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Preschool Teachers' Language and Literacy Practices with Dual Language Learners

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Abstract

The purposes of this study were to (a) examine the degree to which teachers used linguistically responsive practices to support the language and literacy development of Spanish-speaking Dual Language Learners (DLL) and (b) to investigate the associations between these practices and select teacher-level factors. The sample consisted of 72 preschool teachers. Observational data were collected on practices. Teachers self-reported on language and culture beliefs, Spanish speaking ability, and classroom composition. Results indicated that teachers, including those who spoke Spanish, used few linguistically responsive practices to support preschool DLLs. Only Spanish-speaking ability was related to practices. Implications for targeted professional development are discussed.

Keywords

dual language learners; preschool; literacy

Dual language learners (DLLs) are a growing population in the United States educational system (NCES, 2011). DLLs are children who are learning a second language (e.g., English) either simultaneously or sequentially with their home language (Gutiérrez, Zepeda & Castro, 2010). A pressing issue faced by educational researchers and practitioners is how to provide optimal instruction for students who are not proficient in English, especially when the majority of teachers are monolingual English speakers who report they are not prepared to

teach DLLs and receive limited training in this area (Buysse, Castro, West, & Skinner, 2005; Karabenick & Clemens Noda, 2004; Walker, Shafer, Iiams, 2004).

Extant research clearly indicates that provision of high quality preschool education that builds children's early language and literacy skills (e.g., alphabet knowledge, phonological awareness, vocabulary) in English is related to later reading ability (e.g., NELP, 2009). Furthermore, supporting children's home languages in early childhood classrooms benefits DLLs' home language development (e.g., Barnett, Yarosz, Thoms, Jung, & Blanco, 2007; Buysse et al., 2014; Farver, Lonigan, & Eppe, 2009), which in turn lays the necessary groundwork for English acquisition (Dixon et al., 2012; Hammer, Lawrence, Davison, & Miccio, 2009; Riches & Genesee, 2006). As such, teachers should support early language and literacy skills in a linguistically and culturally responsive manner to best support DLLs in their classrooms (e.g., Gay, 2000; Naqvi, McKeough, Thorne & Pfitscheri, 2012). In this study, we predominantly focus on the linguistic aspect of responsive teaching whereby teachers employ strategies that bridge connections between Spanish and English (e.g., using key words in Spanish, having bilingual books) and foster children's comprehension of English (e.g., using gestures or pictures/props). We describe preschool teachers' use of linguistically responsive practices to support Spanish-speaking DLLs' development as well as explore several teacher-level factors (i.e., teachers' Spanish proficiency, beliefs about language and culture, and classroom composition) that may influence teachers' use of these practices. We elected to focus on Spanish-speaking DLLs because Spanish is the predominant home language spoken by DLLs in the United States (NCES, 2011).

High Quality Language and Literacy Practices for DLLs

There are a variety of recommended practices that serve as the foundation for effective language and literacy instruction for all preschool children, including DLLs and monolingual English-speaking children (August & Shanahan, 2006; Goldenberg, Hicks, & Lit, 2013). For instance, teachers can use various strategies to promote children's language throughout the day by engaging children in sustained conversations, asking open-ended questions, building upon children's talk, and using rich or interesting vocabulary words (e.g., Castro, Ayankoya, & Kasprzak, 2011; Justice, Mashburn, Hamre, & Pianta, 2008; Wasik & Hindman, 2011). Literacy skills can be promoted through adult-child shared storybook reading purposefully conducted to support children's comprehension, using techniques such as discussing new vocabulary words or elements of the story (e.g., characters, setting) and making inferences (e.g., Dickinson & Tabors, 2001; Justice et al., 2010; Justice & Pullen, 2003; Wasik, 2010). Additionally, teachers can facilitate children's writing during varied times of the day, such as providing formal instruction during small group-time, offering a writing center for students to work independently or supplying writing materials in other centers, like paper for a grocery list in the dramatic play center (e.g., Dickinson & Tabors, 2001; Justice & Pullen, 2003).

When delivering evidenced-based language and literacy instruction to DLLs, teachers should provide additional linguistic support of the home language as children learn a new language (Goldenberg et al., 2013). Specific linguistically responsive strategies that all early childhood teachers can use to integrate the home language into the classroom are providing

books in Spanish, using key vocabulary words in Spanish (such as saying “libros” along with “books”), displaying common Spanish words on word walls to support children’s kid-writing in Spanish, and most simply encouraging children to continue to use Spanish in the classroom to facilitate connections to English (Castro, Ayankoya, & Kasprzak, 2011; Facella, Rampino, & Shea, 2005). Other recommended strategies include following a consistent schedule, using gestures to communicate intent (e.g., miming or pointing), using photographs, pictures, or props to illustrate word meanings, (e.g., using baskets of different sizes to illustrate the concepts of big, bigger, biggest), and providing numerous opportunities for DLLs to hear and use English (Castro et al., 2011; Facella et al., 2005; Tabors, 2008).

Observations of teachers of preschool classrooms which serve children who are low SES and ethnic minorities, including DLLs, have found that teachers provide basic or low quality language and literacy instruction (e.g., ACF, 2013; Dickinson, Darrow, & Tinubu, 2008; Justice et al., 2008). Within the context of language and literacy instruction, an emerging body of research examines the extent to which preschool teachers provide explicit linguistic supports. Buisse and colleagues (2010) found that even in situations where monolingual English-speaking teachers provide moderate quality instructional language and literacy practices, they use very few linguistically responsive practices to support DLLs. Gort and colleagues (2012, 2015) have examined the way in which preschool Spanish-English bilingual teachers use both languages with DLLs. For instance, during read-alouds, teachers ask differing types of questions when they read in Spanish versus English (Gort, Pontier, & Sembiente, 2012). The samples of these studies have been either English-only or bilingual teachers. An aim of this study was to examine and compare the linguistically responsive language and literacy practices used by monolingual English-speaking and bilingual Spanish-English teachers.

Potential Influences on Language and Literacy Practices with DLLs

Specific factors that may influence teachers’ linguistically responsive practices with DLLs are teachers’ beliefs about language and culture, ability to speak a second language, and the classroom composition. Research on school-aged populations indicates the potential influences of these variables.

Beliefs about language and culture

Researchers have found inconsistent relations between early childhood teachers’ instructional practices and their educational beliefs, such as their beliefs and use of developmentally appropriate practices (e.g., Abbott-Shim, Lambert, & McCarty, 2000; Wen, Elicker, & McMullen, 2011; Wilcox-Herzog, 2003). The small body of research focused on the relations among beliefs and practices of teachers of DLLs has found positive relations between teachers’ beliefs about bilingualism/bilingual education (e.g., using the students’ home language in the classroom) and varied instructional practices (e.g., constructivist approaches, literacy practices, standards-based teaching) for school-age populations (Flores, 2001; Haneda, 2008; Rueda & Garcia, 1996; Vázquez-Montilla, Just, & Triscari, 2014). Of these studies, only Flores (2001) investigated teachers’ use of culturally and linguistically responsive strategies; however, a limitation of this study is that teachers self-reported their

practices which may not accurately reflect what practices are implemented. Thus, further research is needed to examine how teachers' beliefs about the influence of language and culture in educational contexts (e.g., use of culturally and linguistically responsive materials, children's exposure and use of English and home language) relate to their observed linguistically responsive practices with DLLs.

Ability to speak a second language

Empirical work with a school-age population has indicated that the teacher's ability to speak the student's home language is related to more positive beliefs about bilingual education/teaching bilingual students (Flores & Smith, 2008; Lee & Oxelson, 2006; Youngs & Youngs, 2001), feelings of preparedness (Coady, Harper, & de Jong, 2011), and students' academic outcomes (e.g., Cirino, Pollard-Durodola, Foorman, Carlson, & Francis, 2007; Dixon et al., 2012). Yet, it is critical that we also examine the relation between teachers' ability to speak a second language and their use of linguistically responsive practices with DLLs. It is reasonable to expect a positive relation because having some degree of ability in a child's home language enables teachers to communicate content and monitor students' progress more effectively (Wong Fillmore & Snow, 2002). Also, findings from two case studies indicate that teachers who spoke or were learning a language other than English had more empathy for challenges DLLs face in school (Bos & Reyes, 1996; Gillanders, 2007). Increased understanding of DLLs may lead to provision of additional supports for their learning.

Classroom composition

Research on classroom composition is limited, especially in regard to research specifically examining the influence of the percentage of DLLs in the classrooms and teachers' linguistically responsive practices. Existing research indicates that teachers with more experience with DLLs hold more positive beliefs (Byrnes, Kiger, & Manning, 1997; Flores & Smith, 2008; Youngs & Youngs, 2001). It may be that teachers' experiences with DLLs also positively influence practices. Teachers may perceive greater necessity to use linguistically responsive strategies when higher numbers of DLLs are enrolled in their classrooms.

Study Purpose

Three research questions guided this study that examined teachers' use of linguistically responsive practices in their classrooms with Spanish-speaking DLLs. The first two research questions were: (a) to describe the linguistically responsive practices used by preschool teachers with Spanish-speaking DLLs and (b) to describe teachers' beliefs about the influence of language and culture in educational contexts. The third research question was to examine the relations among preschool teachers' use of linguistically responsive practices, beliefs about culture and language, ability to speak Spanish, and classroom composition (i.e., percentage of enrollment of Spanish-speaking DLLs). We predicted that teachers who had more informed beliefs about language and culture (i.e., aligned with evidence and recommendations from the literature), reported Spanish-speaking ability, and had more DLLs in their classrooms would use more linguistically responsive practices. We also

hypothesized that teachers who held more informed beliefs about language and culture *and* were Spanish-speaking or had more DLLs in their classrooms (i.e., interaction effect) would use more responsive practices than teachers who held informed beliefs about language and culture but were not Spanish-speaking or had fewer DLLs.

Method

This study was part of a randomized control trial that examined the efficacy of the Tools of the Mind curriculum (Bodrava & Leong, 2007) on the school readiness of preschool DLLs. Seventy-two classrooms participated. The classrooms were federally and state-funded programs that served low-income children and were located in urban areas of a northeastern and southeastern state. None of the classrooms were considered bilingual programs. Almost all classrooms (91%) were full day programs. Classrooms used a variety of curricula (e.g., Creative Curriculum and High Scope). Typical class size was 18 children with a lead and an assistant teacher. Anecdotal evidence¹ indicated moderate to high levels of administrative support for classroom use of Spanish for the centers in the southeastern state. Administrative support was more variable for centers in the northeastern state with low to high support; only one center administrator was described as explicitly discouraging Spanish use.

Participants

Participants included 72 lead teachers of preschool classrooms. Because ten teachers did not return the teacher demographic questionnaire, statistics pertain to 62 teachers. The majority of teachers had received their Master's degree (53%). One-third (33%) had a Bachelor's degree, 10% had an Associate's degree, and 5% had a high school diploma. Half of the teachers (51%) had an early childhood education certification. Few participants (7%) were certified bilingual teachers. Teachers averaged over 7 years of preschool teaching experience ($M = 7.67$, $SD = 7.09$) and were predominantly female (93%). Close to half of the teachers were Hispanic (47%). Approximately one-half (47%) of the Hispanic teachers did not report their geographic area of origin. For the teachers who reported their place of origin, half of teachers were from Puerto Rico (50%), and approximately one-fifth (28%) were from South America. Other origins were Mexico, Central America, and Cuba. Over one-quarter of the sample was White non-Hispanic (28%), 13% were Black, and 12% reported another race (e.g., Vietnamese, American Indian). One-third (31.5%) reported good or native-like ability to speak Spanish. Additionally, four teachers reported proficiency in a second language other than Spanish (Vietnamese, Garifuna, and sign language).

On average, half of the children in the classrooms were Spanish-speaking DLLs ($SD = 22\%$; 17% – 100%). Classrooms were of moderate quality, based on ratings from the Classroom Assessment Scoring System (CLASS; Pianta, La Paro, & Hamre, 2008). CLASS scores range from 1 to 7; scores equate to *low* (1–2), *moderate* (3–5), and *high* (6–7) quality across three domains. Classrooms averaged 5.35 ($SD = .72$) on the emotional support domain (positive and negative climate, teacher sensitivity), 4.66 ($SD = 1.03$) on the classroom organizational domain (behavior management, productivity, instructional learning formats),

¹Anecdotal evidence was gathered from research staff's observations during center and classroom visits and discussions with center administrators and participating classroom teachers.

and 3.48 ($SD = 1.41$) on the instructional support domain (concept development, quality of feedback, language modeling).

Measures

Teachers completed a questionnaire that garnered demographic information, language proficiency information, and teachers' beliefs about language and culture. An observational measure was used to document teachers' language and literacy practices with DLLs.

Teacher factors—Teachers' beliefs about language and culture were based on an 11-item survey developed by Tabors (2008). Teachers responded to items about their beliefs about home language use, using materials from other cultures and languages, and the needs of bilingual students (see Table 1). Teachers indicated their level of agreement using a four-point Likert-type scale, ranging from *strongly disagree* (1) to *strongly agree* (4). Three items were dropped due to item-total correlations that were .10 or lower. Cronbach's alpha for the remaining eight items was .66. A mean score of these eight items was used in analyses.

Teachers reported their ability to speak Spanish on a five-point scale (1 = *limited*, 2 = *some*, 3 = *moderate*, 4 = *good*, 5 = *native-like*). This variable was dichotomized to represent good or native-like Spanish speaking ability versus lesser ability.

Language and literacy practices with Spanish-English DLLs—The Early Language and Literacy Classroom Observation-DLL (ELLCO-DLL; Castro, 2005), an adaptation of the Early Language and Literacy Classroom Observation (ELLCO; Education Development Center, 2002), was used to assess the quality of instructional practices to support the language and literacy development of young Spanish-English DLLs. The components of the ELLCO-DLL are the same as the ELLCO, which are the (a) literacy environment checklist, (b) classroom observation, and (c) literacy activities rating scale. However, the ELLCO-DLL focuses on linguistically responsive practices specific to supporting Spanish-speaking preschoolers. The sums of the ELLCO-DLL subscales were used when performing inferential analyses.

The literacy environment checklist is comprised of ten items that focus on the availability of books in Spanish or Spanish-English and other written Spanish or bilingual supports (e.g., word cards, labels, posters, and puzzles in Spanish). Five items are dichotomous (yes/no), such as, "Do Spanish/bilingual books range in difficulty?" The other five items are rated on a three-point scale to indicate the number of Spanish/bilingual books available in various centers (e.g., 0 = *no books*, 1 = *1–3 books*, and 2 = *four or more books*). Cronbach's alpha was .76.

The classroom observation includes eight items rated on a scale of 1 to 5, with 1 = *deficient*, 3 = *basic*, and 5 = *exemplary*. We used four items specifically focused on teachers' linguistically responsive language and literacy practices. These items assessed (a) the presence of books (e.g., Spanish/English books that vary in genre, topic, and difficulty), (b) approaches to reading (e.g., using gestures or pictures/props to communicate word meanings, providing key words in Spanish), (c) approaches to writing (i.e., support of children's writing in English and Spanish, such as taking dictation or writing group stories),

and (d) curriculum integration (i.e., systematic opportunities for children to use their Spanish and English language and literacy skills). Cronbach's alpha was .84.

The Literacy Activities Rating Scale has eight items that target the frequency that teachers read to children in (a) Spanish or English with key words in Spanish during whole or small groups that may also include monolingual students or (b) in any language to individual DLL students or small group of only DLLs. Cronbach's alpha was .80.

Procedures

All participants completed the teacher questionnaire in the first two months of school, prior to the intervention training for the larger study. Classroom observations by trained bilingual data collectors were conducted during this time. Data collectors participated in a rigorous one-day training on the ELLCO-DLL, which included videotaped exemplars of practices that were deficient, basic, or exemplary. Data collectors achieved 90% reliability with an expert coder during at least one live classroom visit prior to conducting classroom observations.

The ELLCO-DLL was administered during one morning's observation in each classroom, lasting three to four hours. Inter-rater reliability was established on 20% of the classroom sample. Inter-rater reliability was calculated as percent adjacent agreement (percent within-one) for each item, a commonly-used procedure in observational classroom quality measures (i.e., Pianta, La Paro, & Hamre, 2008). The overall average adjacent agreement was 88%.

Analytic Strategy

Analyses were conducted using SPSS version 21. Preliminary analyses were conducted to check for outliers and to determine whether data adhered to assumptions of normality, linearity, and homoscedasticity as outlined in Tabachnick and Fidell (2001). All assumptions were met, with an exception for the total of the literacy activities rating scale. However, because 70% of teachers received a score of zero on this variable, no further inferential analysis was conducted.

The first two research questions were addressed using descriptive analyses. The third question examined the relations among use of linguistically responsive practices and select teacher factors. Initially, we conducted zero-order correlations among teachers' practices, beliefs, ability to speak Spanish, and percentage of DLLs in the classroom. Because prior research indicates that teacher education and years of preschool teaching experience may relate to teachers' practices (e.g., Domitrovich, Gest, Gill, Jones, & DeRousie, 2009; Phillipsen, Burchinal, Howes, Cryer, 1997), we included these variables in our correlational analyses to explore whether to include those as control variables. Because they were not correlated with any other variables, we did not include them in our regression models.

To predict teachers' linguistically responsive practices as measured by the literacy environment checklist and the classroom observation, we conducted hierarchical regression analyses using the sample of teachers on whom full data was available ($n= 45$). In Block 1, we entered the mean of teachers' beliefs about culture and language and either ability to speak Spanish (Model A) or percent enrollment of children who were DLLs (i.e., classroom

composition; Model B). In Block 2, we entered the interaction term between teachers' beliefs and the respective teacher factor to determine whether the relation of beliefs with observed language and literacy practices varied as a function of Spanish-speaking ability or classroom composition.

We also conducted the regression analyses using multiple imputation (using SAS version 9.4) to account for missing data. Ten (of 72) teachers did not return the teacher questionnaire, and there was additional missing data for failure to respond to items on beliefs ($n=15$) and Spanish proficiency ($n=23$). Visual inspection of the pattern matrix revealed no evidence of univariate or monotone missing patterns; therefore, we assumed arbitrary missingness and used the Markov chain Monte Carlo (MCMC) method to create multiple imputations by drawing simulations from a Bayesian prediction distribution. There was no change in findings between the two methods. We present findings from the listwise deletion method.

Results

Language and Literacy Practices

The first research question was to describe the linguistically responsive practices used by preschool teachers to support the language and literacy development of Spanish-speaking DLLs. Table 2 presents the descriptive data on the subscales of the ELLCO-DLL for the whole sample ($n=72$) as well as the sub-samples of Spanish-speaking ($n=23$) and non-Spanish-speaking ($n=26$) teachers. For all subscales, the means were low. Spanish-speaking teachers scored higher than non-Spanish speaking teachers but were still using few linguistically responsive practices.

On the literacy environment checklist (i.e., availability of books in Spanish/bilingual and other written Spanish/bilingual supports), teachers could receive a score between zero and 16. For the full sample, the average score was 4.71. Spanish-speaking teachers received an average score of 6.04, and non-Spanish speaking teachers received an average of 4.69. This difference was not statistically significant $t(47) = -1.39, p = .17$. These low scores indicate that teachers were providing minimal Spanish/bilingual books and other supports (e.g., posters, puzzles, word cards). Most teachers (73%) did have posters/labels of key words in Spanish but did not have word cards in Spanish to support children's writing. Approximately half of the teachers (53%) had fewer than five Spanish/bilingual books.

On the classroom observation, teachers could score between four (all *deficient*) to 20 (all *exemplary*) points. For the whole sample, the average score was 8.25 points. Spanish-speaking teachers averaged 10.04, and non-Spanish teachers averaged 7.28. This difference was statistically significant $t(46) = -2.50, p = .02$. A considerable number of teachers' linguistically responsive language and literacy practices with DLLs were rated as deficient in quality. Specifically, the vast majority of non-Spanish-speaking teachers and approximately half of the Spanish-speaking teachers scored in the deficient range for presence of books (64%, 57% respectively), approaches to book reading (80%, 50%), approaches to writing (84%, 50%), and approaches to curriculum integration (85%, 48%).

For the literacy activities rating scale, teachers could score between zero to 14 points. The average score was 0.70, with Spanish-speaking teachers averaging 1.00 and non-Spanish-speaking teachers averaging 0.62. This difference was not statistically significant $t(46) = -.74, p = .46$. This extremely low score reveals that teachers were not reading in Spanish or in English with Spanish keywords to any children in their classrooms. In addition, teachers were not reading in *any* language (i.e., English, Spanish, English with Spanish keywords) to individual Spanish-speaking DLL children or a small group of DLLs.

Beliefs about Language and Culture

The second research question was to describe teachers' beliefs about the influence of language and culture in educational contexts. Teachers rated eight items on a scale of 1–4, ranging from *strongly disagree* to *strongly agree*. For all respondents, the mean score was 3.17 ($SD = 0.38$; range = 2.50 – 4). For the Spanish-speaking teachers and non-Spanish speaking teachers, the mean scores were 3.21 ($SD = 0.39$) and 3.21 ($SD = 0.34$), respectively. This indicates that on average, teachers held informed beliefs about language and culture. In regard to specific items (see Table 1), teachers disagreed that (a) English should be the only language spoken in schools, (b) there is no point in communicating with parents who do not speak English, and (c) bilingual children require special education services more often. Teachers agreed that (a) families should use their home language with their children and (b) children benefit from information about other languages and cultures. Teachers were divided about whether the same school program works for bilingual and English-speaking children.

Relations between Teacher Factors and Practices

The third research question examined the relations among use of linguistically responsive language and literacy practices, teachers' beliefs about language and culture, ability to speak Spanish, and classroom composition (i.e., percentage of DLLs). Table 3 provides the correlations among these variables as well as teacher education and years of experience teaching preschool. There was a large positive correlation between the subscales of the ELLCO-DLL. There was a medium positive association between the teachers' ability to speak Spanish and the classroom observation subscale. No other variables were significantly correlated with observed practices.

Teachers' beliefs about language and culture—Teachers' beliefs about language and culture were not associated with teachers' linguistically responsive language and literacy practices (see Table 4). When holding Spanish-speaking ability constant (Model A), beliefs did not significantly predict teachers' scores on the literacy environment checklist ($\beta = .15, p = .63$) or the classroom observation ($\beta = -.09, p = .60$). When holding classroom composition constant (Model B), beliefs did not predict scores on the literacy environment checklist ($\beta = .24, p = .11$) or the modified classroom observation ($\beta = .04, p = .55$).

Spanish-speaking ability—As shown in Table 4 (Model A), teachers' Spanish-speaking ability was significantly related to teachers' scores on the modified classroom observation practices ($\beta = .37, p = .01$) when holding their beliefs constant. However, teachers' scores on

the literacy environment checklist were not related to Spanish-speaking ability ($\beta = .23, p = .14$).

Classroom Composition—The percentage of DLL enrollment in the classroom was not associated with teachers' practices. Table 4 (Model B) shows that no main effects were observed for classroom composition for the literacy environment checklist ($\beta = .24, p = .11$) or the modified classroom observation ($\beta = .04, p = .74$).

Interactions—Table 4 indicates no interaction effects were found. The relation of teachers' beliefs to their scores did not vary as a function of Spanish-speaking ability on the literacy environment checklist ($\beta = .07, p = .75$) or the modified classroom observation ($\beta = -.28, p = .18$). Nor did the relation of teachers' beliefs to their scores vary as a function of classroom composition on the literacy environment checklist ($\beta = -.08, p = .88$) or the modified classroom observation ($\beta = -.29, p = .59$).

Discussion

The purposes of this study were to examine teachers' linguistically responsive practices to support the language and literacy development of Spanish-speaking DLLs and to investigate select teacher-level factors that may influence practices. Two main findings emerged. First, teachers used very few linguistically responsive practices. Second, only Spanish-speaking ability was associated with teachers' linguistically responsive practices. These findings suggest future directions for professional development and research.

Teachers' Use of Linguistically Responsive Practices for DLLs

Participating teachers used minimal empirically-based instructional strategies to support the language and literacy development of Spanish-speaking DLLs. Teachers predominantly scored in the deficient range for the language and literacy instructional practices measured by the ELLCO-DLL. Given limited professional development focused on teaching DLLs (e.g., Castro et al., 2013), it is not altogether surprising that teachers were using few linguistically responsive strategies. It *is* feasible for teachers to score basic or higher for all of the items even if the teacher does not speak Spanish. This is an important point considering that the majority of teachers in the workforce are monolingual English speakers (Buysse, Castro, West, & Skinner, 2005). For instance, during book-reading (or other times), a monolingual English-speaking teacher is capable of using pictures or props to communicate the meaning of words. If a curriculum is available, many teacher guides provide target vocabulary words in English and Spanish. Teachers may also use other resources, such as translation software or asking a parent or other Spanish-proficient speaker to provide key words in Spanish. As another example, teachers can also support students' writing in Spanish by encouraging children to pretend to write (i.e., kid writing) in their home language.

Our results converge with the pre-intervention observations of Buysse and colleagues (2010) who found that monolingual English teachers were implementing very few strategies to support Spanish-English DLLs. Low use of these practices was not unexpected given findings that teachers in preschool classrooms serving low-income students (as was our

sample) often provide less than optimal language and literacy instruction (e.g., Administration of Children and Families, 2013; Dickinson & Caswell, 2007; Justice et al., 2008). However, our results deviate from findings of interviews with 20 early childhood teachers who indicated they were implementing a wide variety of recommended practices to support the learning and development of DLLs (Facella, Rampino, & Shea, 2005). Differences in findings may be attributable to data being self-reported versus observed.

Although we found that Spanish-speaking teachers did provide slightly elevated levels of linguistically responsive teaching than non-Spanish-speaking teachers, Spanish-speaking teachers were still implementing minimal practices. These findings imply that teachers' ability to speak Spanish is not sufficient to support Spanish-speaking DLLs' learning, just as being English-speaking does not equate to the use of best practices for monolingual English children (e.g., Justice et al 2008). Pollard-Duradola and colleagues (2012) also found that Spanish-speaking preschool teachers were using few evidence-based language and literacy practices during read-alouds with DLLs (e.g., asking no or few questions to students, not using pictures/visuals to teach vocabulary) prior to professional development.

However, it is simplistic to imply that lack of pedagogical knowledge is the only reason teachers used few linguistically responsive practices. When teachers are motivated or feel efficacious in teaching DLLs, they may use more linguistically responsive practices (e.g., Lee & Oxelson, 2006). Additionally, anecdotal evidence indicated there was low administrative support for use of Spanish in some classrooms in the northeastern state. Research indicates that bilingual teachers' instructional practices are influenced by attitudes of administrators (Rueda & Garcia, 1996; Walker et al., 2004), and administrators may lack information about how to support DLLs (Castro et al., 2013). Teachers may also receive the message from the broader community that only English should be spoken in classrooms (Cummins, 2000).

Lack of Influence

Contrary to our hypothesis, classroom composition was not related to teachers' use of linguistically responsive practices. While we are not aware of any research that has examined classroom composition in regard to linguistically responsive practices with DLLs, Flores and Smith (2008) found that the number of DLLs in a classroom predicted teachers' beliefs about bilingual education. Regarding the null finding that beliefs about language and culture did not predict teachers' linguistically responsive practices, the relation between teachers' beliefs and practices is sometimes not evident (e.g., Wen et al., 2011; Wilcox-Herzog, 2003). It is likely that the translation of beliefs into practices is not automatic and other variables beyond beliefs may influence practices. Further research is needed.

Limitations and Future Directions

Several limitations require mention. First, there was low reliability and little variability in teachers' responses on the beliefs about language and culture measure, which may indicate social desirability bias (i.e., reporting beliefs in a way to present themselves in the best light). Yet, in other studies, teachers report largely uninformed or negative beliefs about teaching DLLs that imply teachers' beliefs about DLLs may not be highly prone to social

desirability bias (e.g., Vázquez-Montilla et al., 2014). In addition, there may be salient beliefs not captured in this study (i.e., knowledge about second language acquisition) that could be related to teachers' practices. Second, classroom observations reflected only one snapshot view of practices and may not be representative of children's general educational experiences. Third, we lacked information about teachers' academic preparedness and motivation to teach DLLs; gathering comprehensive data in these areas with psychometrically strong measures is an important direction for future research.

Additionally, the use of qualitative methodology would allow teachers to voice what supports and impedes their use of linguistically responsive practices. For instance, anecdotal evidence suggests that administrator support may have played a role in teachers' practices in this study. Further probing on this topic could reveal that administrator support differentially impacts teachers' practices (e.g., provision of literacy environment versus book-reading interactions).

Implications for Professional Development

The results of this study have implications for teacher preparation and professional development. Findings from this study converge with the broader early childhood literature that indicates teachers are infrequently implementing optimal early language and literacy practices that are needed to lay the foundation for children to be successful readers (e.g., Administration of Children and Families, 2013; Dickinson & Caswell, 2007; Justice et al., 2008). Furthermore, Castro and colleagues (2013) recently contended to Congress that the U.S. needs to better prepare teachers to work with DLLs, through such means as providing increased levels of training on how to effectively teach DLLs (e.g., Castro et al., 2013). Promising evidence indicates both university coursework and high quality professional development (PD) improves teachers' practices with bilingual students (e.g., Buysse et al., 2010; Flores & Smith, 2008; Pollard-Duradola et al., 2012) as well as improve teachers' implementation of language and literacy practices (e.g., Justice et al., 2010; Wasik & Hindman, 2011). Given teachers' report of insufficient time to address DLL concerns (Walker et al., 2004), it is important to provide resources and demonstrate strategies that can be easily integrated into existing practices. Furthermore, participants' implementation of new skills is enhanced through targeted coaching (e.g., Onchwari, & Keengwe, 2008). As such, teachers should be provided ongoing support as they strive to enhance their instructional practices with DLLs.

Since children's home language skills promote English skills (e.g., Hammer et al., 2009), teachers should support children's use of their home language in the classroom. Bilingual teachers are thus a critical resource for DLLs because they are able to provide instruction to enhance children's home language as well as English. An important focus of PD for bilingual teachers is to teach them how to systematically use both languages when providing high quality language and literacy instruction to DLLs. Furthermore, professional development should be offered to administrators to educate them on the importance of using children's home language in the classrooms and ensure they employ their bilingual staff to the fullest advantage.

Yet, the majority of teachers in the workforce are not bilingual but are monolingual English speakers (Buysse et al., 2005). Although these teachers should not be expected to score in the exemplary range of the classroom observation subscale, they can still implement linguistically responsive strategies. For instance, Buysse et al. (2010) found that monolingual English-speaking teachers' practices were aided by PD on the language and literacy development of DLLs, suggestions of resources to support their work with DLLs, and a focus on practices that did not require the teacher to be Spanish-speaking (e.g., gestures and pictures/props to communicate meaning). Monolingual English-speaking teachers may benefit from PD focused on understanding the transparent orthography of Spanish, so they can facilitate children's writing in Spanish. As such, children can write in the language in which they are most proficient as a way to demonstrate and improve their language and literacy skills. This can also serve to build a critical home-school connection if DLLs share and extend their writing with their family.

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References

- Abbott-Shim M, Lambert R, McCarty F. Structural model of Head Start classroom quality. *Early Childhood Research Quarterly*. 2000; 15:115–134.
- Administration of Children and Families. Report to Congress on Dual Language Learners in Head Start and Early Head Start Programs. 2013. Retrieved from <http://www.acf.hhs.gov/programs/opre/resource/report-to-congress-on-dual-language-learners-in-head-start-and-early-head>
- August, D.; Shanahan, T., editors. *Developing literacy in second-language learners: Report of the National Literacy Panel on language-minority children and youth*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2006.
- Barnett WS, Yarosz DJ, Thomas J, Jung K, Blanco D. Two-way and monolingual English immersion in preschool education: An experimental comparison. *Early Childhood Research Quarterly*. 2007; 22:277–293. DOI: 10.1016/j.ecresq.2007.03.003
- Bos C, Reyes E. Conversations with a Latina teacher about education for language-minority students with special needs. *The Elementary School Journal*. 1996; 96:343–351.
- Bodrova, E.; Leong, DJ. *Tools of the mind: The Vygotskian approach to early childhood education*. 2. Upper Saddle River: Pearson; 2007.
- Buysse V, Castro D, Peisner-Feinberg E. Effects of a professional development program on classroom practices and outcomes for Latino dual language learners. *Early Childhood Research Quarterly*. 2010; 25:194–206. DOI: 10.1016/j.ecresq.2009.10.001
- Buysse V, Peisner-Feinberg E, Paez M, Hammer CS, Knowles M. Effects of early education programs and practices on the development and learning of dual language learners: A review of the literature. *Early Childhood Research Quarterly*. 2014; 29:765–785. DOI: 10.1016/j.ecresq.2013.08.004
- Buysse V, Castro D, West T, Skinner ML. Addressing the needs of Latino children: A national survey of state administrators of early childhood programs. *Early Childhood Research Quarterly*. 2005; 20:146–163.
- Byrnes D, Kiger G, Manning ML. Teachers' attitudes about language diversity. *Teaching and Teacher Education*. 1997; 13:637–644.
- Castro, DC. *Early language and literacy classroom observation (ELLCO) addendum for Dual Language Learners*. Chapel Hill, NC: University of North Carolina, FPG Child Development Institute; 2005.

- Castro, DC.; Ayankoya, B.; Kasprzak, C. *The New Voices, Nuevas Voces: Guide to Cultural and Linguistic Diversity in Early Childhood*. Baltimore, MD: Brookes Publishing Company; 2011.
- Castro, DC.; García, EE.; Markos, AM. *Dual language learners: Research informing policy*. Chapel Hill: The University of North Carolina, Frank Porter Graham Child Development Institute, Center for Early Care and Education - Dual Language Learners; 2013. Retrieved from: http://cecerdll.fpg.unc.edu/sites/cecerdll.fpg.unc.edu/files/imce/documents/%232961_ResearchInformPolicyPaper.pdf
- Cirino PT, Pollard-Durodola SD, Foorman BR, Carlson CD, Francis DJ. Teacher characteristics, classroom instruction, and student literacy and language outcomes in bilingual kindergartners. *The Elementary School Journal*. 2007; 107:341–364.
- Coady M, Harper C, de Jong E. From preservice to practice: Mainstream elementary teacher beliefs of preparation and efficacy with English language learners in the state of Florida. *Bilingual Research Journal*. 2011; 34:223–239. DOI: 10.1080/15235882.2011.597823
- Cummins, J. *Language, power, and pedagogy: Bilingual children in the crossfire*. Tonawanda, NY: Multilingual Matters; 2000.
- Dickinson DK, Caswell L. Building support for language and early literacy in preschool classrooms through in-service professional development: Effects of the Literacy Environment Enrichment Program (LEEP). *Early Childhood Research Quarterly*. 2007; 22:243–260.
- Dickinson DK, Darrow C, Tinubu TA. Patterns of teacher–child conversations in Head Start Classrooms: Implications for an empirically grounded approach to professional development. *Early Education and Development*. 2008; 19:396–429.
- Dickinson, DK.; Tabors, PO., editors. *Beginning literacy with language: Young children learning at home and school*. Baltimore, MD: Brookes Publishing; 2001.
- Dixon LQ, Zhao J, Shin JY, Wuy S, Su JH, Burgess-Brigham R, Gezer M, Snow C. What we know about second language acquisition from four perspectives. *Review of Educational Research*. 2012; 82:5–60. DOI: 10.3102/0034654311433587
- Domitrovich CE, Gest SD, Gill S, Jones D, DeRousie RS. Individual factors associated with professional development training outcomes of the Head Start REDI program. *Early Education and Development*. 2009; 20:402–430. DOI: 10.1080/10409280802680854
- Education Development Center. *Early Language and Literacy Observation (ELLCO) Toolkit*. Baltimore: Paul H. Brookes; 2002.
- Facella MA, Rampino KM, Shea EK. Effective teaching strategies for English language learners. *Bilingual Research Journal*. 2005; 29:209–221.
- Farver JAM, Lonigan CJ, Eppe S. Effective early literacy skill development for young Spanish-speaking English language learners: An experimental study of two methods. *Child Development*. 2009; 80:703–719. [PubMed: 19489898]
- Flores BB. Bilingual education teachers' beliefs and their relation to self-reported practices. *Bilingual Research Journal*. 2001; 25:275–299.
- Flores BB, Smith HL. Teachers' characteristics and attitudinal beliefs about linguistic and cultural diversity. *Bilingual Research Journal*. 2008; 31:323–358. DOI: 10.1080/15235880802640789
- Gay, G. *Culturally responsive teaching: Theory, research, and practice*. New York: Teachers College Press; 2000.
- Gillanders C. An English-speaking prekindergarten teacher for young Latino children: Implications of the teacher–child relationship on second language learning. *Early Childhood Education Journal*. 2007; 35:47–54. DOI: 10.1007/s10643-007-0163-x
- Goldenberg C, Hicks J, Lit I. Dual language learners: Effective instruction in early childhood. *American Educator*, Summer. 2013:26–29.
- Gort M, Pontier RW, Sembiane SF. Function, type, and distribution of teacher questions in dual-language preschool read alouds. *Bilingual Research Journal*. 2012; 35:258–276. DOI: 10.1080/15235882.2012.734262
- Gort M, Sembiane SF. Navigating hybridized language learning spaces through translanguaging pedagogy: Dual language preschool teachers' languaging practices in support of emergent bilingual children's performance of academic discourse. *International Multilingual Research Journal*. 2015; 9:7–25. DOI: 10.1080/19313152.2014.981775

- Gutiérrez KD, Zepeda M, Castro DC. Advancing early literacy learning for all children: Implications of the NELP report for dual-language learners. *Educational Researcher*. 2010; 39:334–339. DOI: 10.3102/0013189X10369831
- Hammer CS, Lawrence FR, Davison M, Miccio AW. The effect of maternal language on bilingual children’s vocabulary and emergent literacy development during Head Start and kindergarten. *Scientific Studies of Reading - Special Issue*. 2009; 13:99–121. DOI: 10.1080/10888430902769541
- Haneda M. Contexts for learning: English language learners in a U.S. middle school. *International Journal of Bilingual Education and Bilingualism*. 2008; 11:57–74. DOI: 10.2167/beb425.0
- Karabenick SA, Clemens Noda PA. Professional development implications of teachers’ beliefs and attitudes toward English language learners. *Bilingual Research Journal*. 2004; 28:55–75.
- Justice LM, Pullen PC. Promising interventions for promoting emergent literacy skills: Three evidence-based approaches. *Topics in Early Childhood Special Education*. 2003; 23:99–113.
- Justice LM, Mashburn AJ, Hamre BK, Pianta RC. Quality of language and literacy instruction in preschool classrooms serving at-risk pupils. *Early Childhood Research Quarterly*. 2008; 23:51–68. DOI: 10.1016/j.ecresq.2007.09.004 [PubMed: 22773887]
- Justice LM, McGinty AS, Cabell SQ, Kilday CR, Knighton K, Huffman G. Language and literacy curriculum supplement for preschoolers who are academically at risk: A feasibility study. *Language, Speech, and Hearing Services in Schools*. 2010; 41:161–178. DOI: 10.1044/0161-1461
- Lee JS, Oxelson E. “It’s not my job”: K-12 teacher attitudes toward students’ heritage language maintenance. *Bilingual Research Journal*. 2006; 30:453–477.
- Mol SE, Bus AG, de Jong MT, Smeets DJH. Added value of dialogic parent–child book readings: A meta-analysis. *Early Education and Development*. 2008; 19:7–26. DOI: 10.1080/10409280701838603
- NCES. *The condition of education*. Washington, DC: U.S. Government Printing Office; 2011.
- NELP. *Developing early literacy: Report of the National Early Literacy Panel*. Washington, DC: National Institute for Literacy; 2009.
- Naqvi R, McKeough A, Thorne K, Pfitscher C. Dual-language books as an emergent-literacy resource: Culturally and linguistically responsive teaching and learning. *Journal of Early Childhood Literacy*. 2013; 13:501–528. DOI: 10.1177/1468798412442886
- Neuman, SB.; Roskos, K. *Nurturing knowledge: Building a foundation for school success by linking early literacy to math, science, art, and social studies*. New York: Scholastic; 2007.
- Onchwari G, Keengwe J. The impact of a mentoring-coaching model on teacher professional development. *Early Childhood Education Journal*. 2008; 36:19–24. DOI: 10.1007/s10643-007-0233-0
- Phillipsen LC, Burchinal MR, Howes C, Cryer D. The prediction of process quality from structural features of child care. *Early Childhood Research Quarterly*. 1997; 12:281–303.
- Pianta, RC.; La Paro, KM.; Hamre, BK. *Classroom Assessment Scoring System (CLASS)*. Baltimore: Paul, H. Brookes; 2008.
- Pollard-Durodola SD, González JE, Simmons DC, Taylor AB, Davis MJ, Simmons L, Nava-Walichowski M. An examination of preschool teachers’ shared book reading practices in Spanish: Before and after instructional guidance. *Bilingual Research Journal*. 2012; 35:5–31. DOI: 10.1080/15235882.2012.667374
- Riches, C.; Genesee, F. Literacy: Crosslinguistic and crossmodal issues. In: Genesee, F.; Lindholm-Leary, K.; Saunders, WM.; Christian, D., editors. *Educating English Language Learners: A Synthesis of Research Evidence*. Cambridge: Cambridge University Press; 2006. p. 64-108.
- Rueda R, Garcia E. Teachers’ perspectives on literacy assessment and instruction with language minority students: A comparative study. *The Elementary School Journal*. 1996; 96:311–332.
- Tabachnick, BG.; Fidell, LS. *Using Multivariate Statistics*. 4. Boston: Allyn and Bacon; 2001.
- Tabors, PO. *One child, two languages: A guide for early childhood educators of children learning English as a second language*. 2. Baltimore, MD: Brookes Publishing; 2008.
- Vázquez-Montilla E, Just M, Triscari R. Teachers’ dispositions and beliefs about cultural and linguistic diversity. *Universal Journal of Educational Research*. 2014; 2:577–587. DOI: 10.13189/ujer.2014.020806

- Wasik BA, Hindman AH. Low-income children learning language and early literacy skills: The effects of a teacher professional development model on teacher and child outcomes. *Journal of Educational Psychology*. 2011; 103:455–469. DOI: 10.1037/a0023067
- Walker A, Shafer J, Iiams M. “Not in my classroom”: Teachers’ attitudes toward English language learners in the mainstream classroom. *NABE Journal of Research and Practice*. 2004; 2:130–160.
- Wen X, Elicker JG, McMullen MB. Early childhood teachers’ curriculum beliefs: Are they consistent with observed classroom practices? *Early Education and Development*. 2011; 22:945–969. DOI: 10.1080/10409289.2010.507495
- Wilcox-Herzog A. Is there a link between teachers’ beliefs and behaviors? *Early Education and Development*. 2003; 13:81–106.
- Wong Fillmore, L.; Snow, CE. What Teachers Need to Know about Language. ERIC. 2002. Available from <http://faculty.tamu-commerce.edu/jthompson/resources/fillmoresnow2000.pdf>
- Youngs CS, Youngs GA. Predictors of mainstream teachers’ attitudes toward ESL students. *TESOL Quarterly*. 2001; 35:97–120.

Table 1

Preschool Teachers' Self-Reported Beliefs about Language and Culture

	All Teachers (n = 53)		Spanish-speaking Teachers (n = 23)		Non-Spanish-speaking Teachers (n = 26)	
	Strongly Disagree or Disagree	Strongly Agree or Agree	Strongly Disagree or Disagree	Strongly Agree or Agree	Strongly Disagree or Disagree	Strongly Agree or Agree
The same school program works for both bilingual and monolingual children [REV]	41.5%	58.5%	45.5%	54.5%	42.3%	57.7%
English should be the only language spoken in school [REV]	90.6%	9.4%	100.0%	0.0%	88.5%	11.5%
All parents should speak English at home [REV]	79.2%	20.8%	90.9%	9.1%	76.9%	23.1%
Information about home languages should be shared with all children in school	15.4%	84.6%	18.2%	81.8%	28.0%	72.0%
Teachers do not need to try to communicate with parents who speak a different language [REV]	88.7%	11.3%	81.8%	18.2%	96.2%	3.8%
Parents should speak their home language with their children	1.9%	98.1%	4.5%	95.5%	0%	100%
Materials from other languages and cultures should be shared with all children in school	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
Bilingual children require more special education services [REV]	88.2%	11.8%	86.4%	13.6%	87.5%	12.5%

Note. Scale: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree. Four response categories were collapsed into two for presentation. [REV] = item reversed before calculating mean. N for teachers varies because of missing self-reported data. Wording of items adapted from Tabors (2008).

Table 2

Preschool Teachers' Observed Literacy Practices with Spanish-speaking DLLs.

	All Teachers (<i>n</i> = 72)			Spanish-speaking Teachers (<i>n</i> = 23)			Non-Spanish-speaking Teachers (<i>n</i> = 26)		
	Possible Range	Mean (SD)	Range	Mean (SD)	Range	Mean (SD)	Range	Mean (SD)	Range
Literacy Environment Checklist	0–16	4.71 (3.12)	0–13	6.04 (3.98)	0–13	4.69 (2.80)	1–10	4.69 (2.80)	1–10
Modified Classroom Observation	4–20	8.25 (3.86)	3–20	10.04 (4.55)	5–20	7.28 (3.01)	3–14	7.28 (3.01)	3–14
Literacy Activities Rating Scale	0–14	0.70 (1.57)	0–10	1.00 (2.31)	0–10	0.62 (1.20)	0–4	0.62 (1.20)	0–4

Note. The *n* of Spanish-speaking teachers and non-Spanish-speaking teachers do not total 72 due to missing data on this variable. Range for all and non-Spanish-speaking teachers on modified classroom observation begins at 3 due to missing data on one item.

Table 3

Correlations among Teacher Factors and Observed Practices

Variable	2	3	4	5	6	7	8
1. Literacy Environment Checklist	.62***	.37**	.23	.20	.25	.18	-.09
2. Modified Classroom Observation		.38**	.05	.35*	-.001	.06	.08
3. Literacy Activities Rating Scale			-.25	.11	.07	.07	.12
4. Language and Culture Beliefs				.002	.18	-.06	.23
5. Good or Native-Like Spanish speaking ability					.08	.25	-.10
6. Percent of DLL enrollment						-.06	.23
7. Years of Preschool Teaching Experience							-.01
8. Teacher education (dichotomous for Master's)							--

* $p < .05$.*** $p < .01$.

Table 4
 Summary of Regression Analyses Examining the Relations between Select Teacher Factors and Observed Literacy Practices

		Observed Literacy Practices		
		Literacy Environment Checklist	Modified Classroom Observation	
Block	Predictor	R ²	β	β
Model A				
1	Spanish speaking ability (dichotomous)	.08	.23	.37*
	Language/culture beliefs		.15	-.05
2	Spanish ability * Beliefs	.08	.07	-.24
Model B				
1	Percent DLL enrollment	.11	.19	.06
	Language/culture beliefs		.24	.06
2	DLL enrollment * Beliefs	.11	-.08	-.24

Note. Reported β is the standardized value of beta from the corresponding entry block.