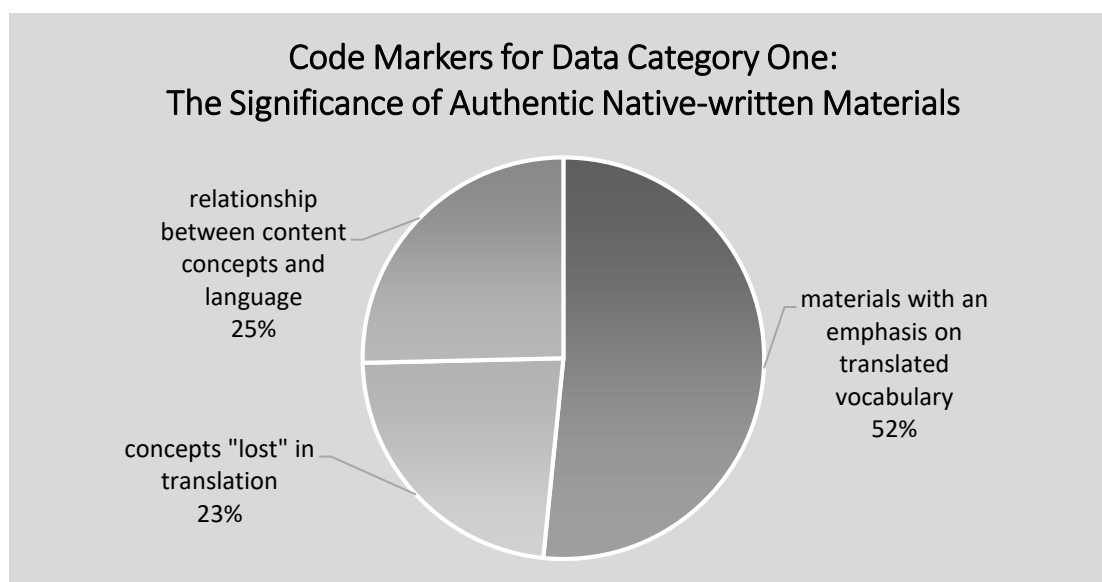


Figure 1. Data category one: The significance of authentic, native-written materials with its three corresponding code markers and frequencies. The prominent code marker *materials with an emphasis on translated vocabulary* had a frequency of 52%.

The second data category of connections to sociocultural complexities also had three code markers. They were a) cultural variations within languages; b) students' cultural identities; and, c) equity and language status. The code markers' principle data source was participant interview transcripts. The code marker of cultural variations within the languages specifically refers to participants' references to different dialects of Spanish between students of Mexican origin, contextually-dependent types of formal and informal Spanish, variations between native Spanish-speakers with cultural and linguistic backgrounds from countries other than Mexico, and how these variations impact academic language development in both languages. At a more particularized level, participants' quotes from transcribed interviews described when and how these language variations manifested in their classroom materials and the impacts on learning (see APPENDIX A). Similarly, the code marker of equity and language status refers to participants' mentioning the importance of materials reflecting equal prominence to Spanish and English languages within the dual language materials. Lastly, the code marker of students' cultural identities refers to students' abilities to

view culturally relevant illustrations and to have access to culturally relevant characters, language patterns, and content-based text (see Figure 2).

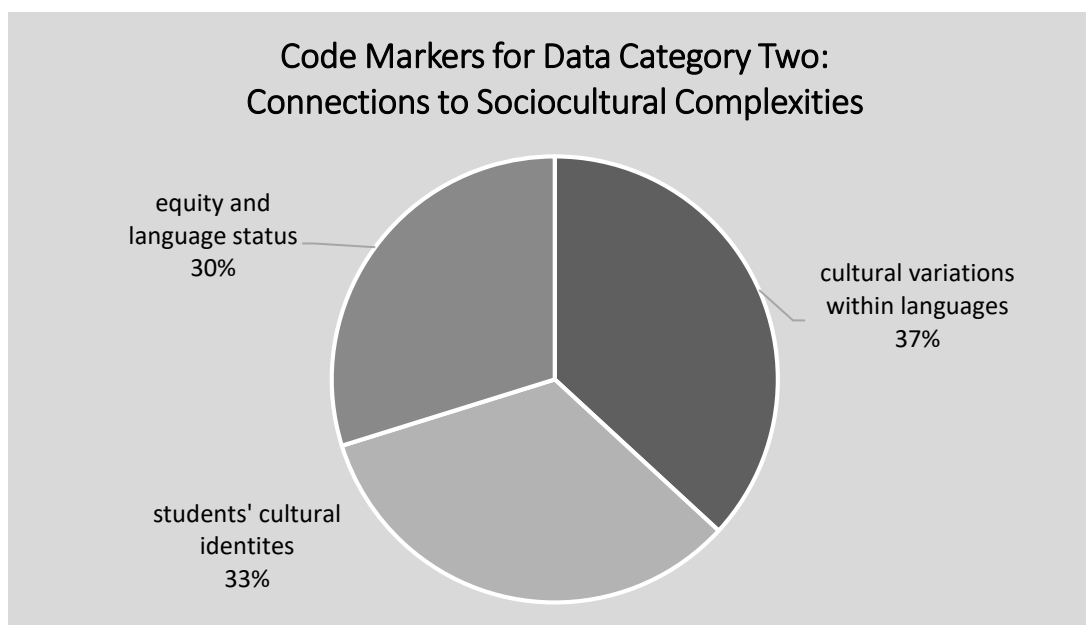


Figure 2. Data category two: Connections to sociocultural complexities.

Lastly, the third data category of recommendations for other dual language teachers, connected to research question two shared the primary data source of participant interview transcripts. Participants unanimously described a shortage of options for authentic materials to use with their dual language learners. All six resoundingly, and independently from one another described scenarios where they were either without materials written in Spanish all-together or, that they only had access to translated materials that often times were not as helpful as the English-written materials. The participants further explained that teachers need to be prepared for situations where translated materials are challenging to use simply because the language patterns and content concepts in the translated materials didn't align with students' linguistic and/or cultural norms in meaningful ways.

In summary, all six focus group participants expressed viewpoints related to the importance of having access to more authentic native-written materials in their classrooms. They explained that this for the mutual benefit of both the native Spanish-speaking students as well as the native speakers of English for biliteracy development. Likewise, they all voiced the idea that the sociocultural aspects within the materials are hugely vital for students' biliteracy development, making linguistic, cognitive, and metacognitive connections within the teaching and learning (García, 2009; Guerrero; Grosjean, 2010; Zwiers & Crawford, 2011). They also all expressed concern for materials that have been designed in English and then simply translated into Spanish, supporting the idea that dual language students' construction of new knowledge is linguistically and contextually dependent and therefore needs to be connected with both academic Spanish and English in mind (Guerrero & Valadez, 2011).

Discussion

In discussion, the study's findings directly connected to the research questions and revealed observations and viewpoints regarding the significance of authentic, native-written materials for biliteracy development. Addressing research question one, the participants presented detailed ideas and explanations of what they viewed as important regarding authentic, native-written materials necessary for biliteracy development, through the practitioner lens of perspective.

Supporting Biliteracy with an Array of Text

The study discussion suggests the need for dual language teachers to use an array of texts, written by varying authors with a broad scope of linguistic and cultural dimensions. Similarly, teachers' use of complex, authentic text and curricular materials must point to students' rigorous engagement with academic languages. To clarify, the use of authentic text materials does not mean simplifying text density nor reduction in academic depth. The dual language teachers from this study expressed the need for their learners to have greater access to authentic materials, therefore providing multiple, amplified entry points for students' reading comprehension, linguistic, and cultural connections within the dual language learning processes.

Using text materials with variety. All six focus group participants specified they felt a great sense of limitation and pedagogical disconnect with the variation and types Spanish and English materials they had to use with their students. Even with the materials they did have access to, they mentioned prevalent shortcomings to the extent that they had to search for other creative options. In one instance a participating teacher relied on bilingual secondary school students in the feeder pattern of her elementary school to actually write and illustrate supplementary materials for her classes. This way, she could guide the written structure, focus, tone, and register of the materials as they were created for her class. To that point, findings also gleaned insight on the challenges associated with locating sufficient authentic materials. In further discussion, teachers' reflections and recommendations regarding authentic, native-written materials for other dual language teachers addressed research question two.

Preparing dual language teachers for the challenge regarding authentic materials. Much like the discussion on the study's findings related to research question one, all six focus group participants made clear recommendations for dual language teacher preparation. For pre-service and in-service teachers alike, the participants echoed the point that dual language teachers need to be ready for the challenge of locating and using authentic text and curricular materials. In their current practices, none predicted how much time they would spend looking for relevant, native-written materials that genuinely addressed the pedagogical needs of their classrooms. Even with strong L1 and L2 reading interventions, the use of dense and rigorous text, heavy peer-to-peer engagement, and other best practices for language learning (Peercy, Artzi, Silverman, & Martin-Beltrán, 2015), the participants articulated that the issues of authentically written text variety and shallow applicability of the existing materials was a serious pedagogical barrier. In unison, the participants stated all dual language teachers should be ready to "think outside the box" regarding the issues, knowing there is no one simple solution. They also indicated that the topic had such merit that it deserved a preparation course within teacher education.

The participants' viewpoints regarding the significance of authentic, native-written materials for biliteracy development demonstrated their essential observations that ultimately shaped their dual language pedagogies. Likewise, it should be noted that these discussions are continued thoughts regarding authentic, native-written materials as opposed to an all-inclusive list of solutions to the complex issues. On the contrary as questions on the subject still remain. Is it possible that the process of translated materials from

English to Spanish is the over-simplified reaction to a deeper issue of language complexity? In the essence of curricular support, have the instructional materials remained superficial while we ask teachers to “dive deeper” into language learning practices? Even when “the Spanish and English languages in the materials” are obvious, there are many hidden layers of meaning that teachers’ viewpoints indicate are lost in translation. What makes these findings and the corresponding discussions unique is how the participants continuously articulated the importance of and the shortage of authentic, native-written materials for biliteracy development in their own words based on application and use of resources in their classrooms (Lindholm-Leary, 2001; Morales & Aldana, 2010).

Recommendations and Future Directions

The study suggests that practicing dual language teachers recognize and affirm the importance of using authentic, native-written materials with their dual language learners. More specifically, the participants described the significance of these materials and how challenging it is at times to find sufficient resources necessary to capture the academic language complexities in both Spanish and English. The granular level observations and viewpoints expressed in study interviews revealed participants’ expressions of essential pedagogical concepts that shaped relationships between languages and text materials along with the impacts on teaching and learning in their classrooms. Likewise, they authenticated their viewpoints by recommending other dual language teachers be prepared for the challenges related to finding sufficient, necessary materials. From here, the study results provide a platform to make solid recommendations for teacher preparation programs, addressing the research questions and making the connection back to the axial theme of: Preparing Teachers for Dual Language Classrooms.

Some practical implications for practice are threefold. First, to emphasize Guerrero’s work (1997), the fields of dual language education and teacher preparation must continue to implore more native authors to participate in publishing native-written materials. This would amplify availability of materials while simultaneously broadening language varieties for academic Spanish development. Second, current dual language teachers, both preservice and in-service must be prepared to compensate for the current shortage in authentic, native-written materials. Colleagues may explore co-authoring materials relevant to lesson design. They may also find creative ways for dual language learners to become authors themselves. Such configurations might occur within the same grade level or, from upper grades to lower grades, co-constructing native-written materials. Another practical solution may be for teachers to work collectively within school or district programs to seek funding resources for more formalized efforts to obtain native-written materials from international publishers. A point to consider here is the importance of curricular alignment with such international materials, which may, or may not be easily addressed given the ranges of curricula worldwide.

From a wider scope, the qualitative data collection and analysis, the study revealed the continued need of specialized preparation for dual language teachers. The resulting implications for practice include considerations for concrete solutions within teacher preparation. More specifically, teacher preparation for dual language should encompass coursework on second language acquisition (SLA) and biliteracy with language minority and language majority students. The course contents would further examine second language acquisition theory and principles through the lens of additive biliteracy and linguistic constructs with both languages as opposed to viewing SLA only from the English learner perspective. Candidates would explore how two partner languages interact with one another in distinct ways with regard to discourse patterns, writing structures, as well as metalinguistic and sociocultural patterns with bilingual students (Bialystok, 2004).

Similarly, another practical solution for specialized coursework should include dual language teaching methods, emphasizing the importance of authentic materials as well as scaffolded instruction in two languages with changed language supports based on when students were L1 or L2 learners (Gibbons, 2015). Additionally, the probable need for increased clinical fieldwork and internships in well-established dual language classrooms exists. Revised coursework might include substantially deepened dual language teacher mentor relationships in K-12 settings to emphasize the use of authentic, native-written materials (Flores, Sheets, & Clark, 2011). This all-inclusive thinking suggests practiced constancy to include theory and application of standards-based dual language principles (Howard, et. al, 2007).

The implications from this study have two branches. First, from the current dual language classroom perspective, the concepts and associated nuances with authentic, native-written materials remain crucial points of pedagogical consideration. Teaching and learning in two languages with ELs, emergent bilinguals and other dual language learners require unique approaches with special attention to sociocultural features. Second, in order for dual language students to deeply access curricular and linguistic concepts, dual language teachers must continue to place emphasis on the use of a wide variety of authentic, native-written materials, many of which are difficult to find. Ultimately, it is increasingly vital to address the specific nuances of dual language teaching and learning (Knight, Lloyd, Arbaugh, Gamson, McDonald, Nolan, and Whitney, 2014; Darling-Hammond, 2012; Herrera, Cabral, & Murry, 2013). In doing so, the numbers of prepared dual language teachers may increase, giving more students access to increased biliteracy development.

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APPENDIX A

Interview Transcript Excerpts: Participants' Quotes

The following excerpts from the participants' interview transcripts correspond to emergent data categories one and two, encompassing code markers from both. Patricia, a native Spanish-speaker expressed her ideas regarding bilingual materials in the context of a math lesson delivered in Spanish, articulating her viewpoints. She specified:

When I think about what we use [for books] it's a challenge sometimes. What we have in Spanish is good, and I know because I can express myself 100% in Spanish. I can express ideas [about math] proficiently with the students. But, that's the easy part for me. The hard part is that I struggle with the resources. The books. We have [named publisher] materials but you know, it's not really what we need or, what I look for. It's close with the translated vocabulary but, the way it's taught, using the American method, is different. It feels like a fish out of water. The primary focus in the book is the Latino part and the concepts but, I use the English book more because of the way the information is presented.

Emily expressed similar ideas regarding materials and the complexities of biliteracy in the context of her primarily Spanish-speaking classroom when she is delivering reading concepts in Spanish. Her viewpoints emphasize the impact of having authentic, native-written materials, with cultural depth. She indicated:

We have adopted new materials this past year. We now use [named publisher and title of the books] and they help. It's a newer series that is really based on Common Core, whereas the previous series was not. So, in this new series, the stories are what I would call authentic Latin American stories, written by Latin American authors in this specific [cultural] voice. They are also paired with English stories but, they're not the same story—they're not translated. They just have parallel aspects. It's a combination [of things]. In one they're discussing the water cycle and in another they've presented a fable in one language and non-fiction in the other. They're both talking about the water cycle and something to do with it and they really go together.

She further articulated:

And so the way they fit together is really beautiful. And wonderfully. Experienced authors [names three prevalent theorists in the field of ESL and special education, one of whom is a native Spanish-speaker] were involved and it shows they kept this [authenticity] in mind.

Caroline followed with her viewpoints, with a somewhat different experience yet, continuing the message regarding the importance of authenticity and the connection to sociocultural connections within language development.

She affirmed:

All our materials are translations from English [into Spanish]. So, you have to realize this when you're teaching. And for sure new teachers need to pay attention to this. They have to learn to consider those materials but, to not go by them 100%. If you're doing [names a copy written program] they're direct translations. It's more critical in dual language. You

have to know that if the [Spanish speaking] kids don't understand, it's because of the translation. It may or may not match what they know [in Spanish]. What we need are [authentic] materials. Materials that are written in Spanish for Spanish. And this is another issue. We have things that come from Spain, some from Mexico and the vocabulary is all very different. It's gotta be materials that are actually created in the locality, in the United States with dual language kids in mind. The Spanish we use here. And then this points to the [standardized] tests. They learn one Spanish word and when it appears on the test, it's another Spanish term.

She continued in the context of a math lesson:

Here's another example. So, you're teaching a lesson on Geometry with this vocabulary in English and then the vocabulary in Spanish, in the [context of math]. You have to cover all the dialects of language you have in your class. And, then there is whatever dialect [of Spanish and/or English] will come on the test. So, they have a lot to learn and manage. The materials don't support these details.

In a similar connection, Samantha who is also a native speaker of English shifted the viewpoint to directly discuss children's literature in the context of English language arts and Spanish language arts lessons. She expressed:

I believe they [teachers] all need information on children's literature with a dual language emphasis. Everyone needs to be exposed, all the time, to authentic literature in both languages. The teachers and the students. It's for the importance of rich, authentic, not translated literature and exposure to lots of it. Things [ideas and concepts] get lost in translation. You don't get rich vocabulary, you don't get language structures and [cultural] norms that are natural. You don't get poetry. And it would be even greater to be a part of a literacy club [she laughs] because they [the kids] need to see "Oh! This person was an author of a book and her name is Claudia, just like my tía [the Spanish word for aunt] Claudia!" They need to see names that are similar to theirs.

Connections to the sociocultural forces came through as she also expressed:

They [the kids] need to see authors and illustrators. They need pictures and drawings that mean something to them. And, things that promote the partner language. Kids really need to make cultural connections so they all see the importance of both languages, so you can really "up" the status of the partner language. The native speakers [of both Spanish and English] need to see how both languages help in school but also in extracurricular activities. Think about career days. We really need to encourage presenters who are bilingual to talk about how being bilingual helped in their jobs, things like that.

Rebecca, a native English-speaker reflected on the idea of both Spanish and English within the materials she uses in her classroom. She explained patterns related to her approach to teaching and, the students' approach to learning. She stated:

When you teach reading, in either language, you need know the implications of this. You need to understand sounds in both languages and select materials that actually help with these concepts. You need to know what things [books] look like that make the two languages different but, bridge them all at the same time. This is really hard to explain. For example, when I'm using a book in Spanish, I explain it from the Spanish point of view

[language and culture]. The same in English. The internal strategies for decoding and things like that are different and, grammatical problem-solving is different. The materials need to support this.

She continued to express the challenges with this:

I work with [names a co-teacher who is Spanish-speaking] and we are both really competent teachers and yet we both struggle with finding the right things to help teach this. We are really struggling. This is especially important when we have to help students learn to make reference to things in a text, in English and Spanish. The way you look for things in stories is different [depending on the language]. And, we are somewhat stubborn. We won't settle for stuff that has just been translated. It doesn't work. At all. We have to train people [who write materials] to know the kids and keep them in mind. Maybe even use student examples of work.

Finally, adding another layer of sociocultural impact Rebecca indicated:

It's ever harder for Native-American kids in our school. They might look a little bit Hispanic so, people think they are. They're not. There is a huge cultural disconnect for them. Every time I have a Native-American kid in my class, I think about how urbanized they are but, are less stable. I have to really work hard to help them understand school and the things we read. Sometimes they don't stay the year.



**Examining Teachers' Knowledge as it Relates to Professional Development Activities in
Dual Language and ESL Programs in Texas School Districts**

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Abstract

National statistics indicate that the population of English Learners (ELs) continues to rapidly increase (Ruiz Soto, Hooker, & Batalova, 2015), which means that there is a need for increasing the number of effective teachers who teach ELs (Samson & Collins, 2012). The purpose of this study was to investigate DL and ESL teachers' knowledge pertaining to: (a) research-based instructional strategies and instructional practices specifically designed for ELs, (b) second language development, and (c) research related to bilingual programs and whether the type of professional development received addressed the areas where teachers indicate they need additional information. The participants in this study were 335 dual language (DL) and ESL teachers from 40 school districts in Texas. Results indicated that there were significant differences between DL and ESL teachers' knowledge. In addition, the professional development training that teachers indicated receiving did not address their lack of knowledge as it related to: (a) research-based instructional strategies and instructional practices specifically designed for ELs, (b) second language development, and (c) research related to bilingual programs. Thus, the results of this study indicate that professional development training needs to be provided, that would assist DL and ESL teachers to enhance their knowledge base, so that they can provide more appropriate instruction to their students.

Introduction

The implementation of Two-Way Immersion programs has dramatically increased, with 824 programs offered across the U.S. (Center for Applied Linguistics, 2017). This increase may be attributed to studies that found educational, cognitive, socio-cultural, and economic benefits for students enrolled in these programs (Lindholm-Leary, 2016; López & Tashakkori, 2006; Maxwell, 2013). Research, for example, has found that students do not only do better academically when they are enrolled in additive programs (i.e., promote bilingualism and biliteracy) such as dual language (DL) programs, but that they experience more long-term educational gains than students in other types of bilingual or ESL programs (Thomas & Collier, 2012; Valentino & Reardon, 2015).

A critical feature of effective DL and ESL programs is having highly-qualified teachers (Hamayan Genesee, & Cloud, 2013; Howard, Lindholm-Leary, Rogers, Olague, Medina, Kennedy, Sugarman, & Christian, 2018). Successful DL and ESL programs have been found to incorporate several critical features including having teachers who are knowledgeable about language development, culture, and subject matter, and implementing effective teaching strategies (i.e., sheltered instruction, cooperative learning, and flexible grouping) (Hamayan, Genesee, & Cloud, 2013; Lessow-Hurley, 2012; Lindholm-Leary, 2012). Therefore, one way to improve the educational outcomes of ELs is to better prepare teachers by providing professional development training that focuses on providing them with more information about the knowledge base that they are lacking. Highly prepared and qualified teachers have a positive impact on the academic achievement of students, so we need to ensure that *all* teachers are prepared to work with ELs (Cadiero-Kaplan & Rodríguez, 2008). The purpose of this study was to examine DL and ESL teachers' knowledge pertaining to: (a) research-based instructional strategies and instructional practices specifically designed for ELs, (b) second language development, and (c) research related to bilingual programs and whether the type of professional development received addressed the areas where teachers indicate they need additional training.

Preparation for Teachers of ELLs

Teacher Preparation Programs

The lack of teacher preparation in DL programs is affected not only by the differences in requirements in teacher preparation programs, but also by the policies that exist in different states for implementing the programs (Martínez & Baker, 2010). State policies determine the requirements for teacher preparation programs and certification standards, thus creating across state differences for teachers' preparation. For example, some states do not have specific licensure for bilingual teachers, this creates a larger need for specific professional development that address the lack of teacher knowledge. Assisting teachers in enhancing their knowledge base can help them to be more successful in DL programs (Howard et al., 2018).

According to a national survey conducted by the U.S. Government Accountability Office (GAO) (2009), a mere 20% of teacher education programs required at least one course entirely focused on ELs and less than 30% required field experiences with ELs. Martínez and Baker (2010) point out that most teachers of ELs are trained in English-only teacher education programs and that although they are often native speakers of the target language they do not have opportunities to develop high levels of fluency and literacy in academic subject matter in the target language (i.e., Spanish).

Teacher Certification

A concern about preparing effective teachers of ELs is that many teachers are being prepared through alternative certification programs (National Council on Teacher Quality, 2015). Alternative certification programs recruit individuals with a bachelor's degree in other fields and train them to be teachers in a short period of time. According to the National Council on Teacher Quality (2015), at least one out every five teachers in the United States is trained through alternative certification (AC) programs. About 20 to 30% of new teachers being hired in the United States are drawn from alternative certification programs and these teachers often end up teaching in high-need schools (Kee, 2012). An evaluation of 665 alternative certification teacher preparation programs found that 76% of the programs did not include teaching ELs as part of the teacher training (National Council on Teacher Quality, 2015).

Considering the lack of preparation that novice teachers are receiving, it is not surprising that teachers do not have the knowledge base that they need and therefore do not feel prepared to teach ELs. Kee (2012) for example, examined how prepared mainstream teachers who had been trained in traditional certification (TC) programs, fast-track AC programs, and residency AC programs felt during their first year of teaching. Teachers in most TC programs had at least one to two years of preparation prior to teaching while teachers in the fast-track AC route usually had four to eight weeks of preparation prior to being full-time teachers and their teacher training continued part-time during their first year. The results of the study indicated that AC teachers reported feeling somewhat less well-prepared than those who were trained in TC programs. Teachers who had less education coursework and shorter field experiences also felt less-prepared than other teachers.

Since the routes for training for prospective teachers differ greatly in terms of the requirements that teachers must meet, it is important to determine whether teacher knowledge and perceptions differ depending on the type of certification route that they completed. Clearly there is not only a need to better prepare teachers to work with ELs, but there is also a need to identify the areas in which teachers feel they are lacking knowledge and skills, so that professional development trainings can be implemented that help teachers to more effectively teach ELs.

Professional Development for Teachers of ELs

It is crucial to provide teachers with professional development opportunities, especially when they work with ELs, since research has shown that many of teachers of ELs have had little or no professional development that was particularly designed to help them teach ELs (Gándara, Maxwell-Jolly, & Driscoll, 2005). Song (2016) examined the use of systematic professional development (PD) sessions using the sheltered instruction observation protocol (SIOP) and guided coaching as a way to compensate for the lack of knowledge teachers have prior to working with ELs. The results showed that effective PD positively impacted the teaching strategies and the attitudes that teachers had towards ELs.

Addressing teachers' knowledge as it relates to professional development experiences is particularly important in DL and ESL programs. More research is needed to determine the knowledge and professional development that in-service teachers have about second language instruction depending on the type of program that they are teaching. Thus, the present study investigates if there are differences between teachers in DL and ESL programs in regards to their knowledge base and the professional development experiences that they participate in.

In summary, previous research has identified having qualified and knowledgeable teachers as one of the critical features for effective DL and ESL programs. Also, several studies have been conducted in regards to the importance of teacher preparation programs, differences in teacher certification routes, and the need for effective professional development for teachers of ELs. In addition, research needs to be conducted to determine whether there are differences in terms of teachers' knowledge depending on the type of second language program that they teach in.

Purpose of the Study

There is ample evidence that indicates that most teachers lack the necessary training for teaching ELs effectively (Colombo, McMakin, Jacobs, & Shestok, 2013; Gándara, Maxwell-Jolly, & Driscoll, 2005; Téllez & Manthey, 2015). The need to provide teachers with the necessary training is also evident, so they can be successful in teaching (de Jong, Harper, & Coady, 2013). Thus, the purpose of this study is to examine teachers who teach in DL and those that teach in ESL in regards to their knowledge pertaining to: (a) research-based instructional strategies and instructional practices specifically designed for ELs, (b) second language development, and (c) research related to bilingual programs. It also investigated whether the type of professional development received addressed the areas where teachers indicate they need additional information.

The following research questions are addressed:

- a. What type of professional development training have teachers in DL and ESL programs received?
- b. Are there differences between DL and ESL teachers' knowledge pertaining to: (a) research-based instructional strategies and instructional practices specifically designed for ELs, (b) second language development, and (c) research related to bilingual programs depending on the program of instruction and grade level they teach in?
- c. Are there differences between DL and ESL teachers' knowledge pertaining to: (a) research-based instructional strategies and instructional practices specifically designed

for ELs, (b) second language development, and (c) research related to bilingual programs depending on the teachers' years of experience, route to certification, and their perceptions about their pre-service teacher preparation?

The results of this study may assist in tailoring professional development experiences for teachers working in DL and ESL programs in Texas.

Methods

Participants for this study were from 40 school districts in Texas. The size of the districts differed greatly (i.e., 29 large, 10 mid-size, and 1 small). According to the Texas Education Agency (2016a, 2016b), districts are categorized by size and type. In regards to the size, a large district has a student population of 10,000 or more, a mid-size district has between 1,000 and 9,999, and a small district has 999 or fewer. The majority of the teachers, 89.9%, worked in large school districts, while 9% were in mid-size districts and 1.2% in a small district.

In addition, districts are categorized as follows: (a) urban-represented by categories titled major urban and other central city, (b) suburban-represented by major suburban and other central city suburban, (c) non-metropolitan-represented by independent town, non-metropolitan: fast-growing, and non-metropolitan: stable; and (d) rural-represented by rural (Texas Education Agency, 2016a, 2016b). Eleven of the districts in the study were classified as urban, 22 as suburban, and seven as non-metropolitan. In fact, 38.5% of the teachers taught in urban, 54% in suburban, and 7.5% in non-metropolitan districts.

The percentage of ELs in the 40 districts ranged from 2.4% to 59.8%. In regards to ELs represented in the large districts, 10 districts had less than 10% of ELLs, nine had between 11-25%, seven had between 25-40%, and three had more than 40% of ELs. In addition, four of the mid-size districts had less than 10% of ELs while the other six had between 11-27%. ELs only represented 3% of the students in the small district (Texas Education Agency, 2016c).

Participants

The sample consisted of 335 teachers that taught in either a DL or an ESL program in grades Pre-Kindergarten through sixth grade. The ethnic backgrounds of the teachers were as follows: 72.2% Hispanic, 17.3% White, 2.4% African-American, 1.2% Asian, 2.7% biethnic, 2.1% other, and 2.1% declined to state. Teachers' experience ranged from first year teachers to teachers with over 20 years of teaching experience.

Instrument

The survey was adapted from an instrument developed by the Center for Applied Linguistics (Lindholm-Leary & Hargett, 2007). It included demographic items and 23 Likert-type items that focused on teachers' knowledge pertaining to: (a) research-based instructional strategies and instructional practices specifically designed for ELs, (b) second language development, and (c) research related to bilingual programs. In addition, the survey included two open-ended questions for teachers to provide additional information about the professional development experiences that they had received to support their DL and ESL instruction.

A priori grouping was used for the 23 items about teachers' knowledge and professional development/training. Table 1 shows sample items for each scale.

Table 1
Description of Teachers' Knowledge Scales

Scale	Sample Items
Research on bilingual programs	Research about two-way bilingual programs.
Instructional practices specifically designed for ELs	Developing of specific language objectives that are incorporated into all content.
Research-based instructional strategies	Differentiated instructional strategies for content areas.
Second language development	Theory of second language development.

The *Cronbach's alpha* reliability coefficients of the four scales ranged from .74 to .92, suggesting that the four scales are reliable in measuring teachers' knowledge. The inter-scale correlation coefficients, however, showed that most of the scales were moderately ($r > .40$) correlated with other scales. This suggests that the instrument does not have adequate discriminant validity and the scales are somewhat related to each other. Table 2 presents the alpha reliability coefficients and inter-scale correlations.

Table 2
Alpha Reliability, Inter-Scale Correlation, Overall Mean and Standard Deviation of the Teachers' Knowledge Scales

Scales	<i>Cronbach a</i>	Inter-scale correlation				<i>Mean</i>	<i>SD</i>
		1	2	3	4		
Research on bilingual programs (1)	.91	—	.37**	.64**	.55**	2.64	1.002
Research-based instructional strategies (2)	.86	—	—	.59**	.75**	3.76	.767
Knowledge about second language development (3)	.74	—	—	—	.68**	3.30	.809
Instructional practices specifically designed for ELs (4)	.92	—	—	—	—	3.58	.741

Note. **Correlation is significant at the 0.01 level (2-tailed).

Means are based on a 5-point scale with 5=very often and 1=never in regards to how much opportunity teachers have had to learn about each item.

Procedures

The survey was piloted and validated in a previous study with a group of teachers (Authors, 2015), was administered to 335 DL and ESL teachers at a professional conference or online. Teachers attending

the professional conference were invited to complete the paper/pencil survey at a table that was set up for this purpose. The survey took approximately 20 minutes to complete. Other teachers who were not able to complete the survey at the conference provided an e-mail address for the researcher to contact them at a later date. These teachers completed the survey online. A response rate of 77% was obtained based on the number of teachers contacted via e-mail and those who completed the survey in person.

Data Analysis

Descriptive statistics were used to analyze survey data and a priori grouping for the teacher knowledge items in the survey to determine dependent variables. MANOVAs were used to examine the differences in DL and ESL teachers' knowledge pertaining to: (a) research-based instructional strategies and instructional practices specifically designed for ELLs, (b) second language development, and (c) research related to bilingual programs based on years of experience, route to certification, and feelings of pre-service preparation. Open-ended responses were transcribed and categorized in regards to the professional development experiences teachers have in their respective programs. This was done using a multi-step process reflective of the constant-comparative method by reviewing the responses multiple times and searching for themes from the findings that emerged across participants' responses.

Results

Professional Development Experiences

DL and ESL teachers were asked to rate the three most frequent types of formal and informal professional development (PD) they had attended. DL and ESL teachers, respectively, reported attending formal professional development activities as follows: (a) face-to-face PD (72.28%, 73.25%), (b) curriculum-based training (65.86%, 65.11%), (c) education conferences/seminars (46.18%, 44.18%), (d) one-shot workshops (19.67%, 20.93%), and (e) on-line courses (18.87%, 13.95%). They also participated in informal PD activities: (a) informal dialogue with colleagues (59.43%, 39.53%), (b) reading professional literature (35.74%, 39.53%), and (c) working one-on-one with context expert (18.47%, 17.44%). Overall the findings indicate that both DL teachers and ESL teachers are participating in similar kinds of training. Nonetheless, DL teachers seemed to communicate informally with colleagues more often than ESL teachers.

Although the majority of the teachers reported having training related to working with ELs, a large percentage of DL teachers (40%) are not receiving adequate professional development to support their instruction in these programs. Open-ended responses indicated that DL teachers, participated in training about (a) second language strategies (e.g., "I learned how to use thinking maps to help them visualize abstract concepts and develop vocabulary"), (b) DL program (e.g., "Dual Language training was helpful because it helped me understand the program and how to implement it in my classroom"), (c) content areas (e.g., "It was a Language Arts/ Social Studies session. We were rotated around to different work stations to view various activities for upcoming TEKS"), and (d) Guided Language Acquisition Design (GLAD) (e.g., "I attended a GLAD training recently. I was taught strategies that will definitely help my limited-English proficient students").

Lastly, although the majority of ESL teachers reported having professional development opportunities, more than 30% may not be receiving adequate training to support ELs. In open-ended responses, teachers reported receiving training in: (a) sheltered instruction (SIOP) (“I participated in the SIOP training and was able to focus on a variety of important components to making the learning comprehensible to ESL students”), (b) literacy (“Yes, language arts, it was useful to be made aware of resources and be trained in new strategies to teach my ELLs”, and (c) English language proficiency standards (ELPS) (e.g., “Every year we are required to take professional development in our teaching area.”).

Differences on Dual Language and ESL Teachers’ Knowledge

Program of instruction and grade level. The MANOVA results with two factors (i.e., program of instruction and grade level) and four dependent variables (i.e., research-based instructional strategies and instructional practices specifically designed for ELs, second language development, and research on bilingual programs) indicated that there are overall differences on some of the dependent variables. There was a significant main effect for program type on teachers’ knowledge about second language development ($F=2.75, p = .000, Wilks' Lambda = .78$) although there was no significant interaction between type of program and grade level upon teachers’ knowledge about second language development ($F= 0.98, p = .543, Wilks' Lambda = .75$). In other words, the type of program that teachers taught in had an effect on their knowledge about second language development.

After conducting the multivariate and univariate tests, the researchers conducted Bonferroni post hoc tests for type of program and grade level. The results for the first post hoc test (see Table 3) indicated that teachers who teach in the ESL pull-out program scored significantly lower than the teachers who teach in DL programs (i.e., TWI 90:10, TWI 50:50, OWI 90:10, OWI 50:50, etc.), on their knowledge about research on bilingual programs. Interestingly, there were no significant differences between teachers who work in other ESL programs and teachers in OWI 50:50, on their knowledge about research on bilingual programs.

Table 3
Post Hoc Results on Teachers’ Knowledge by Program of Instruction

Dependent Variable	Type of Program (<i>M</i>)							
	TWI 90:10	TWI 50:50	OWI 90:10	OWI 50:50	DL Other	ESL self- contained	ESL pull-out	ESL- other
Research on bilingual programs	3.04 _{be}	2.81 _{be}	3.21 _{be}	2.69 _{bd}	2.61 _{bd}	2.49 _{cd}	2.23 _{acd}	1.95 _{cd}
Second language development	3.56 _b	3.49 _b	3.59 _b	3.22 _c	3.40 _b	3.05 _c	3.56 _c	2.67 _{ac}

Note. Means with differing subscript letters within rows are significantly different at the $p < .05$ based on Bonferroni post hoc paired comparisons.

Means are based on a 5-point scale with 5=very often and 1=never in regards to how much opportunity teachers have had to learn about each item.

Program abbreviations: TWI (Two-Way Immersion), OWI (One-Way Immersion), DL Other (Other types of dual language programs), ESL (English as Second Language).

In terms of knowledge related to second language development, the results also showed that teachers who teach in other ESL programs (those not in ESL self-contained, or ESL pull-out) scored significantly lower than the teachers who teach in DL programs on their knowledge about second language development. There were no significant differences between teachers who work in other ESL programs and those who teach in OWI 50:50, ESL self-contained, and ESL pull-out.

Years of experience, route to certification, and pre-service teacher preparation. The MANOVA results with three factors (i.e., years of teaching experience, route to certification, and perceptions of pre-service teacher preparation) and four dependent variables (i.e., research-based instructional strategies and instructional practices specifically designed for ELs, second language development, and research on bilingual programs) indicated that there are overall statistically significant differences on some of the dependent variables.

There was a significant main effect for teachers' self-perceptions about their pre-service teacher preparation on their knowledge about second language development ($F=3.79, p < .001, Wilks' Lambda = .85$), which means that these perceptions had an effect on their knowledge about second language development. There was also a significant interaction between years of teaching experience and route to certification upon teachers' knowledge about second language programs ($F= 0.78, p = .012, Wilks' Lambda = .78$). In contrast, the MANOVA results indicated that years of teaching experience ($F= 1.34, p = .169, Wilks' Lambda = .93$) and route to certification ($F=0.45, p = .970, Wilks' Lambda = .97$) did not have an effect on teachers' knowledge about second language development.

After conducting the multivariate and univariate tests, Bonferroni post hoc tests for years of teaching experience, route to certification, and self-perceptions of pre-service teacher preparation was conducted. The results for one of post hoc tests (see Table 4), not surprisingly, indicated that teachers who did not feel prepared prior to working with ELs scored significantly lower on their knowledge about research on bilingual programs and instructional practices for ELs than teachers who felt prepared, very prepared, and extremely prepared. On the other hand, teachers who felt extremely prepared scored significantly higher than teachers who felt less prepared on their knowledge related to instructional practices for ELs.

The results also indicated that teachers who did not feel prepared and those who felt prepared scored significantly lower on their knowledge about research-based instructional strategies and second language development than teachers who felt very prepared and those who felt extremely prepared. In addition, teachers who felt extremely prepared scored significantly higher on their knowledge about second language development than teachers who felt prepared.

Table 4
Post Hoc Results on Teachers' Knowledge by Self-Perceptions of Pre-Service Teacher Preparation

Self-Perceptions of Pre-Service Teacher Preparation (<i>M</i>)				
Dependent Variable	Not Prepared	Prepared	Very Prepared	Extremely Prepared
Research on bilingual programs	2.35 _a	2.48 _{bc}	2.80 _{bc}	3.52 _{bc}
Instructional practices specifically designed for ELs	3.27 _a	3.51 _{bc}	3.84 _{bc}	4.26 _{bd}
Research-based instructional strategies	3.52 _a	3.50 _a	4.08 _b	4.34 _b
Second language development	3.09 _a	3.11 _a	3.61 _b	4.12 _{bc}

Note. Means with differing subscript letters within rows are significantly different at the $p < .05$ based on Bonferroni post hoc paired comparisons.

Means are based on a 5-point scale with 5=very often and 1=never in regards to how much opportunity teachers have had to learn about each item.

In summary, the findings suggest that teachers who teach in DL and ESL programs need more information about research on bilingual education that may help them to implement more effective instruction. The results of this study revealed that DL teachers reported being more knowledgeable than ESL teachers about research on bilingual programs and issues related to second language development. Both the quantitative and qualitative findings showed that teachers could benefit from more training/professional development in regards to specific instructional strategies when they work with second language learners.

Discussion

The findings indicated that almost half of the DL teachers and almost a third of ESL teachers are not receiving adequate professional development that addresses ELs to support their instruction in these programs. This finding corroborates prior research since many of these teachers had little or no professional development designed to help them teach ELLs (Gándara, Maxwell-Jolly, & Driscoll, 2005). In the present study, DL teachers reported having participated in training about second-language strategies, DL program, content, and using state standards in lesson planning. ESL teachers mentioned attending training about sheltered instruction, literacy, English language proficiency standards, and second language strategies. These findings suggest that although both groups of teachers work with ELs, there is a difference in the types of training that they have participated in. Research has shown that effective PD that uses the sheltered instruction observation protocol (SIOP) and guided coaching is beneficial for teachers who are working with ELs (Song, 2016). This approach could be considered as a way to tailor the PD needs for DL and ESL teachers. Future professional development for ESL teachers should focus on topics where ESL teachers lack the appropriate level of knowledge.

Furthermore, teachers in both DL and ESL programs reported that they could benefit from specific professional development that would assist them in working with ELs. DL teachers stated that they could benefit from professional development about specific content areas, second language strategies, differentiated instruction, language and vocabulary development, working with parents, assessment,

culture, language transfer. Likewise, ESL teachers mentioned that they would like to attend training in regards to specific strategies to work with ELs, students' culture, language development, sheltered instruction, writing for ELs, differentiated instruction, and working with parents. These findings support prior research that have reported that teachers of ELs need training in regards to sheltered English instruction, ESL methods, first and second language literacy methods, and parent involvement (Batt, 2008; Hamayan, Genesee, & Cloud, 2013).

Both the quantitative and teacher comments from open-ended questions suggest that teachers could benefit from more training/professional development in regards to specific instructional strategies when they work with second language learners. Howard and colleagues (2018) emphasize the importance of having qualified and knowledgeable teachers in DL programs, which perhaps could justify why there were some differences on DL and ESL teachers' knowledge in regards to the program of instruction.

The findings from this study suggest that teachers of ELs may need more information about research on bilingual education regardless of the program they work in. This study asked whether there were differences between DL and ESL teachers' knowledge about research-based instructional strategies and instructional practices specifically designed for ELs, second language development, and research on bilingual programs based on a number of variables (i.e., program of instruction, grade level, years of experience, route to certification, and teachers' self-perceptions of their pre-service teacher preparation). The results indicated that DL teachers were more knowledgeable than ESL teachers about research on bilingual programs and second language development. This finding could be due to the fact that DL teachers may have had specific professional development that addressed ELs and/or were exposed to more field experiences with these students. Perhaps, ESL teachers may have added the ESL certification by exam without receiving in-depth training about working with ELs. In Texas, where this study was conducted, teachers are often ESL certified by examination. Future research needs to investigate whether certification by examination with little opportunity for field-based experiences impacts instruction.

There was a significant main effect for program type on teachers' knowledge about second language programs. For instance, teachers who teach in the ESL pull-out program perceived their knowledge to be significantly lower than the teachers in different DL programs on their knowledge about research on bilingual programs. Likewise, teachers who teach in other types of ESL programs rated themselves significantly lower than the teachers who teach in some DL programs on their knowledge about research on bilingual programs and second language development. This lack of knowledge may be linked to the type of teacher preparation some ESL teachers receive, especially those certified by exam, who may not receive the appropriate training to work with ELs. These findings suggest that teachers in ESL programs could benefit from more professional development geared towards research-based approaches and learning more about second language development.

In addition, the findings indicated that teachers who felt unprepared prior to working with ELLs scored significantly lower than teachers who felt more prepared in regards to their knowledge about research on bilingual programs, second language development, research-based instructional strategies, and instructional practices specifically designed for ELs. Perhaps, these teachers have not taken courses nor have they had field experiences with ELs. This lack of experience with ELs and lack of professional development related to ELs is typical of the majority of teachers in the U.S. These findings suggest that all stakeholders (i.e., educators, researchers, school/district administrators, policy makers) should examine the preparation that teachers receive prior to teaching, especially for those who work with linguistically- and culturally-diverse learners.

Limitations of the Study

It is important to address the limitations in the present study in regards to the sample and the instrument used, so that the results are interpreted with caution. First, a sample of convenience was used, which included volunteers from teachers in a large number of school districts in Texas. This selection bias impacts the ability to generalize the findings to the overall population (i.e., DL and ESL teachers in Texas).

Second, the reliability and validity of the instrument used should be addressed. Although the construct validity of the instrument was supported for the teachers' knowledge scales and the internal consistency reliability coefficients of the four scales ranged from .74 to .92, the inter-scale correlation coefficients showed that most of the scales were moderately ($r > .40$) correlated with other scales. This correlation suggests that this part of the instrument does not have adequate discriminant validity and the scales are somewhat related to each other.

Conclusions

Information about these programs will be helpful in that one of the critical issues in bilingual education has been the fidelity of program implementation. In fact, DL programs are effective when they are well implemented. Students, specifically ELs, in these programs perform better than those in other types of bilingual education programs (López & Tashakkori, 2006; Thomas & Collier 2012; Valentino & Reardon, 2015). Research also shows that effective second-language programs have highly qualified teachers (Hamayan, Genesee, & Cloud, 2013; Howard et al, 2018).

This study focused on examining whether there were differences in regards to the type of professional development opportunities that DL and ESL teachers receive related to teaching ELs and teachers' knowledge of second language related issues. This is of concern since research has found the need for teachers to be knowledgeable not only about their content area, but also about second language acquisition. Finding out what teachers know and what areas they need training in can be useful to tailor professional development in DL and ESL programs to improve teachers' instructional practices. The findings from this study contribute to the literature by examining differences that exist in knowledge and professional development training among DL and ESL teachers.

Future research needs to determine how this perceived knowledge translates to classroom practice. Additional research could validate the results of this study by using other data sources such as observations of professional development sessions in different school districts, examining the topics of professional development available in various training facilities (i.e., districts, regional service centers, universities), and by conducting follow-up interviews with both DL and ESL teachers. Conducting follow-up teacher interviews, for example, would allow us to ask questions based on the survey responses and ask probing questions to investigate specific concerns that teachers of ELs have in regards to their training. Directors of bilingual education programs could also be interviewed to find out how they select the type of training that DL and ESL teachers receive. In this manner, stakeholders could target areas where school districts should focus their teacher trainings.

The questionnaire used in this study could also be administered to a larger sample and/or include other school districts to find out if there are differences among these teachers. The need for further research is crucial considering the fact that the EL population continues to increase in the U.S., and a large percentage of ELs attend public schools in Texas. If we can provide teachers who teach in different second language

programs with more appropriate and effective professional development opportunities, then they can be better equipped to serve culturally and linguistically diverse students in the classrooms.

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**Contextualization in Culturally and Linguistically Diverse Classrooms:
Bridging between Students' Lives and the School Curriculum**

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Abstract

Contextualization—a particularly effective and powerful teaching practice for the instruction of emergent bilinguals and culturally and linguistically diverse students—essentially involves supporting learners to make meaning by connecting curricular content and language to students’ lives. Despite its utility, prior research has shown that contextualization, as described by the Center for Research on Education, Diversity and Excellence (CREDE), is challenging to implement and sustain. In this article, we synthesize research on contextualization, locating key challenges associated with its implementation, proffering ways of operationalizing it in the classroom, and suggesting opportunities for contextualization in teacher education/professional development. Wyatt’s (2015) research on contextualization practices of exemplary teachers and Herrera’s (2016) Biography-Driven Instruction method are featured in this article as sources of promising practices for enacting contextualization within a lesson cycle. Overall, we offer teachers and teacher educators a thorough discussion that will deepen their understandings of the art and science of contextualization.

Introduction

The notion of contextualization as a standard or benchmark for the effective instruction of emergent bilinguals and other students is the result of extensive, transnational research (Doherty & Hilberg, 2007; Tharp & Dalton, 2007; Tharp, Estrada, Dalton, & Yamauchi, 2000; Yamauchi, Im, & Mark, 2013). *Contextualization* as defined by the Center for Research on Education, Diversity and Excellence (CREDE) standards, fundamentally involves making meaning by connecting educational content and classroom instruction to students’ lives. Furthermore, in the context of culturally responsive/relevant pedagogy (Gay, 2010; Ladson-Billings, 1995), contextualization is an inclusive means of engaging students from underrepresented populations and/or students from culturally and linguistically diverse (CLD) backgrounds.

At one level, contextualization is of particular concern to teachers and teacher educators because of the potent differences between teachers’ lives/backgrounds and those of their increasingly diverse students. For example, during the 2011-2012 school year, 82% of the nation’s public school teachers were white, whereas only 18% were teachers of color (National Center for Educational Statistics [NCES], 2013). This stands in stark contrast to a varied school populace. For instance, during the 2012-13 school year, 49% of public school students were non-white—with 15.7% black, 24.3% Hispanic, and 5.13% Asian; furthermore, 9.2% of all public school students were English learners (NCES, 2015). Unfortunately, insufficient teacher training and professional development has been implemented to address the changing demographics of United States (U.S.) schools (Gay, 2010; Ngai, 2004; Sleeter, 2001; Teemant, 2014).

At a second level, it is well recognized—in both the educational literature and within the profession—that contextualization is integral to culturally relevant pedagogy (CRP) (Morrison, Robbins, & Rose, 2008). Contextualization informs two essential canons of CRP, as derived from Ladson-Billings’ (1995) seminal work. These are: 1) high academic expectations (a key aspect of which is *using students’ strengths as instructional starting points*) and 2) cultural competence (a theory-into-practice aspect, emphasizing *building on students’ funds of knowledge*) in teaching (Morrison et al., 2008; Young, 2010). Young (2010) suggests that the *theory-into practice* phase of CRP—involving pivotal facets such as contextualization—is essential to teachers’ ongoing, especially collaborative, implementation of appropriate praxis for diversity. In fact, Herrera (2016) has asserted that contextualization is foundational

to CRP because it builds upon both the *assets* and the *needs* that emergent bilinguals and other CLD students may bring to our increasingly diverse classrooms.

Nevertheless, recent research with content-area, K-12 teachers of CLD students has enigmatically revealed that teachers who were generally capable of effectively using CRP were often weakest in contextualization (Murry, Herrera, Miller, Fanning, Kavimandan, & Holmes, 2015). Numerous studies have shown that teachers experience problems enacting and sustaining contextualization in spite of professional development/training initiatives (Bravo, Mosqueda, Solís, & Stoddart, 2014; Murry et al., 2015; Nocon & Robinson, 2014; Teemant, Leland, & Berghoff, 2014; Teemant, Wink, & Tyra, 2011; Wyatt, 2014, 2015). These findings are disconcerting given the theoretical and foundational importance of contextualization to CRP.

The purpose of this paper is to synthesize research on contextualization and present and propose promising instructional practices for increasing contextualization. Moreover, this work endeavors to deepen teachers' and teacher educators' understandings of contextualization by addressing three research questions: (1) What are key problems associated with contextualization as described in research literature? (2) What effective teacher behaviors, strategies and/or techniques does the relevant educational literature recommend in operationalizing contextualization within an instructional/lesson cycle? (3) According to the literature, what shifts need to occur to better enhance candidates' and practitioners' capacities for effective contextualization through teacher education/professional development?

Theoretical Grounding

This paper focuses on contextualization during instruction with emergent bilinguals and other students, as conceptualized according to CREDE standards. CREDE (2002/2014) has outlined five, *Standards for Effective Pedagogy and Learning*: Joint Productive Activity, Language and Literacy Development, Contextualization, Challenging Activities, and Instructional Conversation. A sociocultural perspective in which learning is viewed as socially constructed and mutually negotiated between the learner and teacher informs these five standards. According to this view, the teacher creates a shared context for learning that takes into consideration the students' cultural, historical, political, or community experiences, the essence of which is captured in Standard 3 – *Contextualization: Making meaning [by] connecting school to students' lives*.

In other words, contextualization is the anchoring of new academic material in the context of the student's lived experiences and knowledge. When practicing contextualization, the teacher presents academic material in ways that account for students' pertinent experiences, prior knowledge, and ways of knowing. The teacher avoids presenting material in ways that rely on rules, abstractions, or definitions. Rather, the teacher draws upon students' background knowledge/experiences while illustrating that abstract concepts derive from the everyday world and that they can be applied to it (Doherty, Hilberg, Pinal, & Tharp, 2003; Tharp et al., 2000; Yamauchi, Wyatt, & Carroll, 2005; Yamauchi, Wyatt, & Taum, 2005). When fully enacted, contextualization is a significant vehicle for promoting student participation and engagement. Furthermore, contextualization establishes the crucial connection, or bridge, between the known and the to-be-known (Herrera, 2016; Tharp et al., 2000). Early researchers on the notion of contextualization have cautioned against over-simplifying contextualization, stating that it "is not a simple association between what is already known and what is new; [but rather,] it is an active process of sorting, analysis, and interpretation" (Tharp et al., 2000, p. 29). This foundational conceptualization of contextualization served as the foundation for the current research.

Literature Analysis

In order to answer the three research questions explicated in the introduction section of this manuscript, content analysis was used to systematize the classification and categorization of the pertinent literature from the domains of: culturally responsive teaching, TESOL, and teacher education. Content analysis is a research technique used to make reasoned and replicable inferences through the coding and interpretation of textual material (Bengtsson, 2016).

The method of content analysis enables the researcher to include significant amounts of textual information and systematically identify its properties, such as the frequencies of the [most used keywords](#) by locating the more important structures of its communicative content (Gunduz & Hursen, 2015). Sufficient quantities of textual information must be categorized to provide a meaningful reading of the content under scrutiny. Content analysis, in this case, was applied to four, online databases (ERIC, Education Full-Text, ProQuest Research Library, and JSTOR), Additionally, Google Scholar was used to identify the pertinent literature on the CREDE notion of contextualization. To ensure comparative fidelity, articles considered were those: (1) published in peer reviewed scholarly journals; (2) published in the year 2010 or later (to ensure currency); and (3) that utilized CREDE's Standards and the Standards Performance Continuum (or an adaptation of it) to evaluate teaching efficacy, and by extension, contextualization. The search yielded eight, research-based articles that fit these criteria.

In order to address the aforementioned research questions one and three, the researchers assumed a global perspective on issues surrounding contextualization, as the identified articles (Bravo et al., 2014; Herrera, Holmes, & Kavimandan, 2012; Murry et al., 2015; Nocon & Robinson, 2014; Teemant et al., 2011; Teemant et al., 2014; Wyatt, 2014; Wyatt, 2015) were analyzed. To answer research question one—problems with contextualization—the researchers identified central challenges associated with contextualization, by evaluating the research findings of identified articles. To answer research question three—improving and promoting contextualization in teacher education—the researchers used the research findings of representative articles to identify convergences of practical recommendations on how to bolster contextualization in professional development.

On the other hand, research question two targeted practical guidance on *how* to contextualize. Because question two is praxis-based—operationalizing contextualization in instruction—we focused on two key scholars, for two important reasons. First each of their scholarship enables teachers' understandings of promising classroom practices for contextualization. Second, each of their perspectives is informed by the CREDE standards (Herrera, 2016; Wyatt, 2015). Herrera's (2010/2016) *biography-driven instruction* (BDI)—a culturally responsive method that promotes differentiated instruction and student-teacher reciprocity—to create learning environment emphasizes contextualization as axiomatic to CRP. We also present Wyatt's (2015) research on contextualization. Aspects of her work parallel Herrera's phases of instruction associated with BDI.

Praxis, Contextualization, and Classroom Reality

Despite being foundational to culturally responsive/relevant teaching, recent research and analyses suggest that contextualization is difficult to enact and sustain (Bravo et al., 2014; Murry et al., 2015; Nocon & Robinson, 2014; Teemant et al., 2011; Teemant et al., 2014; Wyatt, 2014, 2015). First, contextualization may not be enacted at the same level as other CREDE standards. For example, although quantitative studies

indicate that teachers increase their overall usage of the CREDE Standards over time, when the standards are disaggregated and examined individually, a different picture emerges. Although teachers may demonstrate increased usage of contextualization in the classroom, it is commonly enacted at a lower/lesser level, relative to other standards (Bravo et al., 2014; Murry et al., 2015; Nocon & Robinson, 2014; Teemant et al., 2011; Teemant et al., 2014). Murry et al. (2015), for instance, observed a lower level of growth in contextualization and language and literacy development—in contrast to other standards—among K-12 public school teachers participating in professional development. However, they noted that when contextualization is enacted, it is sometimes the springboard to practitioners' successful development of skill sets related to other CREDE standards.

Second, even when contextualization occurs, it may not be sustained (Bravo et al., 2014; Nocon & Robinson, 2014; Murry et al., 2015; Teemant et al., 2011; Teemant et al., 2014). For instance, Teemant et al. (2011) observed that groups of both low and high performing teachers had problems maintaining contextualization in their lessons across training cycles. Furthermore, they described teacher usage of contextualization as incidental, meaning that it was not systematically integrated into the lesson.

The challenge of finding teachers who implement contextualization in a sophisticated way is also articulated elsewhere, most notably in Wyatt's (2015) work, which focused exclusively on contextualization. Specifically, Wyatt encountered difficulties in locating teachers who were implementing contextualization strategies at an enacting or integrating level. Thus, how to improve and sustain contextualization are key issues for consideration.

Although contextualization is challenging to implement and sustain in classroom practice, it is not because teachers don't perceive the value of it to appropriately differentiated instruction, such as CRP. Rather, teachers may desist from using contextualization strategies because of teacher, task, or environmental constraints, that may contribute to the slow internalization and implementation of contextualization, despite its importance to CRP (Bravo et al., 2014; Teemant, 2014; Teemant et al., 2011; Teemant et al., 2014; Wyatt, 2014). Possible teacher constraints include limited teacher training/preparation, teachers' lack of cultural awareness, unexamined beliefs, and the pervasiveness of the traditional, teacher-centered classroom. Task constraints associated with the delayed adoption or limited implementation of contextualization include: time constraints, difficulty in making contextualized connections within a lesson cycle, and a general emphasis on decontextualized learning. Last, environmental constraints that may limit or slow the maximization of contextualization may include factors such as testing pressures, district pacing guidelines, and curriculum constraints.

Operationalizing Contextualization in Instructional Sequences

At the very minimum, a lesson cycle consists of three parts—the opening, work time, and closing—although educational analysts have described lesson cycles in more elaborate ways (e.g., Hunter's [1994] 5-step model to direct instruction; Smith's [1998] accelerated learning model). The lesson cycle—opening, work time, and closing—can be easily superimposed on Hudson, Lignugaris-Kraft, and Miller's (1993) three-phase instructional sequence, which typifies what occurs during a lesson. Phase 1: Opening—pre-lesson activities are used to prepare the student for the upcoming lesson; Phase 2: Work time—new material and guided material are presented; Phase 3: Closing—students are engaged in independent practice.

We use this three-phase instructional sequence as the overarching, conceptual framework to compare the contributions of Wyatt (2015) and Herrera (2016), to the notion of incorporating contextualization into the lesson cycle. Although Wyatt's research summarizes themes that emerged from

her study of six teachers' contextualization practices, Herrera's BDI method, developed over the course of over 15 years of applied research, delineates the process of contextualization within the culturally responsive classroom. Wyatt's and Herrera's conceptualizations of contextualization are quite similar since they both draw from the works of key proponents of culturally responsive and relevant teaching (Gay, 2000; Ladson-Billings, 1995) as well as CREDE's five standards. [See Wyatt (2012, 2014) and Wyatt, Yamauchi, and Chapman-DeSousa (2012) for other CREDE related works. Refer to Herrera, Holmes, and Kavimandan (2012), MacDonald, Miller, Murry, Herrera, and Spears (2013), and Pérez, Holmes, Miller, and Fanning (2012) for representative works referencing Herrera's foundational method.] Given their practical approaches, the works of Wyatt and Herrera illustrate how contextualization can be operationalized within the context of a lesson cycle.

In addition, we provide examples of techniques and strategies that can improve contextualization within an instructional sequence. Examples include BDI strategies (Herrera, 2016; Herrera, Kavimandan, & Holmes, 2011; Herrera, Perez, Kavimandan, & Wessels, 2013), in addition to other (CREDE referenced) strategies as recommended by the National Education Association (NEA, 2011). Techniques from other educators who advocate for culturally responsive/relevant instruction are also suggested (Denton & Kriete, 2000; Powell, 2011).

Overview of Lesson Phases

In an attempt to address the dearth of knowledge regarding the process and steps for contextualization, Wyatt (2015) analyzed the decision-making processes of teachers who successfully enacted contextualization in their lessons. She compared and contrasted the ways in which high-performing teachers framed contextualization, discovering that successful contextualization was framed in three phases: (1) the invitation; (2) making the connection and practicing, and (3) ensuring arrival. These phases parallel the opening, work time, and closing phases of the typical lesson. Wyatt brings to the fore the agentive status of teachers, an aspect of CRP that has been previously underemphasized. This *teacher-agency* is central to instruction and contextualization, as teachers mediate instruction for students by making decisions about how to:

- Make the content relevant to students,
- Support learners to process and apply information, and
- Provide opportunities for students to demonstrate their individual learning at the end of the lesson.

Such agency further contributes to the meaningfulness of the lesson since what is meaningful to students is a product of their prior socialization, which filters what is typically perceived as relevant and irrelevant to their engagement.

Herrera's description of contextualization is elaborate because much of her work has been dedicated to the development of BDI, a reciprocal teaching and learning method, which utilizes "purposively integrated strategies and techniques" that promote culturally responsive pedagogy" (Herrera, 2016, p. 71). For Herrera, contextualization is not a singular act or occurrence within a lesson. To successfully enact contextualization, teachers must be responsive and adaptive to situations that emerge and evolve *in the moment of teaching*. That is, teachers find creative ways to use what students have shared, making connections between the lesson and what is *already* meaningful to the learners. Teachers build upon students' background knowledge (documented in the opening phase of the lesson) and emerging understandings to validate their learning, encourage them to make connections to the real world, and

highlight how individual contributions advance the learning of the entire classroom community. In short, contextualization is an on-going process that is interwoven throughout the lesson. Continuity within lesson phases is critical to BDI and is articulated in its three lesson planning phases: activation, connection, and affirmation (ACA).

BDI also supports an asset-based perspective towards teaching, as opposed to a deficit-based perspective (i.e., defining students as fundamentally lacking in linguistic skills, intellectual abilities, and so forth). Through understanding the biographies of CLD students (i.e., the sociocultural, linguistic, cognitive, and academic resources students bring to the classroom), teachers create an inclusive, low-risk learning environment that values student voices. The teacher is intentional in planning a BDI lesson, during which he or she: (1) provides opportunities for all learners to document and share initial connections between their background knowledge and the lesson concepts and vocabulary (Activation); (2) supports students in integrating new information with their existing understandings (Connection); and (3) monitors and affirms student understanding and progress through authentic assessment (Affirmation). These ACA phases are fundamental to structuring the BDI lesson and coincide with the opening, work time, and closing of the lesson.

Phase 1: Opening. Typically, in the opening of a lesson, the teacher stages a pre-lesson activity that prepares the student for the instruction and/or pedagogical activities to follow. Both Wyatt (2015) and Herrera (2016) specify that teachers should engage students in contextualization early, by accessing their experiences and/or knowledge. However, the authors differ in the types of knowledge/experiences that teachers can expect to activate and use to contextualize the lesson.

Wyatt (2015) asserts that in cases where the home or community culture is not a common denominator among students (or between the students and the teacher), the shared, everyday activities within the classroom itself (experiences) become particularly relevant. During the *invitation*, the teacher's role is to create a context that unifies students and provides them with a shared frame of reference for understanding the lesson material. More importantly, she argues that this *created context* does not necessarily need to be rooted in the students' background knowledge.

Wyatt notes that this is a markedly different approach than that espoused in research on *funds of knowledge* (González et al., 2005). That line of argumentation encourages teachers to gather information on students' cultural, historical, political, or community experiences prior to instruction. Proponents of using funds of knowledge in instruction consider students' perceptions, ways of knowing, and preferred approaches to learning as fundamental to CRP (Herrera, Holmes, & Kavimandan, 2012; Moll & Gonzalez, 2004). Wyatt's main point is that given the growing diversity in classrooms, such an approach of gathering funds of knowledge in advance of instruction oftentimes is neither realistic nor feasible. According to Wyatt, in this initial phase, teachers *create a context* to support contextualization by employing one of two strategies.

The first strategy involves teachers creating a context at the onset of the lesson. Subsequently, this strategy may then be used as a backdrop to teach new concepts. For instance, referring to a prior, whole-class experience is one way of creating a context. A teacher in Wyatt's study, for example, used a class trip to purchase items at the school's on-campus store as the basis for introducing the target math concepts of the lesson. Alternatively, teachers might attempt to activate the students' schemas by focusing on "points of intersection" (teacher quoted in Wyatt, 2015, p. 123) in order to teach new content. For instance, using pop culture (as opposed to home or community assets) is one schema-activating technique that was exemplified in Wyatt's research. Another featured teacher utilized students' initial illustrations and descriptions of their family members as a bridge to teaching fractions (although the teacher did not ask students about their existing knowledge of fractions).

According to Wyatt, a second strategy that teachers may utilize involves introducing the skill or concept prior to schema activation. The teacher first introduces the skill/concept (according to preconceived ideas about what will be most effective for the learning community) and then elicits students' background experiences to reinforce the lesson objective. To illustrate, one teacher began a lesson on conflict in literature with an overview of the types of conflict used in fiction. The teacher then prompted students to share connections to their prior experiences in and out of school that reflect conflict with themselves, nature, or another person. Overall, what Wyatt envisions is that in the invitation phase, teachers create a contextualized reference point for the students that is not bound exclusively to their home and community assets.

In Herrera's (2016) BDI method of instruction, the opening is the *activation phase*, in which student knowledge, language, and experiences function as catalysts for accelerating the academic and linguistic development of emergent bilinguals, CLD students, and other learners. Here, the teacher provides the students with opportunities to engage, in uniquely personal ways, with the lesson content and language. The teacher who maximizes BDI differentiates among three knowledge systems to which a learner is privy: (1) *funds of knowledge* (home assets)—the traditions, language, family dynamics, and cultural systems that are unique to the individual student and/or to the home environment (Moll & González, 2004; Herrera, 2016); (2) *prior knowledge* (community assets)—the experiences, knowledge, and skills that a student has accumulated through interaction with others in community contexts (Herrera, 2016); and (3) *academic knowledge* (school assets)—the knowledge and skills that a student has gained from his or her experiences in school settings (Herrera, 2016; Marzano, 2004). The rationale behind differentiating these sources of background knowledge is two-fold. First, it sensitizes teachers to the different types of knowledge/assets students bring to the classroom. Second, it provides teachers with multiple avenues for linking the known to the unknown -- that is, using student assets (e.g., culture, L1 and L2) as a scaffold for new learning.

During a BDI lesson, teachers use instructional preassessment tools to provide all students with the opportunity to activate and document what they know (and/or know how to do) about the topic and/or key vocabulary (using linguistic or nonlinguistic representations). For example, a teacher might simply share the topic with the students and have them use a simple A-Z chart to document words, images, and ideas from all three knowledge systems that they connect with the content.

Emergent bilinguals are encouraged to record words in the native language as desired/needed. The teacher observes students' responses, elicits elaboration, and documents background knowledge for further use throughout the current lesson. Through this process, the teacher enhances his or her ability to be responsive to the sociocultural, linguistic, cognitive, and academic resources of each learner, regardless of the number of cultures and languages represented in the classroom.

Wyatt (2015) and Herrera (2016) both strive to unpack how teachers activate and make use of background knowledge. Virtually, all teachers in Wyatt's study expressed challenges with relating personally to their students' experiences due to differences in their biographies of prior socialization. This perceived hurdle had an impact on the manner in which they strived to connect the lesson content to student's lives. Oftentimes the teachers in Wyatt's research tried to predetermine connections to the content that students might find relevant.

Herrera's method of providing the tools that allow for a multitude of individualized student connections to the content and language of the lesson ensures learners have additional points of access to the curriculum. Acknowledgement of multiple knowledge systems associated with home, community, and school assets demonstrates the multifaceted nature of the students' background knowledge. For Herrera, teacher awareness of these available sources of student knowledge is the starting point for enhancing teachers' capacities to contextualize instruction. Indeed, for teacher educators, this nuanced delineation of

student background knowledge is informative and purposive, as teachers gain an understanding of all the possible strands of knowledge they may weave into their teaching in increasingly diverse classrooms.

Three take-home points emerge from the combined works of Herrera (2016) and Wyatt (2015). First, contextualization is ideally enacted during the lesson opening and continues *throughout* the instructional sequences of a lesson. Second, teachers should be prepared to capitalize on the rich and multifaceted background knowledge (including funds of knowledge) and other assets that students bring to the classroom. Third, teachers can use their creativity to employ strategies and activities to lay the foundation for contextualization, even in heterogeneous classrooms.

Suggested activities from the literature target home and community assets that may be effectively maximized to develop a positive, culturally responsive classroom, ecology. These include: *Photographs of Local Knowledge Sources* (PhOLKS) (Allen, Fabregas, Hankins, & Hull, 2002), hopes and dreams for school (Denton & Kriete, 2000), and *biography cards* (Herrera, 2016). Herrera and colleagues (Herrera, et al., 2011; Herrera, et al., 2013) also provide more than 20 strategies, such as DOTS charts, for activating students' background knowledge in the opening phase of the lesson. Such strategies interactively encourage students to surface their prior experiences/knowledge and, thus, enable teachers to discover and document students' hidden assets so that they can be maximized throughout the remainder of the lesson.

Phase 2: Work time. During the work time of the lesson, the teacher presents new material and provides guided practice for students. Although Wyatt (2015) calls it *making the connection*, Herrera (2016) refers to work time as the *connection phase*. Broadly speaking, both Wyatt and Herrera treat this phase as the juncture where students' experiences are explicitly linked to the content and language highlighted in instructional standards and/or objectives. Both authors underscore the vital, facilitative role that the teacher plays in this phase, as he or she utilizes background knowledge/shared experiences to scaffold thinking toward the student's emergent understandings of the new content/concepts. Additionally, through the use of various types of tasks and group configurations, students become more actively engaged in the learning process.

According to Wyatt (2015), *making the connection* prompts the teacher to use lesson work time to connect students' experiences to the lesson objectives. The teacher systematically guides students through specific analyses and/or application tasks that require them to integrate their prior experience into a new learning context. What Wyatt describes here is a shift from students' reflection on prior experiential contexts to their engagement with the lesson's concepts. In other words, working through a contextualized analysis or application task is the means through which students advance their understanding.

Wyatt suggests that grouping can influence how a teacher contextualizes in a classroom. For example, the intimacy of small groups might work well for safe topics and sharing thoughts, whereas whole groups can bring the class together, aid classroom management, and facilitate writing on sensitive topics, which may be too personal for sharing in small groups. For Wyatt, the guidance that the teacher provides to support students' connections during this phase is of paramount importance to their cognitive processing of new information. Wyatt asserts that teachers play a critical role in promoting students' academic connections between the known and the to-be-known—a role that she claims has been understated in culturally responsive teaching.

During the *connection phase* of Herrera's (2016) BDI, students construct meaning and navigate the curriculum under the guidance of the teacher. For Herrera, the connection phase is crucial to contextualization because it is that aspect of CRP where $i + 1$ occurs, both linguistically (Krashen, 1985) and academically (Lucas, Villegas, & Freedson-Gonzalez, 2008). That is, the existing knowledge of emergent bilinguals and other students related to language and academic concepts (“ i ”) can be advanced to

a higher level of development (“+1”), provided that comprehensible input is a mainstay of the instruction/guidance (Krashen, 1985; Vygotsky, 1978). Such input offers the learner new language information in ways that align with his/her cognitive and linguistic abilities.

Herrera (2016) recommends three, differentiated techniques to promote contextualization during lesson work time: revoicing; strategic grouping; and confirming/disconfirming understanding. Teacher *revoicing* is accomplished through repetition, expansion, rephrasing, summarizing, and reporting of what students say or produce. Here, the teacher re-utters and builds upon students’ contributions, providing “CLD students with an opportunity to hear the teacher use their words, thoughts, and gestures to clarify or elaborate on what was shared and to make connections with the content” (Herrera, 2016, p. 119). Revoicing enables the teacher to model language and reroute student thinking as needed. The monitoring and situation-specific interventions that occur through revoicing allow teachers to explicitly connect background knowledge/experiences to academic content in ways that build upon students’ existing neural-networks. Such teaching increases the likelihood that new content will be retained in long-term memory (Herrera, 2016; Sousa, 2011).

Strategic grouping configurations encourage social and academic interactions in the classroom, thus increasing opportunities for development of language, content understanding, and sense of community (Herrera et al., 2011). A common mnemonic in BDI used to remember important variables in grouping structures and configurations is *i+TpsI*, where “i” highlights the individual’s unique assets/needs and background knowledge. Using this information, teachers employ grouping structures purposefully, throughout the lesson. Teachers create opportunities for total group (“T”) instruction, as well as partner (“p”) and small team (“s”) activities. The lesson culminates with teachers re-focusing activities on the individual student (“I”) -- the student by “this point has been empowered to apply the material in personally meaningful ways while demonstrating individual accountability” (Herrera et al., 2011, p. 7). In addition to working and discussing their thought processes with peers in various group configurations, students are also actively engaged in documenting their learning process. This documentation of learning often highlights differential *ways of knowing* and supports formative assessment, which enables the teacher to assess progress and informs their contextualization efforts during the rest of the lesson.

Teachers who implement BDI also *build in* opportunities for students to reflect upon their learning, in light of initial connections to their background knowledge. Students consider the information explored throughout the lesson to confirm/disconfirm the relevance of their initial associations. They are encouraged to recognize how their background knowledge served as a foundation for the meaning-making process. Alternatively, they acknowledge (as a result of reflection) how their initial conceptualizations did not align with the new information.

Overall, Wyatt (2015) and Herrera (2016) bring two key issues to the fore, as associated with this phase of the lesson cycle. First, contextualization continues well into lesson work time and is most valuable during this phase because *i+1* occurs here. Second, the agency that teachers exercise during the contextualization process facilitates students in making academic and linguistic connections and is fundamental to mediating learning.

Among activities from the literature that promote student interaction—an aspect of instruction highlighted by both Wyatt and Herrera—are carousel brainstorm (NEA, 2011), line-dance share (Laura Hampton, teacher qtd. in Powell, 2011), and BDI strategies such as thumb challenge (Herrera et al., 2013). Strategies that encourage the documentation of student work/progress, include BDI strategies such as active bookmarks (Herrera et al., 2011) and say something, write something (NEA, 2011). Such holistic activities

provide teachers with the opportunity to see/hear and respond to students' thinking (sometimes *on the fly*), in order to contextualize their instruction.

Phase 3: Closing. Generally speaking, students are engaged in independent practice in the closing of the lesson. Wyatt (2015) describes it as *practice and ensuring arrival*, while Herrera (2016) refers to the closing as the *affirmation phase*. Generally, (i.e., pedagogically-speaking), the assessment of learning is fundamental to completing a lesson cycle. Nevertheless, Wyatt points out that CRP (Gay, 2010; Ladson-Billings, 1995) has not emphasized this final step of determining whether students have met the intended goal of the lesson. According to Wyatt, this issue needs proactive attention in the profession.

For Wyatt (2015), contextualization culminates in *practice and ensuring arrival*, in which the teacher assesses if students have moved beyond the familiar and have mastered the new concept by the end of the lesson. To illustrate, some teachers in her research asserted that if students could utilize the new skill or show evidence of comprehending the concept in a decontextualized manner (e.g., on end-of-lesson tasks), then they would have met the academic goal (i.e., they would have *arrived*). Other teachers looked for evidence of new learning during activities. For example, they assessed the degree to which students were able to compare and contrast how a concept *played out* in their own lives with how it was presented in the lesson.

For Herrera (2016), *affirmation* of learning is the primary goal and is the final phase of the lesson cycle. The affirmation phase is characterized by authentic, post-instructional assessment and the documentation of progress. Using all the learning that has been documented throughout the lesson, the teacher asks the student to produce an authentic, written piece of work, demonstrating his/her progress/mastery of the concepts and language targeted. Assessment provides evidence to teachers and students alike that the destination has been reached (i.e., the learner has advanced to a higher level of development). The teacher attends positively to the students' affective filter as the classroom community celebrates their learning (e.g., new skills and understanding of concepts, new abilities to use academic vocabulary, end products resulting from students' efforts and learning, and completion of post-instructional assessments).

The primary unifying point that Wyatt (2015) and Herrera (2016) emphasize is that contextualization requires continuity throughout an instructional cycle, culminating in post-instructional assessment. This assessment piece should not be overlooked since it provides the teacher with valuable information on students' progress and mastery of content and language. These insights then inform subsequent instruction. Activities appropriate for in-class assessment include text representation (NEA, 2011) and BDI strategies such as IDEA (Ignite, Discover, Extend, Affirm) (Herrera et al., 2011; Herrera et al., 2013).

Contextualization in Teacher Education

This analysis of the pertinent literature on the notion of contextualization as defined by CREDE has suggested the demonstrably urgent need for culturally responsive teaching practices in our increasingly diverse classrooms. Pivotal to those practices is teachers' contextualization of praxis, as grounded in both the background assets that emergent bilinguals, CLD learners, and other students bring to learning, as well as the emergent understandings they develop as a member of a classroom community. Our analysis of the relevant literature provides the foundation for three recommendations that we consider constructive to the enhancement of teacher preparation/professional learning for contextualization.

First, if CREDE's *Standards for Effective Pedagogy and Learning* (2002/2014) are being used in teacher education programs, the order in which standards are introduced in training ought to be carefully considered. Murry et al. (2015) have argued that contextualization can act as a scaffold to develop other CREDE competences. In contrast, Teemant et al. (2011) recommend initial focus on language/literacy development, joint productive activity, and challenging activities, after which contextualization and instructional conversation can be targeted. Perhaps whether contextualization should be targeted first or not is a context-specific decision to be made during professional development. Nevertheless, the take-away point is that teacher educators and professional development designers should consider which CREDE standards could act as scaffolds to other standards, in order to optimize professional learning.

Second, our findings indicate that teacher educators need to refocus their capacity building efforts for teachers who are plying their craft in culturally and linguistically diverse classrooms. Teachers benefit from viewing themselves as routine and adaptive experts, as these are roles that they must assume in culturally responsive/relevant teaching, and by extension, in contextualization (Bransford, Derry, Berliner, Hammerness, & Beckett, 2005; Hatano & Inagaki, 1986; Nocon & Robinson, 2014).

However, Bransford et al. (2005) assert that efficiency and innovation are two dimensions underpinning the sort of expertise necessary for appropriate, instructional adaptations such as contextualization. Routine experts develop a high degree of procedural efficiency in stable environments (Hatano & Inagaki, 1986; Nocon & Robinson, 2014), whereas adaptive experts are able to expand the depth of their expertise by combining efficiency with innovation in rapidly changing environments (Bransford et al., 2005). The increasing diversity and complexity of teaching in today's classroom suggest that the latter expertise may prove decisive.

Nocon & Robinson (2014) assert that increasing cultural and linguistic diversity in the classroom are shifting the sorts of expertise required of teachers toward that which is best characterized as adaptive. Especially important, are the capacities to approach emergent bilinguals and other students as learners who bring sociocultural, linguistic, cognitive and academic assets and capital to the learning that is targeted in grade-level and other classrooms. Standards such as those of CREDE and the tenets of approaches like CRP offer teachers benchmarks and practices for adaptive expertise in these complex teaching environments. Essential to both is a new notion of contextualization that is often unfamiliar but purposively defined in ways that enable student-centered, culturally sustaining practices.

Third, teachers might benefit most if contextualization were addressed more explicitly in teacher education. For teachers to become skilled in contextualization, they must be able "to hold the academic objective in mind while monitoring learners' changing understandings" (Wyatt, 2015, p. 129). For this kind of adaptive expertise to develop, teachers need clear models to emulate (Bravo et al., 2014) and targeted feedback (Teemant et al., 2011). Ideally in professional development, teachers should: (a) be trained to analyze and/or explicitly label contextualization practices in an exemplary lesson plan; (b) implement contextualization; and (c) receive feedback on their enactment of it (Bravo et al., 2014).

A departure from traditional professional development that is well suited to advancing contextualization in teacher praxis is *instructional coaching*, a professional development model that Teemant et al. (2011) endorses, especially for teachers working with CLD students. A key proponent of instructional coaching, Knight (2007) defines it as an intensive, ongoing professional development approach that honors the equitable partnership between a coach and a teacher. In this professional alliance, the instructional coach provides differentiated support to the teacher (e.g., assistance with lesson planning; explaining and modeling best-teaching practices; observing teaching and providing feedback). Of critical importance, therefore, is the preparation of both administrative and instructional leaders who understand

the role of contextualization in effective instruction and who have the knowledge, skills, and practical strategies to support such efforts among teachers.

Conclusion

Through contextualization, teachers connect new concepts and language to the unique background knowledge of emergent bilinguals, CLD students, and other learners. Not only does contextualization help the student retain new material and develop language skills, but it also lends itself to building a stronger classroom community and increasing student engagement. Contextualization is by no means a singular teaching move within a lesson. Rather, it is a complex process, requiring adaptive teacher expertise throughout an instructional cycle.

Contextualization is best conceptualized as consisting of three primary phases that coincide with the opening, work time, and closing of a lesson. The teacher is invaluable in moving students from the known to a more advanced understanding of the new concepts and language, as well as ensuring that learning has indeed occurred. Considering how to strategically use background knowledge, group configurations, teacher talk (in revoicing and comprehension checking), and assessment (e.g., pre-, formative, and post-instructional assessment) are all part and parcel of contextualization.

Since contextualization calls for the teacher to be adaptive, creative, and versatile, teachers need appropriate support to become skilled at providing highly differentiated instruction. Ongoing, teacher education, therefore, is strongly recommended to develop and refine this expertise for the emergent and changing needs of increasingly complex classrooms. In turn, teacher educators are encouraged to more specifically and explicitly address the teacher, task, and environmental constraints frequently experienced by educators as they strive to implement contextualization in the classroom. Teachers would especially benefit from opportunities to reflect on these challenges and to develop techniques/plans of action for sustaining contextualization in the face of these constraints. Given the increasing diversity in classrooms, there is growing need for all teachers to master contextualization strategies, for the benefit of learners and teachers alike.

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Studying the Significance of the Home and Classroom Environments on Bilingual Hispanic Students' Academic Development

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Abstract

This study examines the home and classroom environments of academically at-risk Hispanic children. It examines the impact that these environments may have on students' learning attitudes and willingness to attend college. A total of 503 Hispanic children from third through fifth grades bilingual classrooms were recruited for this study. A model was constructed, and multiple pathways of the model were tested using structural equation modeling in order to examine the impact of the home and classroom environments on students' academic achievement. The results yielded the best fit model pathways with an acceptable lower value of χ^2 (19.02). Overall, the study reveals that home and classroom environments influence students' learning attitudes and willingness to attend college. These results stress the need for connecting across environments (e.g., home and classroom) in order to maximize at risk children's learning opportunities.

Keywords: home environment, learning attitudes, college readiness, at risk students, bilingual classrooms

Introduction

Research indicates that the home and classroom environments of bilingual children play an important role in their academic success and attitudes towards schooling (Farrington et al., 2012; Downey, 2008; Masten, Herbers, Cutuli, & Lafavor, 2008; Morrison, Brown, D'Incau, O'Farrell, & Furlong, 2006; Borman & Overman, 2004; Nettles, Mucherah, & Jones, 2000; Padron, Waxman, & Huang, 1999; Fraser, 1998; Waxman & Huang, 1996; Waxman, Huang, & Padron, 1997). In addition, the home and classroom environments significantly impact students' cognitive (e.g., academic mapping) and affective (e.g., self-efficacy) outcomes (Fraser, 1990, 1998; Haertel, Walberg, & Haertel, 1981). Furthermore, research points out that nurturing learning environments can assist in the development of positive attitudes in individuals (Dahl, Ceballo, & Huerta, 2010; Glasman & Albarracin, 2006; Rivera & Waxman, 2007). Also, nurturing learning environments provide protective factors for students' academic success (Rivera & Waxman, 2007).

Students' perceptions of these two environments (i.e., home and classroom), relative to their background characteristics, are more closely associated with their learning outcomes and willingness to attend college (Farrington et al., 2012; Wolf & Fraser, 2007). Furthermore, research indicates that creating connectivity across home and classroom environments will help to strengthen their active learning and further their willingness to attend college (Glasman & Albarracin, 2006). Therefore, examining the mediating role of home and classroom environments is vital in the process of identifying factors and points of leverage that may contribute to the development of students' self-efficacy, academic self-directed behaviors and positive attitudes towards academic achievement (Farrington et al., 2012; Glasman & Albarracin, 2006). Moreover, students' perceptions of their environments can help educators and parents to appropriately respond to students' academic development, learning opportunity, and life changes within the context of the home and classroom environments (Masten, Best, & Garnezy, 1990).

Theoretical Framework

This study focuses on learning environment research as for its theoretical framework. Learning environment research emphasizes the student-mediating or student-cognition paradigm,

which maintains that how students perceive and react to their learning environments (e.g., home and classroom) is essential regarding influencing students' outcomes (Knight & Waxman, 1991; Winne & Marx, 1977, 1982; Wittrock, 1986). Furthermore, Urdan, Solek, and Schoenfelder (2007) set a precedent that to better understand the relationship between students' learning environments and students' learning attitude and motivation, using the students' perception is highly recommended.

Literature Review

In the following contents, we review influences of each environment (i.e., home and classroom) on students' academic development, as well as the influences of collaboration across each environments on students' academic aspirations of attending college.

Home Environment

Home is the first and earliest social learning environment for every human being; parents are the first people that children socialize with (Urdan et al., 2007; Grolnick, Benjet, Kurowski, & Apostoleris, 1997). According to Berger (1991), parents are children's first teachers, and they strongly influence their children's minds, personalities, and intellectual development. Peterson, Cobas, Bush, Supple, and Wilson (2005) further argued that a positive home environment impacts children's life adaptation, self-esteem, and learning attitudes. In contrast, a detrimental home environment may result in children's negative learning attitudes, which later may negatively influence their academic performance and college readiness (Urdan et al., 2007; Peterson, Cobas, Bush, Supple, & Wilson, 2005). For example, families with few financial resources often find themselves living in environments where they are surrounded by extraordinary challenges to their well-being (Dahl et al, 2010). Dahl and associates (2010) also argued that parents' subjective neighborhood perceptions predict parental regulation strategies on what children and families can and cannot do. They further emphasized that the range of possibilities (or lack of possibilities) perceived and/or available to families may also affect children's learning attitudes and beliefs about attending college. On the other hand, when engaged, families can have a powerful effect on children's success in school (Fantuzzo, McWayne, Perry, & Childs, 2004). Furthermore, research also indicates that parental beliefs and expectations about their children's learning are strongly related to children's beliefs and attitudes about their own competencies and future academic achievement (Fantuzzo et al., 2004).

Indeed, active parental engagement and connectivity between the home and classroom environments promote better relationships between teachers, parents, and children. Furthermore, these better relationships support children's perceptions on the importance of education. For example, a meta-analysis of the research literature on the parental involvement conducted by Hill and Tyson (2009) yielded the statistically significant positive result that school-based involvement (e.g., parent-teacher partnership and communication) has a positive association with children's academic achievement. Another meta-analysis study (2012) discovered that there are four types of parent engagement characteristics that have a statistically significant positive effect (effect sizes) on children's academic achievement: (a) shared reading (.51); (b) teacher-parent partnership (.35); (c) checking homework (.27); and (d) teacher-parent communication (.28). For example, the effect size of programs that encourage parent/child share reading at home is .51 of a standard deviation, which equates to about .60 to .65 of a grade point. When parents participate in academic activities with their children, this engagement demonstrates an equivalent of 4 to 5 months' improvement in reading or math performance (Jeynes, 2012). Research also indicates that there are certain parental behaviors that support high achievement by low-income bilingual Hispanic students (Lara-Alecio, Irby, & Ebener, 1997). These behaviors are (a) having high academic expectations, (b) setting high

expectations in the completion of school, (c) connecting education with success, (d) expressing a desire to further their own education, (e) saving money for children's education, and (f) acting as a role model in acquiring an education. Engaging family breeds positive feelings toward the classroom and home environments and thus is supportive of the children's academic success (Parker et al., 1996).

Classroom Environment

A report conducted by the National Mathematics Advisory Panel (2008) showed that there are substantial measurable differences in the effectiveness of teachers in generating achievement gains in the classroom environment. Those differences in teachers account for 12% to 14% of total variability in students' mathematics achievement gains during an elementary school year. The report also showed that the effects of teachers on students' achievement can compound positively or negatively if students receive a series of effective or ineffective teachers (National Mathematics Advisory Panel, 2008). These findings point to the importance of the classroom learning environment on engaging students and creating positive attitudes during their schooling process.

A healthy classroom learning environment can develop and enhance students' positive learning attitudes, as well as academic success towards college (Rivera et al., 2017; Rivera & Waxman, 2011; Downey, 2008; Masten et al., 2008; Morrison et al., 2006). According to Waxman, Padron, Shin, and Rivera (2008), a healthy classroom learning environment consists of three main characteristics: (a) developing a more socio-culturally congruent and safe environment for students; (b) using feedback from students on both environmental and perceived importance of educational activities; and (c) tailoring learning opportunities that are positively viewed by students. By immersing students in such a healthy learning environment, their perceptions of their academic competency and confidence would be enhanced (Waxman, Padron, Shin, & Rivera, 2008). Their enhanced perceptions will be a critical mediator for their future learning engagement, academic performance, and college readiness (Wang & Holcombe, 2010).

Furthermore, the attitudes and perceptions of students towards their classroom learning environment have been studied by researchers and have yielded some important results. In one such study, Waxman and Huang (1996) compared the motivation and the classroom learning environment of Hispanic students and found that students in a supportive classroom learning environment had significantly higher perceptions of involvement, task orientation, rule clarity, satisfaction, pacing, and feedback. These findings indicate that these are important factors that need to be present in effective learning environments when seeking to foster students' academic success. In addition, when considering how to assist students to be college ready, the research by McGee and Keller (2007) indicates that there are five key characteristics that effective classroom learning environments support, and these characteristics serve to predict students who will go on to higher education. The characteristics include: 1) curiosity to discover the unknown, 2) enjoyment of problem solving, 3) higher level of independence, 4) desire to help others indirectly through research, and 5) a flexible, minimally structured approach to the future. These seem to be key characteristics that need to be fostered and supported in learning environments when seeking to engage students in the schooling process.

In summary, the research literature indicates that positive academic attitudes and academic resilience can be fostered and developed through improvements in the multiple learning environments in which children reside (e.g., home and classroom) as well as through the development of protective factors within those environments (e.g., mentors and a supporting network) (Masten et al., 2008; Masten et al., 1990). Research conducted by Walker, Shafer, and

Liams (2004) also indicates that Hispanic students develop more positive attitudes when they receive teachers' support in the classroom learning environment. This is important since learning attitudes influence students' views and aspirations towards their academic future. According to Kao and Thompson (2003), educational aspirations have a linear relationship with academic achievement (i.e., grades on tests, attendance and homework completion). Hurtado, Carter, and Spuler (1996) also found that positive learning attitudes impacts Hispanic students' willingness to attend college and their success in postsecondary education.

To examine the significance of the home and classroom environments on influencing the academic development of bilingual Hispanic children, a model was developed and tested. A path analysis using Structural Equation Modeling (SEM) was performed using survey data on students' perceptions of the classroom and home environments.

Research Questions

Two research questions are examined:

1. What is the relationship between home environment and classroom environments on students' educational attitudes?
2. What is the relationship between home environment and classroom environment on students' willingness to and attitudes on the importance of attending college?

Method

Participants

The participants were 503 third through fifth grade Hispanic students from six elementary schools implementing a Dual Language Bilingual program within one public school district. Descriptive statistics are based on this total sample of the population. However, for SEM, some cases were excluded due to missing data, which resulted in a total of 439 participants for the SEM analysis.

The school district was located in an urban city in the southwestern region of the United States. The schools serve predominantly Hispanic students (70%), and nearly all of them receive free or reduced-cost lunches (95%). The distribution by gender was 43.3% male students and 56.7% female students. Overall, the percentages reflecting the ethnic background of the participants were 90.6% Hispanics; .9% African Americans; 3.3% European descent, .2% American Indian, .4% Asian/Pacific Islander, and 4.6% other. The age range for participants was 7 years old to 12 years old (mean = 9.56). Participants' distribution by grade level was 26% third graders, 36% fourth graders, and 38% fifth graders. Overall, 84.5% of the participants were from elementary classrooms, and the remaining 15.5% were from secondary classrooms where the dual language program was also implemented.

Instruments

A bilingual survey (Spanish/English) was developed and piloted during focus groups with students. The survey contained 74 closed-ended items and was designed to gather: (a) students' background information; (b) systematic information on students' classroom learning environment; (c) systematic information on students' home learning environment; and (d) student's beliefs and attitudes towards

education and their perceptions regarding their future college possibilities. The survey also covered questions about: (a) students' school experiences; (b) students' school achievement; (c) students' parental involvement; and (d) students' perceptions on the benefits of education. A four-point Likert-type scale was used to answer questions on the construct of learning attitude, home environment, classroom environment; a binary scale was used to answer questions on the construct of willingness to attend college.

The average reliability (Cronbach's Alpha) value is .72. According to Lance, Butts, and Michels (2006), any value greater than .70 is acceptable. Examples of survey items and the Cronbach's Alpha values for each construct are provided below:

1. Classroom Environment:

- a. The sense of security: Do you feel safe at school? (*Cronbach Alpha = .75/5 items*).
- b. Interaction with teachers and peers: Does your teacher tell you how you are doing in class? (*Cronbach Alpha = .73/6 items*)

2. Home Environment:

- a. Attachment Security: Are there problems at home that make you feel lonely, and or feel like crying? (*Cronbach Alpha = .70/4 items*)
- b. Interaction with family members: Do your parents tell you to do your best at school? (*Cronbach Alpha = .74/6 items*)

3. Learning attitude:

- a. Active learning: When you are working on a class assignment by yourself and you do not understand something, do you ask your teacher for help? (*Cronbach Alpha = .64/3 items*)
- b. Academic performance: Mark the statement that best describes your grades, so far, from your classes this semester. (*Cronbach Alpha = .75/4 items*)

4. Willingness to attend college:

- a. Teacher's and Parents' expectations: Have your parents ever talked to you about going to a college or a university? (*Cronbach Alpha = .72/3 items*)
- b. Self-expectation: Would you like to go to college after high school? (*Cronbach Alpha = .76/3 items*)

Procedure

The procedure for this study involved two steps (1) survey development and (2) survey implementation.

Step1: For the development of the survey, we examined the literature on family/home environment research (Ramsdal et al., 2015; Sad & Gurbuzturk, 2013; Urdan et al., 2007; Peterson et al., 2005), effective bilingual teaching practices (Tong, Irby, Lara-Alecio, Koch, 2014; Tong, Lara-Alecio, Irby, Mathes, 2011), and dual language program models (Gomez, Freeman, & Freeman, 2005; Collier & Thomas, 2004) in order to better understand areas of focus for the survey. We also examined the literature on College and Career Readiness Standards (Neri, Lozano, Chang, & Herman, 2016; American Institutes for Research, 2014), as well as the literature on English Language Proficiency Standards (Council of Chief State School Officers, 2014; Texas Education Agency, 2007), in order to develop survey items addressing educational experiences in the two environments as viewed and experienced by the students during home and/or classroom activities.

The final procedure in the development of the survey involved two focus groups, one in Spanish and one in English, in an effort to do the final calibration of the survey instrument with elementary children from third through fifth grades. These focus groups helped us adequately address language ambiguity and/or revise unclear items.

Step 2: The survey was implemented among third through seventh grade dual language bilingual classrooms. A trained bilingual member of our research team applied the survey to the entire class during a scheduled time agreed upon with the teachers. Prior to the classroom visits, student assent and parent consent forms were obtained. Any student who did not have parental consent to participate in the survey used the survey time instead to complete their homework or work independently on other materials. Participating students were read a short paragraph indicating the survey procedures and were told that they had the choice to fill out the survey in either Spanish or English. The survey was read aloud by the researcher in both languages. The researcher then paused for questions, providing the students with ample opportunities and time to respond to the items. The same procedures were followed by the research team across all classrooms visited.

Results

The survey data was analyzed using SEM to test the hypotheses between the observed and latent variables in the study. Mplus was used for validation of the analyses. The path diagram for the tested model is presented in Figure 1 based on what the survey data revealed to be the best fit model. Note that the four latent variables are: (1) classroom environment; (2) home environment; (3) learning attitudes; and (4) willingness to attend college. Under each latent variable, there are two or three measured variables. Under classroom environment, the two measured variables were (1) the sense of security and (2) interaction with teachers and peers. Under home environment, the two variables examined were (1) the attachment security and (2) interaction with family members. Under learning attitude, the two variables measured were (1) active learning and (2) academic performance. Under willingness to attend college, the two variables measured were (1) teachers' expectations and parents' expectations and (2) self-expectation.

To examine the goodness-of-fit of the model, we adhered to several criteria for the analysis: the chi-square needed to be non-significant (Muthen & Muthen, 2001); the comparative fit index (CFI) needed to be larger than .95 (Bentler, 1990); the root mean square error of approximation (RMSEA) needed to be smaller than .05 (Browne & Cudeck, 1993); and the weighted root mean square residual (WRMR) needed to be smaller than .90 (Muthen & Muthen, 2001; Muthen, 2010). CFI is a measure of an overall improvement of a proposed model by examining the discrepancy between the data and the model (Byrne, 2006). RMSEA is a measure of the approximate fit of a model that pays much attention to degree of freedom and sampling error (Keith, 2015). WRMR is a measure of a goodness-of-fit of a model with categorical observed variables on different scales (Yu & Muthen, 2002).

With the examination of casual relationships among the four latent variables, the model yielded the following values: χ^2 is 19.02; the degree of freedom is 16; p value is larger than .05. The CFI and RMSEA of the model are 1.00 and 0.02 respectively. The WRMR (residual variance) is .48. Due to the non-significant difference of the p value, the model was found to be a good fit model.

Consequently, these results reveal that in children's perspectives, the addition of the home environment influences their learning attitudes and willingness to attend college more than just classroom environment alone. The model shows that 74% of the variance on bilingual students' learning attitudes can be explained by the home and classroom environments with a statistical significance ($R\text{-Sq} = .74, p < .001$).

Furthermore, a significant, positive association was also found between students' learning attitudes and willingness to attend college; the standardized coefficient was medium sized and significant (see Figure 1). The model shows that 38% of the variance on students' willingness to attend college can be explained by students' learning attitudes with a statistical significance ($R\text{-Sq}=.38, p < .05$).

The model also shows the indirect effects of classroom environment on willingness to attend college as statistically significant (standardized coefficient $=.38, p < .05$). Regarding the indirect effects of family environment on willingness to attend college, the results show significant differences (standardized coefficient $=.31, p < .05$). It is important to note that learning attitudes are directly influenced by the reciprocal relationship between home and classroom environments, which indirectly influences students' perceptions about attending college.

Discussion

The findings provide support to the research literature that emphasizes the importance of home and classroom two environments for the academic achievement of bilingual Hispanic students in the schooling process. Moreover, the findings further indicate the critical role of the home environment in children's learning attitudes. Clearly, the educational environment at home could influence and serve as a point of leverage for the development of children's positive attitudes and perceptions towards their education. The combined synergy of the home and classroom environments can serve to change the educational trajectory of these children from at-risk to excellent. In the next sections, the results are discussed in regards to the two guiding research questions examined in the study.

Impact of Home and Classroom Environments Pathways on Learning Attitudes

The results show that the home and classroom environments have a direct and positive relationship to children's learning attitudes, and that both environments play a significant role in mediating students' learning attitudes. The findings point to one important note of leverage: to maximize learning outcomes, the home and classroom environments need to be interconnected in efforts to support Hispanic students' academic development. The results imply that teachers and parents are strongly encouraged to act as a mediator or protective factors to support students' positive learning attitudes. Additionally, we suggest that teachers should act as a moderator to encourage parents to get involved in their children's school activities. We also suggest that parents and teachers need to closely work together to optimize the positive impact of the two environments on students' education. This is because incongruences and disconnections between parents and teachers can have a detrimental effect on students' academic performance and learning attitudes across time during their schooling process. Moreover, decontextualized classroom activities, hosted by teachers, can be viewed as less meaningful or disconnected by students who are facing challenging circumstances at home and in their neighborhoods.

In regards to the home environment, our study points to its empirical importance. A desirable home learning environment is one that supports school-related activities and includes meaningful and educational dialogue regarding college and family educational expectations. Therefore, the engagement of Hispanic parents in school-related activities is vital particularly for at-risk students. Moreover, our study shows that parents' participation in their children's school-related activities at home as well as in school can serve to support children's positive attitudes

towards school and education. Furthermore, active engagement can help parents better understand how to best assist their children in the development of positive attitudes towards education. For example, the conversations that some parents have with their children at home may contain instructional aspects and transference of basic values about schooling and its importance for their future, this in contrast to other parents who may simply tell their children to behave and stay in school. Although these last two items are not unwanted characteristic for the home environment, it is becoming much clearer that for at-risk students these less instructional conversations are not enough to foster academic success. To help at-risk students succeed academically, students may need more guidance and constructive educational conversation with both parents and teachers. This also implies that parents and teachers will need support in order to guide students. This is because the real client of any intervention is not only the individual child but includes the ecological systems where the child resides and interacts (O'Donnell, Tharp, Wilson, 1993). This includes the classroom environment as well as the home environment. Therefore, these two environments may also require teacher professional development as well as parental capacity building on how to best assist children in their respective environmental settings (O'Donnell et al., 1993).

Pathway to Impact Students' Attitudes and Willingness to Attend College

Our findings also show that the classroom environment has a direct influence on children's attitudes and willingness to attend college. Our findings, more importantly, also point out that the home environment have an indirect influence on children's attitudes and willingness towards attending college. These results point to the potential within the classroom environment at mediating the development of students' future college-going culture. However, it is important to state that the home environment still has an influence on students' learning attitudes. Therefore, the home environment still plays a significant role in what students perceive to be important. These findings point to the need for capacity building among parents in order for them to play a more impactful role in their children's attitudes and willingness to attend college. For example, research indicates that Hispanic students often encounter barriers to college access, for they seldom receive instrumental knowledge on the necessary steps to attending colleges (Auerbach, 2004). Furthermore, according to Tornatsky, Culter, and Lee (2002), most Hispanic parents also lack information and knowledge about college such as college admissions eligibility and college financial aid. In addition, parents with little or no personal college experience are not likely to possess knowledge about what economic and social benefit a post-secondary education will bring to their children (Olive, 2008). Olive (2008) argued that many Hispanic parents want their children to work instead of attending college after high school, partly due to their lack of knowledge on its benefits. However, if parents have college knowledge, children's educational aspirations for attending college are more likely to be enhanced (Olive, 2008). All in all, teachers and schools play a critical role in sharing with Hispanic parents and students the critical knowledge and strategies for college admission eligibility and planning. It is encouraging to know that this investment in the family can translate into a powerful influential role for the parents on the learning attitudes of their children. This in turn has a positive impact on the academic success of these bilingual children in the schooling process.

From a school programmatic perspective, this suggests that if we want Hispanic parents to support and influence their children's post-secondary education, these parents need to actively work with the teachers in a combined effort to support and in some cases develop a college-going culture at home with their children. However, this will also require a degree of support from schools to parents. For example, schools can begin to build capacity in parents by providing parents with workshops on college-readiness for their children (e.g., college enrollment requirements, information about SAT or ACT, and financial aid

for college). If parents have this information as well as a sense of the positive effect of a college degree, this may serve to mediate the attitudes that children develop earlier in their schooling process.

Conclusion

As stated earlier, research shows that students' perceptions of these two environments (i.e., home and classroom), relative to their background characteristics, are more closely associated with their learning outcomes and willingness to attend college (Wolf & Fraser, 2007). There seems to be consensus in the research literature that creating connectivity across these learning environments is an important step towards the development of positive educational attitudes by students (Wang & Holcombe, 2010; Masten 2008; Glasman & Albarracin, 2006).

In summary, this survey study examined the effect of the home and classroom environments on bilingual Hispanic students' educational attitudes and willingness to attend college. The research focused on predictors and protective factors for academic success rather than on characteristics of students' academic failure. This may help us design more effective educational programs to foster at-risk Hispanic students' academic success through future research-based capacity building activities in the home and classroom environments (Benard, 2004; Condly, 2006). The study examined the interplay between home and classroom environments as a potent antidote against at-risk factors that may otherwise adversely affect the educational trajectory of bilingual Hispanic students in the schooling process.

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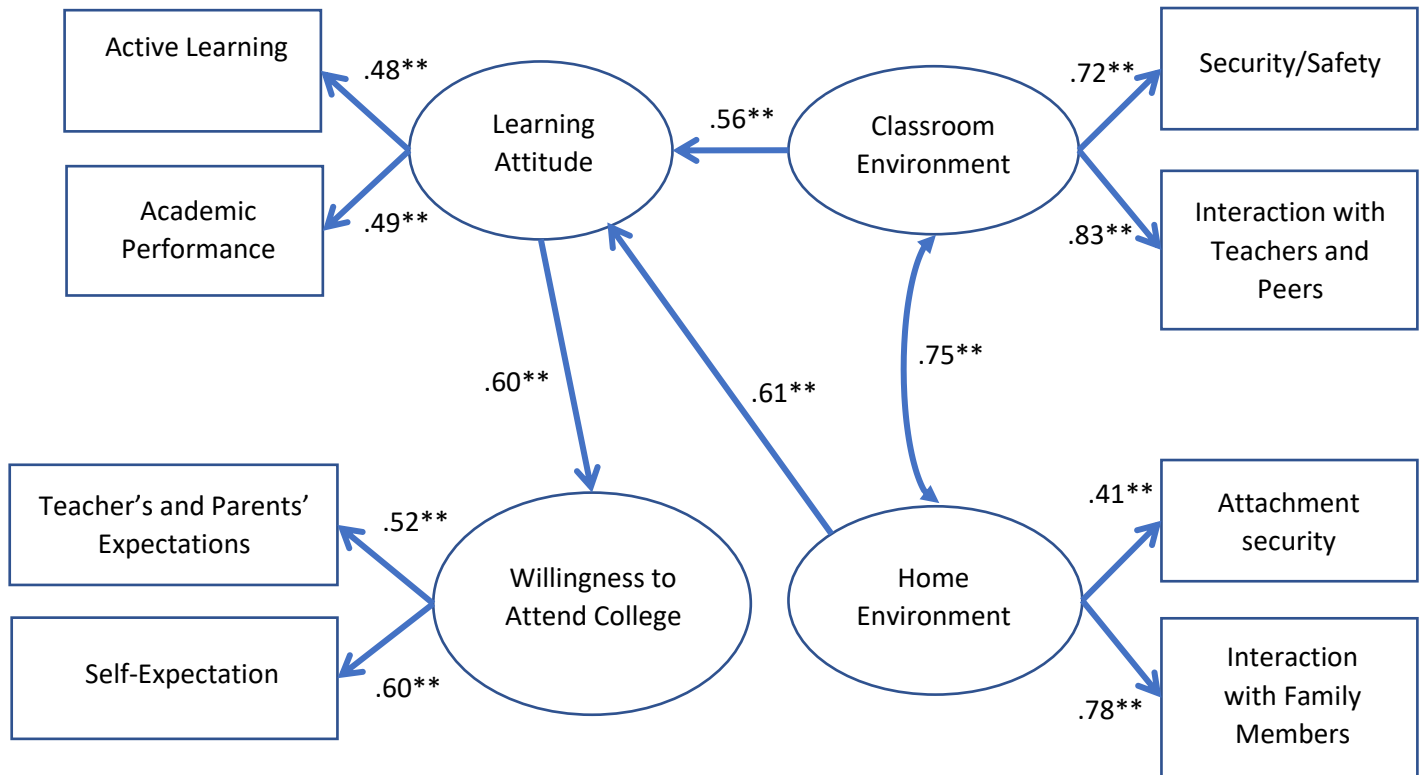


Figure 1. The best fit model with statistically significant pathways derived from the students' survey data.
 *p<.05, **p<.01



Knowing and Teaching Elementary Math to Bilingual Students: Examining the Role of Teaching Self Efficacy on Content Knowledge

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Abstract

Educational reform in the last several decades has attempted to increase equal access to high quality teaching of mathematics for all students. The persistent gaps in student achievement, particularly for bilingual children, have heightened attention to increasing the pool of teachers highly qualified to teach mathematics. In response, the Mathematics Professional Development for Teachers of English Learners (pseudonym for the purpose of the blind review) was established to develop elementary school teachers' mathematics instructional effectiveness for supporting the instructional needs of English Learners (ELs). Three domains of effective teachers and teaching were examined in this project: content knowledge, teaching and learning beliefs, and pedagogical skills. Results, from a mixed methods approach, suggests a positive relationship between self-efficacy and content knowledge, but a complex interplay between content and pedagogical knowledge and skill.

Introduction

Past empirical studies have identified effective teachers as those who have a positive impact on students' engagement in learning activities (Reeve, Jang, Carrell, Jeon, & Barch, 2004) and an impact on outcomes associated with students' learning – self-regulation, social competencies, and academic achievement (Roehrig, Turner, Arrastia, Christesen, McElhaney, & Jakiel, 2012). Also, well-documented is the strong sense of self-efficacy exhibited by effective teachers (Henson, Kogan, & Vacha-Hasse, 2001). Applied to teaching, self-efficacy refers to teachers' beliefs that they can bring about desirable changes in student achievement (Guo, McDonald Connor, Yang, Roehrig, & Morrison, 2012). Teachers with high self-efficacy believe they can positively affect student learning and accept responsibility for helping students make progress (Newman, Rutter, & Smith, 1989).

Teacher's knowledge and dispositions are also important in understanding students' outcomes (see Roehrig et. al., 2012). Clearly, teachers' messages to students, as well as the instructional methods they choose, are affected by teachers' values, beliefs and content understandings (Muijs & Reynolds, 2002). The purpose of this study was to examine the impact of professional development in mathematics on content knowledge and self-efficacy of elementary teachers who serve English learners (EL) including its impact on instructional practice. This study is part of a larger project aimed at cultivating teachers' beliefs about teaching and learning to correspond to, and induce instructional change in teaching math and science to ELs.

Theoretical Framework

Teachers commonly find justification for their teaching practice in sources which they themselves and members of their communities embrace – experience and the wisdom of practice – rather than research-based practices (Fives & Buehl, 2012). Beliefs, formed by larger communities based on knowledge gained by experience, serve the role of filters of information and experience. These can be viewed as frameworks to frame situations and problems as well as guides for intention and action in planning and moment-by-moment decision making (Fives & Buehl, 2012). Viewed in this way, beliefs affect teachers': (a) willingness to employ a new instructional approach, (b) engagement in sustained professional development, (c) active seeking

of new ways to engage students, and (d) effectiveness in developing students' content learning. Therefore, it is important to monitor beliefs during professional development efforts.

The Role of Teacher Self-Efficacy Beliefs

Luft and Roehrig (2007) suggest that teacher beliefs reveal how they view knowledge and learning and ultimately how they may enact their classroom practice. Karabenik and Clemens Noda (2004) found evidence to suggest that more confident teachers approach instruction anticipating success and engender positive emotions while less confident teachers anticipate failure and negative consequences. Thus, positive teacher beliefs influence positive attitudes towards teaching, which also influence instructional practice and classroom structure for learning. Past research has demonstrated that self-efficacy is predictive of individuals' choice to engage in a task, effort, as well as persistence in the face of difficulty (Bandura, 1997; Schwarzer & Schmitz, 2004). Therefore, it is important to examine and monitor teachers' self-efficacy in order to increase their engagement in professional development. In addition, research on the impact of teachers' self-efficacy on student outcomes has consistently shown that teachers high in teaching efficacy will work hard to ensure that all students learn, set high expectations for all students, and focus on mastery of the content (rather than passing the test) (Stevens, Harris & Dwyer, 2008). Finally, teachers with high teaching efficacy are more likely to experiment with new teaching strategies, even if they are difficult to implement (Hami, Czerniak, & Lumpe, 1996).

Perhaps if all teachers had high self-efficacy beliefs, professional development efforts would be more successful in producing instructional change. Unfortunately, the reality is that the great majority of professional development has not had such an impact. Teachers differ in their levels of self-efficacy; therefore, even professional development characterized as high quality could yield varying degrees of impact for distinct groups of teachers. How can teacher training be organized to engage all teachers at high levels for a prolonged period of time? How could teachers be encouraged to engage in difficult tasks if they have low prior knowledge of the content or have deeply engrained beliefs about students' learning ability or about teaching and learning?

Teacher Professional Knowledge

Teacher beliefs are also influenced through their own experiences and perceptions as learners that guide their actions as teachers and decision makers. Shulman (1986; 1987) argues that effective teaching is characterized by the successful integration of teachers' subject content knowledge and pedagogical knowledge (PK) as pedagogical content knowledge (PCK). When taken together as PCK, teachers may select the most appropriate activities and set their classroom structure to be conducive to learning through inquiry and discourse based practices. However, when subject matter knowledge is low, teachers tend to control discourse by questioning that avoids unfamiliar content (Carlsen). Such teacher-directed classroom discourse patterns are detrimental to EL learning as opportunities for oral language practice are limited, which may in turn reduce students ability to think critically, solve problems, and create passive resentment (Padron & Waxman 1999).

Professional Development for Teaching English Learners

Past empirical studies targeting EL instructional practice or PD have also focused on instructing ELs through structural approaches to language use by focusing on conventional language elements such as grammar, spelling, syntax, phonology, etc., with the belief that over time these will lead to greater fluency. Other studies have not been grounded in well-articulated theoretical models. Research and scholarship on bilingual/ESL PD relies on vague sets of competencies believed to be necessary to successfully work with ELs. These competencies include: (1) “best practices” for ELs (e.g., Gándara et al., 2005); (2) first and second language acquisition (e.g., Hakuta, 1986); (3) popular instructional programs such as sheltered instruction (see Knight & Wiseman, 2006). It is likely that these knowledge sets are important for teachers to develop, but extant research does not support strong claims to be made about the impact of these competencies on important teacher dispositions, behaviors, or student outcomes. Where there is a growing body of theory-driven research and scholarship is in disciplinary content literacy (structural and functional approach to language use in specific learning communities). Researchers from this perspective have examined ways in which both content and language knowledge support apprenticing students into content-based discourse communities.

Few studies have emerged for studying structural and functional approaches to language use when teaching math and science to ELs (Aguirre-Muñoz, 2014; Aguirre-Muñoz, & Boscardin, 2008; Aguirre-Muñoz, & Pantoya, 2016). These studies highlight the need for integration of knowledge bases as PCK and its effect on instructional effectiveness. Thus, PD requires the integration of knowledge and teacher beliefs for instructional effectiveness through content-specific language strategies and scaffolding in math and science.

We argue that teachers need to acquire knowledge on how students can use language within a discipline as a tool for communication and negotiation of ideas (Windschitl, 2002). This is congruent with a shift in more recent mathematical learning research focusing on how students construct knowledge, negotiate meaning, and participate in mathematical discourse (e.g., Moschkovich, 2002). If the linguistic needs of ELs are targeted, a teacher must also acquire knowledge on how to create opportunities that will allow ELs to communicate and negotiate ideas within a specific context and discipline (Aguirre-Muñoz & Amabisca., 2010). Merino (2007) identified four categories of knowledge that teachers should have when working with ELs, instructional practices specific to ELs, content knowledge, teaching academic English, and first language connections. These four categories of knowledge can be obtained by developing a strong foundation in second language acquisition theory and a deep understanding of mathematics content. Knowledge about subject matter will allow teachers to fully understand the content and clearly see the cognitive demands it places on each student. Knowledge of second language acquisition will provide teachers with the most effective instructional methods for ELs that includes how to teach academic language in a way that will encourage students to make connections to their first language. Because of the increased communication demands in mathematics, such as explaining solution processes and describing conjectures (Moschkovich, 2002) a vast understanding of language acquisition and mathematics is critical to properly serve ELs. These new demands require educators to reassess the design of their curriculum and instruction in order to successfully support the needs of ELs. It is the experienced educator who initiates and assists the less experienced student in learning and provides the relationship between

development and the cultural resources or tools that produce that development (Moll, 2000). In doing so, it is not only important for teachers to possess the knowledge base required to have a deeper understanding of content, but also be cognizant of the demands it places on ELs. “Insufficient knowledge of the subject matter can lead to misconceptions by both teachers and students” (Windschitl, 2002, 148). Thus, it is reasonable to argue that student misconceptions may be created and/reinforced as a result of content delivery that lacks effective use of research based practices for ELs. In order to give teachers the knowledge and skills necessary for successfully meeting the needs of all ELs, intensive professional development opportunities should address the challenges teachers of ELs face (Coady, De Jong, & Harper, 2010; Hernandez, Herter & Wanat, 2008).

To meet this challenge, teachers need access to high-quality sustained professional development that targets research-based practices. If teachers do not have the opportunity to participate in such activity, educational reform, however well-intentioned it may be, may not affect a substantial number of ELs despite attempts to address their learning needs (Gándara, 1994; Valadez, 1989). If mathematics reforms are to include ELs, professional development also needs to address the relation between language and mathematics learning from a perspective that combines current perspectives of mathematics learning with current perspectives of language, bilingualism, and classroom discourse (Moschkovich, 2002).

Mathematics PD for Teachers of EL (MPDTEL)

To induce instructional change of participating teachers and school support staff, this project was developed to support on-going and intensive professional development activities that are designed to improve classroom instruction for ELs in mathematics education. In-service mainstream and bilingual teachers serving ELs are required to complete five graduate courses designed to develop their pedagogical content knowledge in science and mathematics in relation to ELs. Thus, the program’s purpose is to: (1) promote effective science and mathematics education (SMEd); (2) increase opportunities for in-service teachers to engage in high-quality, sustained professional development in SMEd subjects that benefit ELs; and (3) improve instructional practices and student outcomes in elementary schools based on high quality data. The project components are further elaborated in the methodology section. The focus of this study is on examining the extent to which the program is impacting teachers’ mathematics knowledge, self-efficacy beliefs and instructional practice.

Research Questions

To address the need to improve all students’ learning opportunities, including that of ELs, we examined the following research questions:

1. To what extent did the *MPDTEL* increase in-service teachers’ content knowledge and self-efficacy to teach elementary mathematics to all students?
2. What is the relationship between self-efficacy and knowledge growth?
3. To what extent did the *MPDTEL* impact instructional practice and teacher beliefs about teaching mathematics?

Methodology

Sample and Design

A mixed methods approach was utilized to allow for triangulation of results and generate more robust conclusions about program process and effectiveness in changes within teacher knowledge, self-efficacy and beliefs.

Thirteen teachers and three support staff from two semi-rural school districts in the west Texas panhandle were recruited to participate in an intensive professional development program (described below) in elementary science and mathematics education. The average number of years teaching reported by the teacher participants was 9.50 years, ranging from 1 to 28. Three participants were academic support staff (an English-as-a-Second-Language teacher, a science coach, and a bilingual coordinator) whose combined teaching experience averaged 8.75 years; four teachers were currently teaching pre-kindergarten and kindergarten with an average of 3.00 years of teaching experience; the remaining eight teachers taught grades three to five with an average of 13.13 years of teaching experience. Five teachers are bilingual teachers in dual language programs, and five are mainstream teachers who serve ELs. All of the teachers were certified to teach in bilingual or English-as-a-Second Language programs. All teachers taught ELs; the range of percentages of ELs in their classrooms was 25% to 98%. The mean percentage of ELs across classrooms was 48%.

MPDTEL Program Components

Rigorous content and pedagogical courses. *The MPDTEL* requires teachers to complete five courses designed to deepen their science and mathematics content and pedagogical knowledge in relation to the needs of ELs in elementary grades. As such, these courses are aligned to state and national content standards (e.g., NCTM), as well as state and national English proficiency standards (e.g., Teachers of English Speakers of Other Languages, TESOL).

In addition to existing research-based EL instructional strategies (e.g., those highlighted in the Sheltered Instructional Observation Protocol (Echevarria & Short, 2009), focused attention is given to more recent and promising strategies that go beyond graphic displays and modified text as language differentiation strategies, providing ELs with a framework for coping with essential academic language in science and math curricula, to fully benefit from the current standards-based reform (e.g., Aguirre-Muñoz, Park, Amabisca, & Boscardin, 2008; Gibbons, 2003; Schleppegrell, 2004). To situate teacher learning in real-world teacher practice, each education course engages teachers in case study examination to fortify their learning of course material.

Continuous feedback on practice. In addition to increasing content and pedagogical knowledge, teachers are provided opportunities to critically reflect on their practice (Loucks-Hoursley, Stiles, Mundry, Love & Hewson, et. al, 2010). Course instructors, the project bilingual SMEd coach, and participating teachers utilize Teachscape *Reflect* technology (a system that integrates immersive panoramic video, and online collaboration tools with research-based frameworks) and web-based resources to record enacted lessons at multiple time points during program participation. This system also allows teachers to receive continuous feedback on their

practice, reflect on their evolving ability to engage ELs meaningfully in math lessons, and share their successes and challenges with other teachers. These features provide participating teachers with opportunities to continually enhance their practice.

Instruments

A combination of quantitative and qualitative instruments was used to obtain data to answer the research questions. Coding reliability of the interview, focus groups and written assignments provided by teachers during two courses suggests these data have adequate reliability.

Mathematics focus group discussion. Focus groups were conducted on a sample of teachers representing the range of grade level and teaching experience. Teachers were asked about their personal experiences in (1) learning mathematics; (2) teaching mathematics; (3) use of tools and manipulatives; (4) beliefs about mathematics; (5) impact of program courses on knowledge growth; and (6) instructional change due to program learning. To center the focus group discussion, a protocol was used to elicit information from areas consistent with the post-training surveys. Average kappa coefficient for each of the 6 components of focus group ranged from .66 to .82 based on the entire transcript of the focus group session. Kappa coefficients take into account chance agreement and therefore are more conservative measures of reliability Cohen, 1980).

Content knowledge measures. The math content knowledge measure is a 40-item multiple-choice test, that took approximately one hour to complete, designed to capture teacher math content knowledge. The items target the five strands outlined in the TEKS. These include: Numbers & Operations (10 items), Patterns & Algebraic Thinking (8 items); Geometry (11 items); Measurement (6 items); Probability & Statistics (5 items). Cronbach alpha indicated adequate reliability (n = 32) on the total measure is .89. Alpha indices on the sub-domains were also within the acceptable range and include: numbers and operations, .75; patterns and algebraic thinking, .74; geometry: .73; measurement, .80; probability and statistics, .83.

Self-Efficacy. To monitor teachers' self-efficacy to teach mathematics content, teachers completed self-efficacy measures targeting math instructional contexts. Teachers were presented with items from the state assessment representing each strand of the math Texas Essential Knowledge and Skills (TEKS) standards and asked to rate their level of confidence that they could: (a) answer the item correctly; (b) identify the underlying concept the item represents; (c) explain the concept to an average student (at grade level); (d) explain the concept to a struggling student (well below grade level); (e) create an integrated math/science lesson; and (f) develop a culturally or linguistically appropriate lesson that targets the concept.

For each of the 138 self-efficacy items, teachers recorded their responses on a Likert-scale scale ranging from 0 (no confidence at all) to 100 (very high confidence). Teachers rated their confidence in teaching mathematics topics corresponding to the sub-domains of the content knowledge measure. Strong validity information is provided in, Stevens et. al., 2008. We calculated Cronbach alpha indices for each sub-domain. They include: (a) numbers and operations: .85; patterns and algebraic thinking: .86; geometry: .83; measurement: .90; probability and statistics: .94.

Case study interviews. To capture teachers' developing pedagogical content knowledge, teachers were presented with two case studies describing an instructional event. The case studies

target subtraction and multi-digit multiplication. Both cases captured common content misconceptions elementary school students hold as well as described less than ideal teaching practices. For example, in the subtraction case study, Ms. Hill, a second grade teacher, is depicted as reinforcing the misconception that smaller numbers cannot be subtracted by a larger number (as in subtracting 5 from 4). Ms. Hill also uses the term “borrow” to explain why the number four becomes a 14 in the subtraction of 15 from 24. Although she attempts to ask conceptual questions, she answers her own question and provides a procedural explanation.

Participating teachers were asked questions to elicit identification of both misconceptions held by the students, the degree to which the teacher reinforced those misconceptions, and whether they could offer more effective pedagogical practices for the scenario depicted in the case study. For example, the questions pertaining to the explanation regarding the subtraction case included: *Has Ms. Hill effectively answered Timothy’s question about why the number 4 becomes a 14 and the number 2 becomes a 1? Why or why not?*

The case study interviews were transcribed, coded and analyzed for trends within teacher responses demonstrating their ability to identify the underlying concept presented in the case study.

Classroom observations. To structure feedback on instruction as well as monitor growth in instructional effectiveness, the English Learner Instructional Strategy Rubric (ELISR), an adapted version of the Project TEACH observational protocol (PTOP) (Salazar & Aguirre-Muñoz, 2011), was used to evaluate videotaped lessons and monitor growth in instructional effectiveness that promotes EL learning. Modifications incorporated two dimensions (language literacy development and contextualization) of the Standards for Effective Teaching Performance Assessment developed by the Center for Research on Equity, Diversity, and Excellence (CREDE; Dalton, 1998). Like the CREDE and SIOP instruments, the ELISR assesses the extent to which practices reflect the features of effective sheltered instruction such as comprehensible input, building background, and metacognitive strategies. Unlike those instruments, the ELISR also integrates recent conceptualizations of academic language instruction (see Aguirre-Muñoz & Amabisca, 2010).

The ELISR is comprised of 14 dimensions that assess classroom management, teacher content knowledge and practice, and effective teaching of ELs. A specific dimension, targeting content and language objectives, was added to reflect the degree of preparation of the integrated lesson. To foster subject matter concept development, dimensions that captured feedback and questioning were developed. Several dimensions were included to evaluate teacher ability to effectively prepare and deliver instruction free from content errors and misconceptions, activate higher order thinking skills and incorporate research based assessment practices. Additionally, dimensions were included to support the development of conceptual understanding of diverse learners consistent with effective EL content instruction

Scoring Videotaped Lessons

Raters viewed the video-taped lessons and made judgments for each dimension on the ELISR. Training on the ELISR began with careful review of the scoring guidelines. For each dimension, examples and non-examples were presented to contextualize the dimension qualities.

Following this discussion, raters viewed three videos and scored them individually. Scores were shared and discrepancies were discussed until consensus was reached. For each dimension, percentage of exact-score agreement was based on the sum of the scores for the process items which comprised each dimension. Percentage exact-score agreement is a rough measure of agreement because it does not take into account the percentage of agreement due to chance (Cohen, 1960). Therefore, percentage of exact-score agreement is an inflated reliability estimate. A more accurate index of reliability is the Kappa coefficient as it does take into account chance agreement (Cohen, 1960). An online calculator (Randolph, 2008) was used to calculate Kappa coefficients for each of the dimension scores. Percentage of exact score agreement for all 14 dimension ranged from 71% to 85% and kappa coefficients from .64 to .81 (Table 4). These indices indicate strong inter-rater reliability (Cohen, 1960). In light of the favorable reliability observed, the ELISR appears to be a reliable measure of the quality of instruction for ELs.

Results & Analysis

Changes in Teachers' Self-Efficacy to Teach Mathematics

Quantitative evidence. For each of the five scales of the self-efficacy measure, paired-sample t-tests were conducted. Table 1 presents the observed means self-efficacy to teach mathematics for two time points (Time1 and Time 2) by content domain and context (i.e., answers correctly, identify underlying concept, and explain concept). Time 1 was recorded in the first semester participation (spring), and Time 2 was recorded in the third semester of participation (fall) after three of the five courses had been completed. As presented in Table 1, increases in the self-efficacy means were observed for all but one of the 30 mean comparisons for mathematics. Seventeen of the observed increases for mathematics were statistically significant (p 's < .05). Mean patterns reveal that the most prevalent increase in self-efficacy was in teachers' confidence to develop culturally-relevant lessons as evidenced by significant increases in all five content domains. The next prevalent increases were observed in teachers' confidence in ability to integrate a science concept as evidenced by significant increases in all but geometry. The area in which teachers appeared to be the least confident was in their ability to explain a math concept. Only one (probability & statistics) of the five means was significant at Time 2.

Examining increases in teachers' confidence across the six areas of self-efficacy, teachers reported the most consistent increases in the domains of patterns & algebra and measurement. This is not surprising given that more time was expended discussing these math topics in the mathematics course they completed by the spring. Thus, it appears that engaging elementary teachers in complex problem solving can increase their efficacy to teach mathematics. Although some attention was given to pedagogical concerns, the main focus of the class was on mathematics content. This finding therefore lends support to claims by many other mathematics education researchers that teachers' content knowledge is an important background characteristic that needs development (e.g., Ma, 1999).

Table 1.

Descriptive Statistics for Each Scale of the Self Efficacy Measure (n = 14)

<i>Subdomain</i>	<i>Answer Correctly</i>		<i>Identify Concept</i>		<i>Explain Concept</i>	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
<i>Mathematics</i>						
Numbers & Operations	99.12 (1.86)	98.82 (2.74)	95.05 (8.50)	95.80 (6.34)	90.27 (10.90)	93.21 (8.07)
Patterns & Algebra	94.44 (8.14)	98.34 (4.27)	83.84 (16.43)	92.84 (9.14)	82.71 (15.74)	89.44 (9.68)
Geometry	90.09 (11.91)	95.93 (5.52)	84.93 (13.99)	92.55 (7.87)	83.21 (16.65)	89.43 (9.69)
Measurement	91.96 (11.57)	97.30 (6.02)	85.13 (15.42)	94.61 (7.79)	82.86 (16.95)	92.02 (8.81)
Probability & Statistics	89.30 (14.09)	91.32 (11.69)	82.96 (18.33)	89.07 (15.45)	77.36 (21.82)	83.86 (15.45)
<i>Explain Concept to struggling student</i>						
<i>Integrate Science Concept</i>						
<i>Develop Cultural Lesson</i>						
Numbers & Operations	77.42 (20.86)	81.25 (12.74)	47.02 (28.60)	64.51 (16.34)	52.97 (38.43)	66.38 (12.01)
Patterns & Algebra	94.44 (8.14)	98.34 (4.27)	83.84 (16.43)	92.84 (6.14)	82.71 (15.74)	89.44 (9.68)
Geometry	87.58 (13.71)	89.93 (12.24)	73.23 (19.27)	75.52 (18.87)	49.37 (26.65)	66.41 (9.59)
Measurement	66.54 (31.57)	74.92 (18.43)	36.80 (28.16)	68.27 (17.09)	50.53 (26.91)	60.84 (32.47)
Probability & Statistics	75.94 (21.89)	84.17 (11.69)	38.54 (28.33)	58.76 (10.75)	46.87 (36.81)	57.58 (21.27)

Qualitative evidence. The focus group discussion revealed that the majority of teachers struggled in math courses as early as middle school. They came into the math course with great reservations about taking a graduate level math course. Despite their reservations, the relatively high ratings on the self-efficacy measure suggest that teachers may believe their knowledge is sufficient for teaching elementary school. Themes that emerged from the focus group support this interpretation. One teacher expressed the belief that the number of years teaching gave her the pedagogical skills she needed to be an effective math teacher, “*experience and the valuable experience in teaching 10 years in kinder and pre-k.*” Many of the teachers attributed their success to pedagogical skills and their relationship with students as opposed to their mathematics understandings. This is consistent with Ma’s (1999) findings that U. S. teachers tend to rely more heavily on pedagogical knowledge. Unfortunately, Ma also demonstrated that pedagogical knowledge is not likely to compensate for lack of conceptual understanding. The focus group discussion also indicated that teachers’ are themselves coming to this realization. Teachers expressed the cognitive dissonance they experienced in the mathematics class with the need to bear this in mind as they teach new content to their students, as in the following teacher comments. “*I associated with my students’ feelings of frustrations when they don’t understand, I can relate.*” “*It was a gift that I was back in my students’ shoes, listening, studying, homework etc.*” Thus, for most teachers, engaging in mathematics problem solving gave them confidence in teaching mathematics.

Also important to report is that all of the teachers were able to identify multiple examples of activities they have modified as a result of the class. They attributed their changes to their increased confidence resulting from the mathematical knowledge gained. Their examples could be organized into (a) changes made to highlight conceptual connections among math concepts and (b) changes made to use cultural resources of their students to frame math lessons and assignments. A few (3) made concrete references to ways in which they were able to make lessons more conceptual and more connected to their lived experience. The excerpt below illustrates increased awareness of conceptually-based instruction as well as increased value of students' funds of knowledge in her planning/delivery of instruction. It is a long excerpt, but necessary for elucidating the impact of MPDTEL on their practice in these two areas.

“I didn’t really make the connection between perimeter and area before ... probably because I didn’t see this connection before this program. Of course perimeter and area are connected! ... So when I taught perimeter I wanted to make concept connections but I also wanted to make it real or relatable for them, to capture their attention. They were really into a cumbia song from one of the [local] Tejano bands, so I used that to capture their attention. In the classroom we had a math “*cumbia*” dance where we counted the *cumbia* steps around the area rug, then predicted how many more steps it would be around the classroom, around the school, and block. I guided them to make reasonable predictions. Then I gave them lots of different examples of measurements and asked them to find patterns. Two groups were able to describe the formula before I presented it. It was the most powerful instruction I had ever done... I texted Dr. A in tears because I couldn’t believe that they were sounding like little mathematicians and having fun. ...When it was time to link to area, I first used the paper analogy Dr. A shared. I used that because when I teach volume I need to continue with the layers or stack of individual papers to make up the ream to see the connection between area and perimeter. Before I used to just color in a box. Saying the outer edges is the perimeter and the shaded area is the area. This does not connect with many students and, as we have learned, it doesn’t make the connection to the formulas. I needed to change that. All I did was ask them to share with their partner how they could use what they know about perimeter to describe the paper. So this was my informal assessment of how they can apply their knowledge to new situations-[laughs] yes I needed to check for deeper understanding. Dr. A would be proud. I almost cried when my low students were able to participate in the discussion in a meaningful way. Some made reference to the two identical sides. I asked them to share with the class and wrote their descriptions on the chart paper so I can refer to it when I introduce the math pattern they identified. Then I gave them a hook. I told them that the paper also can be described with another math concept. They had 30 seconds to tell their partner what it could be and they wrote it in their math journal. Some got it... I didn’t tell them. It was hard not to, but then it would be like I told them instead of letting them discover it. So I used the context of a *tianguis* (flee market) space because most of the students in the class had family members who sold or bought goods at the local *tianguis*. I took pictures of the spots from two students’ family members. One was noticeably bigger than the other. I did make a reference to the math *cumbia* and

asked them if it can explain why the bigger one was better. Most said no, which was a relief but they couldn't really explain why. I held up the two sizes, two pieces of paper with different areas. I saw lots of lights going off in their heads. They asked me if they could have a partner share about the connections they just made. It's amazing how using what you know about students in your lessons makes them eager to apply hard math concepts and want to know more. ...so after more guiding questions the students connected the larger space with having more space (area) to place more goods and therefore make more money. ...I can't wait to teach volume and I used to hate it. I really thought it was too abstract for many... not anymore.

Patterns in Teachers' Mathematics Content Knowledge

Quantitative evidence. Due to logistical constraints, mathematics pre-tests were not administered to participating teachers. Instead, participating teachers' post-test results were compared to a comparison group of elementary school teachers. Several paired sample t-tests were conducted to compare the control and the *Proyecto* group means for each domain. As presented in Table 2, participating teachers out-performed the control group for all but one math sub-domain (probability & statistics). The greatest difference in math content scores was for geometry (5.00 and 7.50 for the comparison and participating teachers respectively) followed by numbers and operations (5.71 and 7.65 for the comparison and participating teachers respectively). The overall score was also significantly higher than the comparison group. These results demonstrate the program's promise in increasing teachers' mathematics content knowledge.

Table 2.

Descriptive Data and Paired Sample T-Test Results for Mathematics Content Knowledge Scores

Mathematics Content	Descriptive Data		T-Test Results		Effect Size
	Control	Project XX	t	p	n ²
Numbers & Operations	5.71 (0.99)	7.64 (1.74)	3.95	.001	0.95
Patterns & Algebraic Thinking	4.21 (1.25)	5.93 (1.87)	2.70	.012	1.10
Geometry	5.00 (1.11)	7.50 (1.83)	4.30	.000	1.70
Measurement	3.50 (1.61)	4.64 (0.63)	2.48	.024	1.01
Probability & Statistics	1.64 (0.85)	2.07 (1.21)	1.09	.286	0.41
Total Score	18.78 (3.96)	27.79 (5.79)	4.79	.000	1.83

Note: Numbers in parentheses are standard deviations; n = 24.

Qualitative evidence. Although the quantitative data shows that teachers are improving in their content knowledge, the case study interview data showed that many teachers were unable to identify common misconceptions held by students, despite their ability to identify the underlying concept. Qualitative evidence for the subtraction with regrouping case study indicated that out of the 15 teachers interviewed, only four were able to adequately identify the underlying concept, five somewhat adequately, and three could not identify the underlying concept at all. The teachers that failed to identify the underlying concept either agreed with Ms. Hill's ineffective use of strategies or did not react to her lack of conceptual understanding in teaching subtraction with regrouping. Additionally, teachers that identified the concept somewhat adequately identified the presence of place value, decomposition/composition of numbers or regrouping, yet failed to understand the mathematical relationships within. On the other hand, the teachers that adequately identified the concept had a conceptual understanding of subtraction with regrouping and

successfully described the mathematical relationships. This data also revealed that many teachers do not see the connection between less than ideal prior learning opportunities and the development of these misconceptions. For example, three of the pre-k and kindergarten teachers did not identify the misconceptions that Ms. Hill was reinforcing in her subtraction explanation and initially expressed discomfort in answering the case study questions. The following quotes illustrate one teacher's discomfort: "*I want to start over*" and "*this was tough.*"

All but one of the participating teachers used the term "borrow" when explaining regrouping. More than half of the teachers (7) agreed with Ms. Hill's statement that one cannot subtract a larger number from a smaller number. This pattern indicates that additional opportunities are needed to eliminate this misconception. In general, all of the teachers knew that place value is fundamental to understanding subtraction with regrouping; however, they were not able to explain how they would teach subtraction with regrouping to their students. Thus, in the case of regrouping, being able to identify the underlying concept did not appear to help teachers identify underlying misconceptions nor conceptualize a corresponding teaching strategy.

Similar trends were observed in response to the multi-digit multiplication case study. Analysis of the multi-digit multiplication case indicated that out of 13 teachers interviewed, five were able to adequately identify the underlying concept in the scenario, five somewhat adequately and three were unable to identify the concept at all. The teachers who were incapable of identifying the concept attributed their understanding to the procedural algorithm they were taught to multiply multi-digit numbers. Those who somewhat adequately identified the concept were able to identify place value and partial product alignment in isolation. However, teachers who adequately identified the underlying concept specified how place value contributes to the alignment of partial products when multiplying multi-digits.

Teacher questioning mirrored those in the subtraction case study. As with the subtraction case, pre-k and kindergarten teachers felt frustrated while answering the questions. Three upper elementary Science and English Language arts teachers said "*I am just not sure how I would teach multiplication*". These same teachers mentioned "*I would teach multiplication the same way I learned it, the traditional way.*" Only two different upper elementary teachers were able to explain different methods on how to teach multi-digit multiplication effectively. These same teachers stressed the significance of breaking out the multi-digit multiplication problem and having the students understand why and how they were multiplying. These teachers stressed that students needed to understand not just the process, but also place value, the concept underlying multi-digit multiplication. Similar to the subtraction case study, seven teachers were able to identify the misconception but did not know how to correct it.

Nine of the thirteen teachers realized the significance of understanding place value to understand more complex mathematical problems. Teachers were also able to identify the misconception that placing boxes as a place holder would not help students understand multi-digit multiplication. Unfortunately, they lacked the content knowledge necessary to specifically address the misconception. In response to the question about how to teach both topics, ten teachers suggested the use of manipulatives during instruction. Despite teachers' ability to identify the misconception and the underlying concept, they could not offer effective practices for teaching the content other than what they had experienced as students. Teachers continue to use default

pedagogies when faced with content they have not taught previously. This pattern clearly demonstrates the need for professional development programs to address content concepts in the context of instructional approaches and student misconceptions.

Relationship between Self-Efficacy and Content Knowledge Growth

Pearson-product correlation coefficients were computed to examine the relationship between teaching self-efficacy and content knowledge (Table 4). Moderate to high and significant correlations were found between math content knowledge and self-efficacy. Consistent with past research, this pattern indicates that as self-efficacy to teach math increases, content scores also increase. The strength of the relationship between self-efficacy and content knowledge for mathematics was, $r(12) = .60$ and $r(12) = .54$, (respectively for math pre- and post-test). Consistent with past research and theory, self-efficacy appears to be important in developing teachers' content knowledge. Future studies will also explore the relationship among self-efficacy, content knowledge, and growth in instructional effectiveness.

Table 4. *Correlation between Math Content Knowledge and Math Teaching Self-Efficacy Beliefs*

Measure	1	2	3
1. Post Math Content Knowledge	--		
2. Pre-Math Teaching Self-Efficacy	.54**	--	
3. Post-Math Teaching Self-Efficacy	.60**	.74**	--

Note: Pre=Pre-test, Post=Post Test, SE=Self-Efficacy; * $p < 0.05$; ** $p < 0.01$

Change in Teacher Beliefs about Teaching and Learning

Focus groups and reflective essays. We also found initial evidence of conceptual change in teachers' conceptions of quality instruction for ELs. Some interesting emerging themes have been identified from the focus groups and instructional reflection essays. In about a third of the essays, the realization of inducing greater engagement from students during mathematics instruction was identified as an instructional goal resulting from the video-taped lessons and feedback, as in the following comments, "[I] see the importance of clear definitions to begin a lesson and see the importance of full engagement ..." "Both the technology and math course have assisted me... in quality of teaching and level of student engagement." In both of these examples the teachers refer to an element of teaching quality that leads to more student engagement. Both teachers also claimed that they hadn't realized this prior to reflecting on their enacted lessons. This is consistent with recent perspectives of the impact of opportunity to learn on student outcomes. For example, Boykin and Noguera (2011) argue that student "engagement is the bellwether for enhanced student achievement. It is the precursor to gap-closing academic outcomes" (p. 40).

Another emerging theme related to beliefs about teaching mathematics is the need to capitalize on learning progressions and conceptually based instruction, particularly in the early grades, as in the following, "this ... allowed me to see that all math is interrelated and in kindergarten is where the foundation for future problem solving is laid ... and is key for future success... I now teach everything in terms of sets and use more [accurate] mathematical vocabulary with students."

Also notable is teachers changing conceptions of good instruction for ELs. *“This program helped me realize that I need to have better ways of learning about their home experiences. Lessons should always start with them,.. period. I thought I was a better teacher because I did spend time with them and their families, but I never took what I learned from those interactions to motivate students.. to help them stay focused. Hearing about how others tried that and seeing they had success, I was able to do that and every day I get better at it.”*

Despite articulated constructivist views by teachers, their responses to case studies (described above) also demonstrate their regression to traditional practices when they encounter new and unfamiliar content to teach. This is concerning as professional development programs could not possibly address all new content teachers may encounter. Future studies will explore this trend more directly.

Impact on instructional practice. For each of the fourteen dimensions of the ELISR, a paired-sample t-test was conducted. Table 3 presents the ELISR means for two time points (Time 1 and Time 2) by the rubric dimensions (e.g., classroom management, differentiation, assessment, and questioning). Time 1 was recorded in the first semester of participation, and Time 2 was recorded in the third semester of participation after three of the five courses had been completed. As presented in Table 3, increases in the instructional effectiveness were observed for all but 2 of the 14 mean comparisons for mathematics. Of the observed increases in the instructional effectiveness, nine were statistically significant (p 's < .001). This data indicates that the MPDTEL experiences were effective in increasing teachers' explanation of mathematics content. This was also evident in reflective conversations with the bilingual English learner SMEd coach. Significant growth was also observed in the dimensions of presenting clear content and language objectives, differentiation, and background knowledge which were areas that are consistent with the intensive coaching that targeted these areas. Feedback and assessment were also significantly higher at Time 2. Thus, increases in teachers' knowledge appear to have helped them provide more academically oriented feedback and more focused assessment of their students' content understanding.

Table 3 *Descriptive Data, Kappa Inter-rater Reliability and Paired Sample T-Test Results for Observational Findings (N = 12)*

	Time 1		Time 2		Kappa	T-Test Results		
	Mean	SD	Mean	SD		df	t-value	p
Classroom Management	3.86	2.60	4.67	2.46	0.77	11	1.60	0.14
Academic Literacy	3.46	2.02	4.75	3.33	0.64	11	1.33	0.21
Objectives	0.93	2.39	4.75	2.34	0.67	11	3.78	0.00
HOTS	4.39	2.84	3.75	2.96	0.72	11	-0.43	0.68
Differentiation	2.92	2.10	6.92	3.92	0.68	11	3.49	0.00
Background Knowledge	3.61	2.66	7.92	3.63	0.69	11	3.80	0.00
Content Knowledge	1.23	0.68	3.33	2.77	0.70	11	2.56	0.02
Feedback	2.07	2.95	8.75	4.11	0.75	11	4.38	0.00
Questioning	7.38	3.81	8.42	3.42	0.72	11	1.02	0.33
Assessment	4.00	2.79	7.92	3.00	0.79	11	5.50	0.00
Group/ Pair Work	4.76	3.14	4.00	2.09	0.76	11	-0.70	0.50
Background Language	2.69	1.75	4.25	2.80	0.81	11	1.88	0.08
Sheltered Instruction	11.61	2.98	13.83	1.75	0.79	11	2.12	0.06

Note: SD=Standard Deviation, N=Number of Participants.

Summary & Conclusion

This study sought to explore the relationship between teacher self-efficacy and content knowledge and to address the growing concern in the lack of professional development models centered on the professional learning needs of teachers serving ELs. A mixed method approach was utilized to examine the impact of a theory-driven approach to teacher learning on their growth in content knowledge, self-efficacy, and instructional effectiveness to teach mathematics content in general and ELs in particular. Data suggests that engaging teachers in complex problem solving in mathematics improves their confidence to teach mathematics content as well as increases their content knowledge. Ongoing significant interaction with the content acted as a catalyst for inducing changes in instructional beliefs which positively affected their self-efficacy. Strong teaching self-efficacy appears to positively affect motivation as well as initiate changes in their beliefs thus situating them to utilize the tools the MPDTEL exposed them to in order to provide effective instruction to all of their students. This is an important finding especially when considering the additional supports that teachers should utilize when teaching this unique population of students.

However, consistent with past research, content knowledge alone did not lead to improvements in instructional practice. Another significant finding was that despite teachers' ability to identify underlying concepts of instructional tasks and misconceptions, this content knowledge did not necessarily position them to identify meaningful ways to provide conceptual instruction in subject specific topics. Further, identifying the underlying conceptual target of an instructional event did not necessarily position teachers to identify the existence of misconceptions in student responses or teacher practice. Therefore, in order to develop the capacity to identify student misconceptions based on student responses and student work, professional development should provide equal and meaningful attention to a deeper understanding of content knowledge and conceptual instruction.

Given that teachers' instructional delivery did significantly improve in half of the ELISR dimensions, this study also reveals the complex interplay between content and pedagogical knowledge. This complexity is evident in the results demonstrating that teachers do not seem to hesitate to revert to traditional practices when faced with teaching a topic in which they are less knowledgeable or experienced. Given this trend, the challenge for teacher educators is to provide teachers with tools that will enable them to consider alternative solutions to this situation. The implications of this tendency is significant for ELs, as several national studies have found that teachers report being less knowledgeable about teaching ELs and are less confident in their ability to address their linguistic and learning needs. If teachers revert to traditional, undifferentiated instructional strategies, the future does not bode well for ELs in the era of increased rigor in content standards such as the Common Core State Standards. Continuous professional development that explicitly focuses on the development of understanding and delivery of conceptually-based teaching may be needed to become part of their everyday practice.

The results of this study further suggest that teacher educators should place equal attention to discipline-based issues that directly affect educational outcomes of bilingual students. Due to the lack of attention to language development needs of ELs, professional development programs place most of the attention on language learning without a discipline-based context. "Language development approaches to mathematics teaching is a focus on correction of vocabulary or grammatical errors (Moschkovich, 2010), obscuring the mathematical content in what students say and the variety of ways that students who are learning English do, in fact, communicate mathematically" (Moschkovich, 1999, p.12). While language learning needs are important, there is growing attention to the necessity to contextualize them in content-based situations in order to sufficiently address the academic needs of ELs (Moschkovich, 2010). The

results of this study support the need to address language learning needs within the context of subject areas as well as the need to address beliefs about learning in increasing linguistically diverse instructional settings.

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Bilingualism, Disability and What it Means to Be Normal

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Abstract

Bilingual education advocates believe that linguistically diverse students should have access to home language learning. Disabilities studies advocates believe that children with dis/abilities have the right to participate in mainstream education. For emergent bilingual learners labeled as disabled (EBLADs) inclusion in the mainstream often requires the acceptance of a monolingual education. The literature around normalcy offers a lens into how perceptions of dis/ability and bilingualism, in relation to “being normal,” impact the inclusion of EBLADs in multilingual learning environments. Existing work done around normalcy, dis/ability and race, has not explored how ideas of normalcy impact EBLADs’ access to bilingual education. This review of literature explores how the gap between these fields originated and continues to grow. Additionally, the way that the literature addresses both dis/ability and bilingualism can offer insights into how “normal” values are upheld within schools and within research. Recommendations for how to better serve EBLADs are also offered.

Keywords: bilingualism, disabilities, inclusion, normalcy

Introduction

Although bilingual children and children labeled as disabled are both represented within their respective fields by strong advocates who believe that these children deserve full participation in mainstream education, that ideology is not often extended to emergent bilingual learners labeled as disabled (EBLADs) with regards to home language development and maintenance. Current literature around normalcy offers the possibility that the ways in which dis/ability and bilingualism are viewed in relation to “being normal” can have a major impact in the inclusion of EBLADs in multilingual learning environments. While existing literature has not explicitly explored how ideas of normalcy impact EBLADs’ access to bilingual learning environments, there has been some work done around normalcy, dis/ability and race (Annamma, Connor, & Ferri, 2013; Baynton, 2013; Blanchett, Klingner, & Harry, 2009; Connor & Ferri, 2005; Erevelles & Minear, 2010; Ferri, 2010; Ferri & Connor, 2005; Liasidou, 2014). Additionally, the ways that scholars write about both dis/ability and bilingualism can offer some insight into how “normal” values are upheld within schools and within research.

The origins of “Normal”

Education is laden with terms that allude to being normal and values of normalcy: *average, typically developing, meets the standard, general education, mainstream, regular class, regular school, common branch*, etc. Although there is often talk about students being individuals in relation to anti-testing movements (Brangham, 2015; McKenna, 2015; Merrow, 2001; Shapiro, 2015), the collective “normal” continues to be used as the north star that guides measures of academic development, physical development and behavior. The word *normal* even had a place in teacher education. Before being called teacher colleges, teacher-training institutions were called normal schools. As such “[n]ormal schools were established chiefly to train elementary-school teachers for common schools (known as public schools in the United States)” (normal school | teacher education, n.d.). These schools “were intended to set a pattern, establish a ‘norm’ after which all other schools would be modeled” (Hilton, n.d.). In essence, the normal school was created to prepare teachers to teach to the middle. The varying programmatic options available

now were created in order to meet the needs of those who deviated from the norm either because of race, ability, or language. Although the term normal was not used in the same way, the legacy of normal and common schools — school as the place where norms are established — remains, as does a hegemonic ideology that doubly stigmatizes EBLADs for their dis/ability and their linguistic practices. Yet, few people question what it means to be normal and how “normal” came to be the defining criteria for all.

The term normal (and all of its subsequent baggage) comes from the statistical artifact known as the Bell curve, also known as the normal curve (Dudley-Marling & Gurn, 2010a). The normal curve of errors is the byproduct of multiple individuals:

[In the early 18th century] French-born mathematician Abraham de Moivre pioneered the theory of probability, formulating the mathematical formula that would later form the basis of the normal curve. [...] A generation later, Carl Gauss and Pierre-Simon Laplace applied Moivre’s theory to the distribution of measurement errors in astronomical observations. [...] [In the 19th century] Belgian astronomer Adolphe Quetelet appears to have been the first person to propose that the “normal curve of error” could be applied to the social realm of human beings (Dudley-Marling & Gurn, 2010b).

After passing through three sets of hands, the normal curve shifted from mathematical theory to a human categorical tool. Quetelet’s original intention was “to determine the average physical and behavioral characteristics of human populations” in order to identify the average man, who would be based on “a composite of average values across multiple variables” (Dudley-Marling & Gurn, 2010b). For Quetelet all “deviations from the mean denot[e] errors or imperfections in design” (Dudley-Marling & Gurn, 2010b). As such the mean would represent that which occurred most often as was therefore natural, while any variation represented an irregularity. Dudley-Marling and Gurn (2010b) write that this view on human behavior and human bodies laid the ground work for social Darwinism. However, our current understanding of normal as well as our present valuing and devaluing of deviation from the norm emerged from the work of Sir Francis Galton, founder of the eugenics movement. For Galton “the mean represented less than ideal since clustering around the mean were the undistinguished masses” (Dudley-Marling & Gurn, 2010b). In other words, that which is easily found is not worth coveting. Instead Galton focused his attention on the tail ends of the curve with “strength and brilliance at one end and weakness and feeble-mindedness at the other” (Dudley-Marling & Gurn, 2010b). As such, Galton “transformed the normal distribution into rankings so that one tail end of the normal distribution would be seen as optimal or desirable and the other tail as abnormal and undesirable” (Dudley-Marling & Gurn, 2010b). As a result of Galton’s work, people of different abilities, sexualities, phenotypes, and race are often stigmatized, and viewed as deficient and undesirable (Hansen & King, 2013; Kline, 2001; Köhl, 2014; Munyi, 2012; Pernick, 1996; Reid & Knight, 2006; Stepan, 2001). In *Disability Rhetoric* Jay Dolmage writes that “[w]e might recognize the normal position, when we think about it, to be able-bodied, rational-minded, autonomous, polite and proprietary, and so on. In North America, the normal position is also middle to upper class, white, male, western European, preferably American, overconfidently heterosexual, right sized, and so on” (2013, p. 21). He goes on to say that “these norms change, but the presence of a desired, central, and privileged position persists” (Dolmage, 2013, p. 21).

For EBLADs, the distance from the privileged position is great and as such they face particularly oppressive educational experiences. Leonard Baca, Professor of Education at the University of Colorado, Boulder, is quoted as saying that “English-language learners with disabilities were once referred to as the triple-threat students because they have three strikes against them: disability, limited English proficiency, and lower socioeconomic status⁷,” (as cited in McBride, 2008). Although these students may no longer be referred to in this way, these qualities are still viewed as problematic because they are identified as resulting in lower academic achievement (Chapman, 2015; Klein, 2016; “Map,” 2015; Samuels, 2015). As such, students who possess them are deemed undesirable. In order to understand how these “three strikes” come together to form a “triple-threat student,” one must understand the place of dis/ability, linguistic variance, ethnicity and socio-economic status in a world so consumed with the concept of “normal.” In an effort to present bilingualism and dis/ability in relation to normalcy accurately, this section of the literature review will first present them as separate identity markers. This division of terms will highlight the fact that dis/ability and bilingualism are both considered to be atypical characteristics within the North American education system. However, if placed on the normal curve one would notice that they stand on very different ends of the curve, with dis/ability being viewed as a deficit and bilingualism as a benefit. Later the terms will be unified in order to underscore the fact that when the markers are combined, the deficit view of dis/ability supersedes the potential gains of being bilingual particularly when a student is also poor and in possession of a brown body.

Dis/ability as Condemnation

“[T]he very concept of normalcy by which most people (by definition) shape their existence is in fact tied inexorably to the concept of disability, or rather, the concept of disability is a function of a concept of normalcy. Normalcy and disability are part of the same system” (Davis, 1995, p. 2).

Within schools, disabilities are overwhelmingly viewed through a deficit model that typecasts learner (and human) variance as “a defect that should be cured or remedied” (Dolmage, 2013, p. 20; Gorski, 2011; Harry & Klingner, 2007; Humphries, 2013). As such “[any] person with a visible physical impairment (someone with an injured, nonstandard or nonfunctioning body or body part) or with a sensory or mental impairment (someone who has trouble hearing, seeing, or processing information) is considered disabled” (Davis, 1995, p. 1). According to Pfeiffer (2002),

There are three variations of the deficit model: the medical model, the rehabilitation model related to employment, and the special education model. Each model specifies a deficit (health condition, employment condition, learning condition) which must be corrected in order to make the person with a disability “normal.” Of course, many of these conditions cannot be corrected (whatever that means) so that the person with a disability will never be allowed to be normal (whatever that means) (para. 4).

⁷ Socio-economic status is often used as a euphemism for race (Anyon, 2005). Given that all English language learners with disabilities are ethnic minorities one could argue that this is the case here (National Center for Education Statistics, 2010).

The most prevalent model is the medical model which creates a climate in which “[t]he overriding political feature of interventions administered by medical practitioners is that it brings all dis/ability groups together under a single medical interpretation of the cause behind their marginalized position in society” (Finkelstein, 1993, p. 5). In schools, the medical model takes shape as the special education model which positions the student as the sufferer of an academic deficit, while the school is framed as both the experts and helpers who must categorize, treat and prescribe said deficit (Finkelstein, 2004; Pfeiffer, 2002). This is particularly evident in educational policies that focus on intervention and remediation (Grosche & Volpe, 2013), as well as those that measure success by how well a student *meets the standard* and how much of the general education curriculum they are able to access—the academic equivalent of approximating normal (J. L. Martin, n.d.; “Promotion Criteria Guidelines for Students with Disabilities in Grades 3-8,” n.d.).

The history of people labeled as disabled is riddled with stories of isolation and discrimination (Danforth, 2014; Fleischer & Zames, 2012). This isolation stems from the perception that *they* are unlike the rest of *us* (Williams, Pazey, Fall, Yates, & Roberts, 2015). People labeled as disabled have been thought to hold a connection to the paranormal; to be the subjects of karmic punishments; to be dangerous; to be incompetent, and incapable of leading happy, successful and independent lives (Björnsdóttir & Traustadóttir, 2010; Kamei, 2014; McHatton & Correa, 2005; Michie & Skinner, 2010; Munyi, 2012; Skinner, Bailey, Correa, & Rodriguez, 1999; Skinner, Rodriguez, Bailey, & Jr, 1999; J. L. Williams, Pazey, Shelby, & Yates, 2013; J. Williams et al., 2015). These perceptions have historically resulted in the institutionalization of people labeled as disabled. Prior to 1975, four out of five children with disabilities were excluded from partaking in public school education (Office of Special Education and Rehabilitation Services (OSERS), 2010, p. 8). Many of those children received a limited amount of services from live-in state institutions that provided basic care, but no “education [or] rehabilitation” (OSERS, 2010). As a result of the Education for All Handicapped Children Act – Public Law 94-142 (1975) (later renamed the Individuals with Disabilities Education Act (IDEA)) many children moved out of institutions and into community schools (OSERS, 2010).

Although PL 94-142 brought children labeled as disabled out of the margins, it did not result in academic integration. While children labeled as disabled are often fully integrated into their families and their communities, they continue living segregated lives within school districts and even within community schools (Cosier, Causton-Theoharis, & Theoharis, 2013; Ferri & Connor, 2005; Fulcher, 2015; Jackson, 2014; Ryndak et al., 2014; J. L. Williams et al., 2013). This is especially true for children of color who tend to be diagnosed with more severe disabilities as compared to their white counterparts and as a result are placed in more restrictive environments (Brown, 2009; Perez, Skiba, & Chung, 2008; Smith, 2010). Students labeled as disabled can be segregated from their peers in ways that are big and small such as being pulled out of their classes to receive special services, being placed in special classes, or they can be enrolled in special schools (“Family Guide to Special Education Services for School-Age Children — A Shared Path to Success,” 2014). Even within inclusive classrooms —considered the most effective setting to ensure that students labeled as disabled learn along their non-disabled peers while receiving the services they need—the segregation of children with disabilities continues (Jobe, Rust, & Brissie, 1996; McLeskey, Landers, Williamson, & Hoppey, 2012; Praisner, 2003; Salend & Duhaney, 1999). The reason for this is that the students are inherently identified as different through the use of labels. These labels further alienate them from their peers. Their education is governed by their Individual Education Plans (IEPs), they are placed in *special classes* with other kids with *special*

needs often in *special* classrooms within *special* schools (Job, n.d.; Lauchlan & Boyle, 2007). These labels create multiple points of dissonance between students labeled as disabled and those that are considered “normal.” The continued use of labels means that while PL 94-142 was effective in bringing students labeled as disabled out of darkness, it also led to more visible methods of segregation and a greater enforcement of what it means to be normal and abnormal (Education Advocates Coalition, 1980; Harry & Klingner, 2007). Regardless of the good intentions, in categorizing students as disabled they are also branded as being different than the masses (Goodley, 2001; Harry & Klingner, 2007; Job, n.d.). As a result, schools effectively become human laboratories for the ideologies put forth by Gaston. Effectively, students labeled as disabled are marked with the scarlet letter D for disabled and defective.

On the other hand, the field of Disabilities Studies was founded in part in order to counter this deficit narrative (Pfeiffer, 2002). As a way to proclaim that “[...] there is no deficit in the person with a disability. There is nothing which keeps her from being normal. ‘Normal’ is a value based perspective. [...] normal and abnormal are social judgments of what are and what are not acceptable biological variations and functioning. By classifying people with disabilities as abnormal, these value judgments are used to justify the disadvantages which confront people with disabilities” (Pfeiffer, 2002). As such, an effort has been made to establish a new model, one in which dis/ability is a social construction within which,

Disability is not an object - a woman with a cane - but a social process that intimately involves everyone who has a body and lives in the world of the senses. Just as the conceptualization of race, class, and gender shapes the lives of those who are not black, poor, or female, so the concept of disability regulates the bodies of those who are 'normal.'" (Davis, 1993, p. 9)

There have been great efforts to dismiss the narrative promoted by the medical model to one that views dis/ability as a social construct enacted to maintain unequal distributions of power. Still, within schools the medical model prevails, as does the reification of disabled versus non-disabled, insider versus outsider, normal versus not. “Attitudes towards persons with disabilities are compounded by the fact that in many instances a person's dis/ability is perceived as extending far beyond the necessary limits of the dis/ability to affected traits and functions” (Jaffe as cited in Munyi, 2012) which may explain why children labeled as disabled have limited access to bilingual programs.

Beyond ability, another way that children are categorized and subsequently segregated in schools is by linguistic practice (Pedalino Porter, 1998). While many children can be labeled as English language learners, a select few get to be “bilingual.” Unlike the negative stigma that surrounds “being disabled” or “being an English language learner,” to many something missing, bilingual means to be smart, successful, and cultured.

Bilingualism as Benediction for language majorities.

According to the American Community Survey Reports, 16 percent of the American population is believed to be bilingual, which means that in the United States monolingualism is much more common and as such is deemed to be normal (Ryan, 2013). However, the United States has been undergoing an ideological shift of how it views bilingualism. To this Grosjean (2012) writes,

Bilingualism in the United States has traditionally been transitional—a passage, over one or two generations, from monolingualism in a minority language to monolingualism in English. However, there is an increasing awareness that the country's knowledge of the languages of the world is a natural resource that should not be wasted. Hence a growing number of families are fostering bilingualism either by making sure the home's minority language and culture are kept alive or by encouraging their children to acquire and use a second language.

This shift is not an altruistic one and has more to do with “the need for young Americans to be able to compete in a globalized economy” than with the cultural preservation of Americas immigrant population (Rohter, 2008).

At one point bilingualism was believed to result in decreased verbal development and lower IQ (Deutsch, 1965; Peal & Lambert, 1962; Saer, 1923). However, the scientific community has spent a few decades “peer[ing] deeper into the brain [in order] to investigate how bilingualism interacts with and changes the cognitive and neurological systems” (Marian & Shook, 2012). As a result, the research community has reversed its position and has been very vocal about the great cognitive, social, economical and developmental gains that can be made simply by learning a second language (Bak, Nissan, Allerhand, & Deary, 2014; Fradd & Lee, 1998; Keysar, Hayakawa, & An, 2012; Marian & Shook, 2012; D. Martin & Stuart-Smith, 1998; Mechelli et al., 2004; Zelasko & Antunez, 2000). Bilingualism has been cited not only for resulting in increased linguistic abilities, but also for “protecting against age-related decline” such as Alzheimer’s, dementia, and increased information processing abilities which results in increased learning (Marian & Shook, 2012). Social scientists have contributed to the field by highlighting the social and economic gains that are available to bilinguals: opportunities to connect with other cultures, more and better paying jobs, and increased social circles (Fradd & Lee, 1998; Zelasko & Antunez, 2000). The gains of being a bilingual are so great that they have their own collective name: The Bilingual Advantage (Bialystok, Majumder, & Martin, 2003). As a result, bilinguals are considered smarter, more flexible, more aware (Bhattacharjee, 2012; Kalkan, 2014; Valian, 2015).

As presented above, for some to be bilingual is to be intelligent, to be agile, to be gifted, to be superior (Bowern, 2014; Kinzler, 2016). These are not the words typically used to describe a person with a dis/ability. Rather, bilingualism is even seen as a preventative measure for dis/ability. Scientific research papers are full of phrases like this: “[b]ilingualism appears to provide a means of fending off a natural decline of cognitive function and maintaining what is called ‘cognitive reserve’” (Marian & Shook, 2012). While newspapers contain phrases like this: “[r]esearchers, educators and policy makers long considered a second language to be an interference, cognitively speaking, that hindered a child’s academic and intellectual development [but recent findings have prove that] being bilingual [actually] makes you smarter” (Bhattacharjee, 2012, para. 2). Statements like these uphold ableist ideology while elevating the status of bilingualism from a cultural function to a dis/ability-prevention tool. Using the terminology “natural decline in cognitive function” implies that those with differing levels of “cognitive function” at earlier ages are somehow unnatural or abnormal. Stating that bilingualism makes you smarter positions bilingual speakers as better than monolingual speakers rather than different. As a result, bilingualism is framed as the antidote to the mental deterioration that results from age-related

disabilities. As such, bilinguals are presented as superhumans who can avoid the trappings of the most prevalent dis/ability known to man: aging.

Although the science clearly indicates that being bilingual is beneficial in all aspects of life, access to bilingual education remains rather limited. One of the primary reasons for this is that in the United States while it may be beneficial to be bilingual, it is problematic to be an English language learner.

Aside from ablest ideologies and a super human perception of bilingualism, there are additional reasons why access to bilingual education is limited for most EBLADs. The first reason is that the educational policies that address dis/ability and linguistic variance do not converge. The second reason is that, as stated previously, monolingualism is the norm, but often that norm is defined by English and so bilingualism in the US is appreciated only when the bilingual speaker's first language is English (Erard, 2012). The third reason is the false belief that students with disabilities cannot be bilingual.

The academic needs of EBLADs are met by two differing federal policies. Title III of the Elementary and Secondary Education Act: Language Instruction for Limited English Proficient and Immigrant Students (ESEA Title III) addresses linguistic needs, while the Individuals with Disabilities Education Act (IDEA) addresses dis/ability related needs. Both policies also come with their own set of controversies. Although IDEA has its faults, its primary goal of ensuring that students with dis/abilities receive the services they need is often met. Additionally, IDEA has been responsive to the changing demographics within American public schools.

When IDEA was reauthorized in 2004, modifications were made that required that EBLs be evaluated in their native language in an effort to reduce the erroneous classification of students on the basis of poor English proficiency rather than the presence of a true dis/ability (U.S. Congress, 2004). However, while congress recognizes the need for EBLs to be assessed in their home language, there still have not been any mandated changes that would require access to bilingual education for children who speak a language other than English and are identified as needing special education services. Artiles and Ortiz (2002) noted the fact that even within monolingual settings, EBLADs “(in general) do not receive the type of instruction they need (due to the lack of ESL instructional methodology and other professional development for special education professionals)” (p. 1). This focus on English only within special education may stem from the fact that the nation's educational policies have shifted from being supportive of bilingual education in the 1980s and 90s to cautioning against it in the early 2000s (Hornberger, 2006). Prior to 2000, the linguistic needs of EBLs in the nation's public schools were supported by the Bilingual Education Act of 1968. However, with the introduction of No Child Left Behind, the Department of Education shifted its position from one that was open to multilingual teaching and learning to one that focused on English acquisition (Hornberger, 2006; Hornberger & Johnson, 2007; Ricento & Wright, 2008; Tanenbaum et al., 2012). As such, multilingual spaces within public schools continue to be very contentious. While some states, like New York, work on expanding bilingual education, others, like Arizona which is considered “the most restrictive English-only state”, actively work on abolishing it (Garcia, 2015). Those who oppose multilingual learning see bilingual education not as a research driven pedagogy that supports student achievement, but rather as a precarious and propaganda-rich practice that results in segregation, hinders English acquisition, thwarts assimilation, delays student growth and threatens American values (Bethell,

1979; Gándara & Aldana, 2014; Gonzalez, Schott, & Vasquez, 1988; Krashen, 1999; Pedalino Porter, 1998; Ravitch, 1985; Rohter, 2008). Given the prevalence of these niche policies, it is not surprising to find that although the research indicates that children with disabilities “will most likely have problems learning a second language and will experience difficulty with cognitive development as well” unless they develop native language competence, most EBLADs continue to be labeled as ELLs rather than bilingual or multilingual and as such only have access to ESL services (Artiles & Ortiz, 2002, p. 4).

In the United States, English-speaking monolinguals resist bilingualism for people of color for a variety of reasons including xenophobia, nationalism and the misconception that bilingualism for Juan will lead to capital loss for John (Bower, 2014; Chiswick & Miller, 2016; Hakuta, 2011; Zehr, 2010). As a result, the circumstances under which bilingualism is supported are limited to those that will result in maintaining the status quo (Johnson & Johnson, 2014; Tollefson, 2013; Valdes, 1997). In this political climate, bilingual programs are overwhelmingly supported when they are offered as enrichment opportunities for English proficient children from white, middle class families, as opposed to language maintenance programs for ethnically minoritized children (Bower, 2014; Carr & Cheung, 2015; Cervantes-Soon, 2014; Flores, 2015; Palmer, 2010). In other words,

bilingualism is often seen as ‘good’ when it’s rich English speakers adding a language as a hobby or another international language, but ‘bad’ when it involves poor, minority, or indigenous groups adding English to their first language, even when the same two languages are involved. (Bower, 2014)

The reason for this dichotomy is that the former manifestation of bilingualism does not challenge the current distribution of power. Bilingualism as enrichment builds on the idea that bilingualism is a superlative that can only be gained once the basic criteria for normalcy has been met. In this case in order to be considered “normal” one must have dominion of the English language (Hinton, 2016). “English proficient” is a title that is automatically granted to white, middle class children, but for many emergent bilinguals the road to proficiency is a long and treacherous one, littered with tests and evaluations (Boals et al., 2015; Carroll & Bailey, 2016; Flores, Kleyn, & Menken, 2015; Han, 2012; Sotelo-Dynega, Ortiz, Flanagan, & Chaplin, 2013). Most EBLs spend years working towards English proficiency; all the while their home language literacy is neglected (Colon & Heineke, 2015; Flores et al., 2015; Flores & Rosa, 2015; Hakuta, Butler, & Witt, 2000). English-only or English-mostly education for linguistic minority students persists because linguistic and cultural deficit myths persists (Flores et al., 2015; Howard, 2015). These myths, like the label English Language Learner and other forms of cultural bias, position the student as needing remediation, and their home language and home culture as obstacles to be overcome (Paris, 2012; Valdes, 1997). Additionally, ethnic minority children are often seen as being disadvantaged as compared to mainstream children (Mann, 2014; Oropeza, Varghese, & Kanno, 2010; Valdes, 1997). This ultimately grants EBLs their very own scarlet D. This branding in relation to the normal bell curve places EBLs to the left of center – equating linguistic variance with “disability”. And so it is, that an EBLAD comes to be viewed as doubly disabled. Add an increased probability to live in poverty and you have an amalgamation of all the features “[that]people think of as outside the norm, that is, the person of color, the disabled body or mind, the person living in poverty” or as Chan (1980) once dubbed them: the “triple threat” (Reid & Knight, 2006).

When bilingualism and dis/ability are understood through an ideology of normalcy the “labeling and segregated education [of students carrying high-incidence and legally defined labels] seem natural and legitimate” particularly for “students of color and those living in poverty” who are often seen as “Other” (Reid & Knight, 2006, p. 18). This Othering not only legitimizes segregation but also validates the denial of bilingual education to EBLADs. Bilingualism has been found to be beneficial for children with low incidence dis/abilities such as intellectual disability, autism and down syndrome (Bird et al., 2005; Hambly & Fombonne, 2012; Kay-Raining Bird, Trudeau, & Sutton, 2016; Kremer-Sadik, 2005; Petersen, Marinova-Todd, & Miranda, 2012; Ware, Lye, & Kyffin, 2015). Additional research shows that even for children with language impairments being bilingual does not have a negative effect on their ability to communicate; on the contrary being bilingual can be beneficial (Kay-Raining Bird, Trudeau, et al., 2016; Korkman et al., 2012; Paradis, 2007). Yet EBLADs, who more often than not are labeled with high-incidence, high-functioning dis/abilities, continue to receive services in predominantly English-only settings (de Valenzuela et al., 2016; Kay-Raining Bird, Genesee, & Verhoeven, 2016; Liasidou, 2013; Marinova-Todd et al., 2016; Sadowski, O’Neill, & Bermingham, 2014). The reason for this lies in a persistent and widespread belief that children with disabilities cannot and should not be bilingual in part because they “would be overtaxed by learning two linguistic systems” (Cheatham & Barnett, 2016; Paradis, 2007). This continued belief is not rooted in science but rather in anecdotal beliefs and may be more reflective of the realities of testing than of student capacity. Research shows that teachers and other education professionals have been identified as supporting bilingual education for children with disabilities; however, this does not result in increased access (Marinova-Todd et al., 2016). Given the pressures that high-stakes testing places on teachers and schools, it is possible that educators believe that multilingual learning is too taxing for EBLADs because they are confounding performance on standardized testing with intellectual capacity (Abedi & Faltis, 2015; Fitzgerald, 2015; Hursh, 2013; Katsiyannis, Zhang, Ryan, & Jones, 2007; Lane & Leventhal, 2015; Thurlow & Kopriva, 2015). In other words, they are basing academic success on how well the student can meet the standard and approximate normal.

Implications

In order to remediate the inaccurate perception that students labeled as dis/abled are incapable of being bilingual we must actively strive towards creating systems that are more inclusive. Below are a few suggestions as to how all educators can ensure greater access to bilingual spaces for emergent bilinguals labeled as disabled as well as support their linguistic development regardless of the setting.

For special education specialist:

1. During the IEP meetings caregivers are often asked to weigh in and reflect on their child’s academic performance, this is a great opportunity to also talk about a student’s linguistic performance. Schools and educators who are committed to inclusive practices can easily make the discussion of linguistic goals a part of these meetings. By asking caregivers about a student’s linguistic practices outside of school the school can gain access to the student’s linguistic abilities making it easier to determine the appropriate placement, and the right supports needed to ensure that the student is successful not only at school but also at home, and in the community. Additionally, by talking about language practices with caregivers, schools also communicate to parents that they value their linguistic practices which will

empower caregivers and can result in an increased level of participation.

2. IEP meetings are a good time for schools to consider holistic approaches to inclusion. Rather than considering whether a child is academically or linguistically ready to move into a mainstream setting, questions should be grounded into how to make learning environments more welcoming to the whole student. Asking questions like ‘what linguistic supports can be added to a monolingual inclusive class in order to make it more welcoming to multilingual children?’ or ‘what supports could be provided within a bilingual mainstream setting to make it more welcoming to students with disabilities?’ creates more inclusive spaces within a school without resulting in any part of a child’s needs going unmet. Upon asking these questions schools can act to ensure that all mainstream settings are welcoming to children labeled as disabled.
3. Inclusive classroom teachers who want to be able to support their emergent bilingual students’ linguistic needs can benefit greatly from incorporating Translanguaging spaces into their practice and their classrooms. Translanguaging is a linguistic theory and practice grounded in the belief that languages do not exist in separate spheres within the multilingual speaker. This is counter to the ways in which we try to contain language either with physical or ideological borders. Speakers are allowed to use all of their linguistic resources to communicate, learn and express knowledge (Garcia & LiWei, 2014). Translanguaging counters the ideas behind code-switching (a deficit model) and additive bilingualism (two monolinguals in one) in favor of dynamic bilingualism where the speaker uses language fluidly in order to maximize her experience. By creating Translanguaging spaces in their practice, inclusive classroom teachers will create learning spaces that allow students to express themselves using all of their resources.⁸

For bilingual educators and/or language specialists:

4. During recommendations for evaluations, and during the process itself, teachers must ensure that they advocate for ongoing linguistic supports. As language specialists, it is important to use our positions to inform other educators about the benefits of bilingualism for all students. This includes but is not limited to making sure to report student capacity in both languages; document which student behaviors or practices are typical for emergent bilingual students; and recommend that students be evaluated in both languages by a certified bilingual specialist.
5. Teachers who are implementing, or recommending students for Response to Intervention programs should be sure that these are done in both the home and target language.
6. Bilingual teachers who want to support their students LAD would benefit greatly from incorporating Universal Design for Learning (UDL) into their practice.

Universal Design for Learning is a set of principles for curriculum development that give all individuals equal opportunities to learn. UDL provides a blueprint for

⁸ For explicit strategies and practices that can be used see *Translanguaging within the monolingual special education classroom* by Cioè-Peña, 2015.

creating instructional goals, methods, materials, and assessments that work for everyone--not a single, one-size-fits-all solution but rather flexible approaches that can be customized and adjusted for individual needs.

-National Center on Universal Design for Learning, 2014

UDL functions on the premise that all learners are different and as such benefit from different teaching styles. By adopting UDL into their practice mainstream bilingual teachers will open their classrooms up not only to students LAD but also to a range of students who do not meet the standard criteria of a *good* student.⁹

Conclusion

Since normalcy is a lens with which many people evaluate their own lives and the lives of others, it is important to investigate what role, if any, it plays in the decisions being made for EBLADs regarding the language of instruction. Ultimately, stakeholders need to be asked about their decision making process with regards to program options. If the research highlights all of the gains to be made from being bilingual, why do EBLADs continue to be placed in monolingual settings? Are program options being decided based on student need, family interest and the linguistic realities in which they live? Or are these decisions based on a normalizing bias that leads to an external evaluator deciding what is appropriate for an Other based on their measure of what is normal and what is not?

⁹ For more on UDL see The National Center on Universal Design for Learning.

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