



Enhancing Young Hispanic Dual Language Learners' Achievement:

Exploring Strategies and Addressing Challenges



POLICY INFORMATION REPORT



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RESEARCH REPORT

Enhancing Young Hispanic Dual Language Learners' Achievement: Exploring Strategies and Addressing Challenges

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Dual language learners, or DLLs, may have greater school readiness needs due to the key role English oral language skills play in the development of emerging literacy skills in English and their overall academic achievement. This especially can be the case if children's capacity to benefit from classroom instruction and interact with teachers and fellow students is dependent on their English language proficiency. This policy report examines key factors contributing to young Hispanic DLLs academically at-risk status, as well as the emerging research base on strategies for supporting the learning and development of DLLs in preschool and the early primary grades. Also addressed are the practical, on-the-ground implementation challenges to be addressed if early education programs are to incorporate these strategies.

Keywords Dual language learners; preschool; early education

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This report arises out of three independent, yet consequentially relevant U.S. policy contexts: a strong federal focus on enhancing the quality of early education programs, a rapidly growing population of Hispanic preschoolers, and the need for concrete, on-the-ground instructional strategies for improving the learning outcomes of preschool to Grade 3 students who are not yet proficient in English. Furthermore, the relevance of these contexts emerges when considering the goals of the federal Race to the Top—Early Learning Challenge (RTT-ELC) and the demographics of the 20 states that have been awarded close to \$1 billion in funding since the initiative began in 2011. For example, RTT-ELC aims to improve high-need infant, toddler, and preschoolers' access to high-quality early learning and development programs as a means for enhancing their school readiness. To accomplish this goal, the initiative targets the coordination of state services for young children, improving early education quality and accountability, increasing children's learning outcomes, enhancing the capacity of the early education workforce, and measuring children's outcomes and progress (Applications for New Awards: Race to the Top—Early Learning Challenge, 2012).

The high need categories that have been required to be reported as part of each state's RTT-ELC application are identified disabilities or developmental delays; being migrant, homeless or in foster care; residing on Indian lands; or being an English learner. States also have had the option of reporting the quantity and percentage of children who meet additional state-specific need categories, such as living in a rural area or having low birth weight (Final Requirements—Race to the Top—Early Learning Challenge, Phase 2., 2012). As might be expected, the number and percentage of children reported within each of the required high needs categories varies across the 20 RTT-ELC states. However, in 16 states, the category with the largest estimated percentage of children is *English learners* (see Appendix A).

Perhaps not coincidentally, since 2000 all 20 RTT-ELC states have experienced an increase in the number and percentage of children not yet in kindergarten and identified as Hispanic/Latino (see Appendix B). In all cases, this growth has occurred in terms of absolute numbers and as a percentage of the total population of children ages 0–4. Similar growth is mirrored in total enrollment data for the federally funded Head Start program for low-income preschoolers, with the percentage of children identified as Hispanic/Latino expanding from 30% in fiscal year 2001 (Schumacher & Rakpraja, 2003) to 36% in 2012 (Office of Head Start, 2014). In fact, recent U.S. Census numbers suggest that 26% of all children between the ages of 0 and 4 are Latino (U.S. Department of Commerce, 2010). Moreover, while an estimated 98.5% of Hispanic/Latino preschool children are born in the United States, 46.2% of this group has at least one immigrant parent.¹

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Consequently, the growth in the Hispanic population potentially represents an increase in the number of young students for whom English is a second language.

No matter what their ethnic background, young English learners — and referred to in this report as dual language learners, or DLLs — are defined as having a non-English home or dominant language and are in the process of acquiring greater proficiency in that language, but also are learning English (Office of Head Start, 2008). Young DLLs are considered to have greater school readiness needs because of the key role English oral language skills play in the development of emerging and later English literacy skills and overall academic achievement (Dickinson, Golinkoff, & Hirsh-Pasek, 2010; Hart & Risley, 1995; Hoff, 2013; Kieffer, 2008; Snow, Burns, & Griffin, 1998). These readiness needs may be especially critical if children's capacity to benefit from classroom instruction and interact with teachers and fellow students is dependent on their English language proficiency.

Of course, it is important to remember that being bilingual can benefit young children's development and learning, particularly in terms of their inhibitory control and cognitive flexibility (Barac, Bialystok, Castro, & Sánchez, 2014; Carlson & Meltzoff, 2008; Martin-Rhee & Bialystok, 2008; Morales, Calvo, & Bialystok, 2013; Poarch & van Hell, 2012; Poulin-Dubois, Blaye, Coutya, & Bialystok, 2011). Moreover, preschool-aged DLLs will have differing levels of risk for developing academic achievement issues, with the probability of risk dependent in large part on the extent to which students need special language assistance to fully benefit from enrollment in a high-quality early education program (Gutiérrez, Zepeda, & Castro, 2010; Halle, Hair, Wandner, McNamara, & Chien, 2012; Quirk, Nylund-Gibson, & Furlong, 2013; Winsler et al., 2014). Yet, this continuum of risk can present a unique set of challenges to early education programs and policymakers as they strive to enhance DLL students' kindergarten readiness. Teachers must determine the classroom support children need and differentiate their practices accordingly (E. E. García, 2011). The programs and schools in which these classrooms operate must figure out optimal staffing and student placement configurations to support DLLs' language development and overall learning (Uro & Barrio, 2013). These issues also have implications for the knowledge and skills classroom and other school staff need to effectively teach DLL preschoolers and assess their linguistic proficiency and ongoing learning. All of these challenges are particularly salient in light of what is left to be learned about effective early education instructional strategies for DLLs (Love, Chazan-Cohen, Raikes, & Brooks-Gunn, 2013).

RTT-ELC's focus on enhancing the quality of early education, the recently announced Preschool Development and Expansion Grants (U.S. Department of Education, 2014), and President Obama's² and pending Congressional proposals³ to expand 4-year-olds' access to publicly funded prekindergarten (pre-K) are positive steps for increasing the kindergarten readiness of this country's high needs children. This is particularly the case given the benefits of high-quality preschool for disadvantaged students (Barnett, 1998, 2001, 2002; Yoshikawa et al., 2013). However, accomplishing this set of inter-related goals may require a similar focused investment on the key early education instructional inputs that can bolster the achievement of preschool-aged DLLs who are most at risk for experiencing academic achievement issues. Furthermore, due to the growing number of children identified as Hispanic/Latino and between the ages of 0 and 17 (Federal Interagency Forum on Child and Family Statistics, 2014; Krogstad, 2014; O'Hare, 2011; U.S. Census Bureau, 2014; U.S. Department of Commerce, 2010), as well as research on achievement gaps between this group of students and their non-Hispanic peers (Flanagan & McPhee, 2009; Fryer & Levitt, 2004; Fuller et al., 2009; Galindo, 2010; Halle et al., 2009; W.-J. Han, Lee, & Waldfogel, 2012; Haskins & Rouse, 2005; Hemphill, Vanneman, & Rahman, 2011; J. Lee, 2002; V. E. Lee & Burkam, 2002; National Center for Education Statistics, 2012b, 2012c; Rampey, Dion, & Donahue, 2009; Reardon & Galindo, 2009; Reardon & Robinson, 2008; Reardon, Valentino, & Shores, 2012), an initial focus on preschoolers whose home language is Spanish may provide policymakers with the opportunity to impact the largest number of high-need DLLs.

To provide a rationale for this argument, this report draws on the early childhood research base on enhancing the early academic achievement of DLLs, with a particular emphasis on Hispanic students. We begin with an overview of key factors contributing to young Hispanic DLLs' academically at-risk status, followed by a brief history of legislation regarding the education of DLLs and more recent professional position statements and early learning standards on this topic. Shared next is the emerging research on instructional strategies for supporting the learning and development of DLLs in preschool and the early primary grades, as well as the practical, on-the-ground implementation challenges to be addressed if early education programs are to incorporate these strategies. The report then turns to the validity and reliability challenges to consider when using assessment data to inform instructional and

programmatic decisions in classrooms serving young DLLs. We conclude with some implications for the instructional inputs to be focused on as part of future RTT-ELC and/or other federal investments aimed at reducing Hispanic DLL achievement gaps.

Key Contributors to Young Hispanic Dual Language Learner's Academically At-Risk Status

As noted in the introduction, preschool-aged DLLs can be at risk for developing academic achievement issues, with the probability of risk dependent in large part on the extent to which students need special language assistance to fully benefit from an education program. While the level of risk varies for each child, the implications for Hispanic students specifically (not all of whom will be DLLs) are revealed when comparing data on this group's academic achievement and that of their non-Hispanic White peers. For example, despite good birth outcomes and health in infancy (Fuller et al., 2010) as well as strong social-emotional growth (Fuller & García Coll, 2010; Guerrero et al., 2013), analyses of data from the Early Childhood Longitudinal Study (ECLS) demonstrate that Latino toddlers exhibit smaller cognitive gains and preliteracy and math scores (Fuller et al., 2009; Halle et al., 2009). These data also reveal gaps in early reading and math skills upon entering kindergarten (Flanagan & McPhee, 2009; Fryer & Levitt 2004; Han et al., 2012; Haskins & Rouse, 2005; V. E. Lee & Burkam, 2002).

Additional analyses of ECLS data as well as scores on the National Assessment of Educational Progress (NAEP) suggest that such gaps narrow slightly in the elementary grades (Galindo, 2010; Reardon & Galindo, 2009), but can differ in magnitude depending on the specific Hispanic subgroup (Reardon & Robinson, 2008; Reardon et al., 2012). Hispanic kindergarteners' approaches to learning skills also can differ based on their parents' region of origin, which may, in turn, contribute to differences in early math skills (Galindo & Fuller, 2010). Furthermore, analysis of NAEP scores for students in Grades 4, 8, and 12 reveals further gaps in math, reading, vocabulary, and writing (Hemphill et al., 2011; J. Lee, 2002; National Center for Education Statistics, 2012b; National Center for Education Statistics, 2012c; Rampey et al., 2009; Reardon et al., 2012).

Parental Education and Family Income

Understanding the variety of factors impacting Hispanic DLLs' differing levels of academic achievement can be useful for thinking about how such risk might be addressed. These factors include a set of complex and interrelated family demographics. For example, just 76% of Hispanic high school freshmen graduate 4 years later. While this rate is slightly higher than that for Black students (68%), it is lower than the graduation rate for White and Asian/Pacific Islander students (85% and 93%, respectively; National Center for Education Statistics, 2014). The most recent census data reveal that by age 25, 62.9% of Hispanic parents have graduated from high school, as compared to 87.6% of White, 84.2% of Black, and 88.9% of Asian American parents (U.S. Census Bureau, 2012). Moreover, Hispanic parents with limited English skills have the highest proportion among all adults in this specific group of achieving only an elementary-school education (Hernandez, 2010). Low graduation rates also result in decreased educational attainment over time, with just 1 in 10 Hispanic adults having a college degree, compared to 1 in 4 White adults (Gándara & Contreras, 2009).

Lower levels of education also can negatively affect access to higher paying jobs (Hernandez, Denton, & Macartney, 2007). In fact, a recent analysis of job characteristics of employed parents in the United States found that Hispanic workers not only are more likely to be paid by the hour, but also have the lowest average hourly wage (\$12.50) as compared to non-Hispanic White (\$19.20), Black (\$14.40), and Asian American workers (\$19.20; Earle, Joshi, Geronimo, & Acevedo-García, 2014). Consequently, another socioeconomic factor related to the Hispanic achievement gap is family income, with 35% of all Hispanic children age 0–17 living in the United States considered to be in poverty. This percentage is disproportionately high as compared to that of non-Hispanic White children (12.4%), but not as high compared to that of Black children (39.1%). In addition, while 35% of all Hispanic children age 0–17 are in poverty, these rates are higher for children of immigrants (40.2%) compared to children of United States-born parents (27.6%; Aud et al., 2013; M. H. Lopez & Velasco, 2011).

High-quality early education programs have the potential to enhance disadvantaged students' high school graduation rates and long-term employment and earnings (Schweinhart et al., 2005). However, to realize such effects within a high-needs Hispanic DLL population, there are two additional factors that likely have salient short-term implications for early

education program instructional strategies: students' proficiency in English and Spanish, and family support for children's at-home and in-school learning.

Students' English and Spanish Language Proficiency

The first major DLL risk factor which early education programs potentially can address is the degree to which children's capacity to meaningfully participate in classroom instructional activities and interact with teachers and fellow students is dependent on their language proficiency. Part of this risk stems from the complex process by which a child becomes fluent in a first and a second language, beginning with opportunities to hear and use language with more linguistically proficient adults, siblings, and peers. Such opportunities can take place at home, in a child's neighborhood, and in early education settings. Age and personality also may play a role in the extent to which a young child speaks and understands a language. In addition, children's proficiency in speaking two languages can vary depending on the amount and type of exposure to any language (daily exposure at home from a native speaker vs. infrequent exposure in the neighborhood), at which age the exposure begins, and whether the languages are being learned simultaneously or sequentially (Boyce, Gillam, Innocenti, Cook, & Ortiz, 2013; Bumgarner & Lin, 2014; B. A. Collins, 2014; Hammer et al., 2014; Hoff, Rumiche, Burrige, Ribot, & Welsh, 2014; Isbell, 2002; E. A. Ortiz, 2009; Saffran, Senghas, & Trueswell, 2001).

Because of the variety of contributors to this process, when a young Hispanic DLL first participates in an early education program, his or her linguistic proficiency may vary from minimal in both languages; fluent in Spanish, but not in English; competent in everyday English social conversations, but not in the type of language used in classrooms to learn different academic subjects (and often referred to as *academic language*); to fully proficient in both languages (Espinosa, 2008; Genesee, 2010; Grant, 1995; Oades-Sese, Esquivel, Kaliski, & Maniatis, 2011; Páez & Rinaldi, 2006; Place & Hoff, 2011; Tabors & Snow, 2001).

Data from national surveys also supports the link between home language environments and uneven Hispanic DLL proficiency in speaking and understanding English upon school entry. In 2000, an estimated 75% of Hispanic children in immigrant families were living with at least one parent who did not speak English exclusively or very well, and half lived with two parents with limited English skills (Hernandez, 2006). Similarly, the most recent data from the 2011 American Community Survey indicate that in 24.3% of Spanish-speaking households "no one age 14 and over speaks English only or speaks English 'very well'" (U.S. Census Bureau, 2011). A 2013 report on Head Start DLL students and families, 84% of whom speak Spanish as their home language, also noted that 48% of parents reported not understanding English well, and an additional 15% did not understand English at all (Administration for Children and Families, 2013).

Moreover, while almost 10% of all K–12 public school students participated in programs for English language learners (National Center for Education Statistics, 2012d), recent NAEP mathematics data suggest that 38% of Hispanic Grade 4 students and 20% of Hispanic students enrolled in Grade 8 are similarly identified (National Center for Education Statistics, 2012a). When considering the impact of home language environments, it perhaps is not surprising to learn that variations in these environments can be related to children's language proficiency at ages 2 and 3 (Boyce et al., 2013) as well as their scores on English-based assessments of math and reading skill development in kindergarten (Reardon & Galindo, 2007, 2009).

Family Proficiency in Supporting Children's Early Learning

Parental proficiency in English, education level, and income can on their own be related to Hispanic achievement gaps. When combined, they can impact a second major risk factor that potentially can be mitigated by early education programs: family involvement in children's at-home and school learning (J. Lee & Bowen, 2006), which research consistently links to children's academic achievement (Griffith, 1996; Henderson & Mapp, 2002; Jeynes, 2012; Miedel & Reynolds, 2000; Shonkoff & Phillips, 2000). Parent involvement can include a wide continuum of school-based activities, ranging from communicating with a child's school, attending parent-teacher conferences, and helping out in the classroom (Castro, Bryant, Peisner-Feinberg, & Skinner, 2004; Epstein, 2001; Marcon, 1999; Reynolds & Shlafer, 2010). It also includes the home learning environment, such as helping children with school-related tasks (Halgunseth, Peterson, Stark, & Moodie, 2009), as well as cultural and family attitudes about the importance of education for future success and expectations for student behavior (Durand & Perez, 2013; Guerra & Nelson, 2013; McWayne, Melzi, Schick, Kennedy, & Mundt, 2013). In addition, young children's home learning environment—including the materials available and the type of interactions

children have with siblings and adults — can provide an important foundation for the development of their later academic achievement skills (Dearing & Tang, 2010; Guralnick, 2008; Lamb Parker, Boak, Griffin, Ripple, & Peay, 1999; J. Roberts, Jurgens, & Burchinal, 2005). The combination of home learning environment and parental attitudes and expectations may be particularly critical for children who already are demographically at high risk for experiencing academic problems (Baker, 2014; Ginsburg-Block, Manz, & McWayne, 2010).

The potential contribution of family proficiency in supporting young children's early learning is illustrated when we consider the impact of at-home shared book reading and overall emphasis on literacy, both of which are viewed as essential elements for building young children's early literacy skills (Bus, 2002; International Reading Association, & National Association for the Education of Young Children, 1998; Snow et al., 1998). Further research is needed to determine the exact contributions of shared storybook reading and more global at-home literacy practices to children's early language and literacy skill attainment (J. Roberts et al., 2005; Schickendanz & McGee, 2010). Nonetheless, when coupled with the use of open-ended questions, print referencing, and other related activities, this activity seems to be useful for expanding young children's expressive and receptive vocabulary, print knowledge, and listening skills (Chrisler & Ling, 2011; Justice, Kaderavek, Fan, Sofka, & Hunt, 2009; Shanahan & Lonigan, 2010). Research suggests a strong correlation between the numbers of books in the home and family "scholarly culture" (Evans, Kelley, Sikora, & Treiman, 2010) as well as older students' scores on standardized measures of reading proficiency (Barton & Coley, 1992).

Research comparing the frequency with which different groups of low-income parents read to their children suggests far lower rates for Hispanic as compared to non-Hispanic families (Boyce et al., 2004; O'Brien et al., 2002; Raikes et al., 2006; Yarosz & Barnett, 2001). This may be due in part to a traditional cultural emphasis on oral storytelling (Langer de Ramírez, 1996; McDowell, Herrera-Sobek, & Cortina, 1993; Reese, 2012). Also contributing may be varying beliefs about the value of reading to children in their home language (L. M. López, 2005) as well as an at-home emphasis on other types of activities to help children develop their language and literacy skills (López-Velásquez, 2009; R. W. Ortiz & Ordoñez-Jasis, 2005; Reese & Gallimore, 2000). In addition, low-income families may not have a sufficient quantity of age-appropriate and high-quality literacy materials to read in their home because of financial constraints and/or lack of access to a well-stocked public or school library (Duncan & Magnuson, 2005; Reese & Goldenberg, 2006; T. Roberts, 2008; Waldfogel, 2012).

No matter what the reason(s), fewer opportunities to engage in shared book reading can contribute to a child's concurrent lack of motivation to learn how to read (Strickland, 2001). Even if parents engage in shared book reading, due to their own beliefs, personal experiences, and/or literacy levels, they may not know how to make the most of these experiences to support their child's emergent literacy skills (Cottone, 2012). These experiences potentially may result in less than optimal language and literacy development (Vernon-Feagans, Hammer, Miccio, & Manlove, 2001).

Moreover, while parents may wish to support their children's at-home and in-school learning, their level of involvement may be limited by a variety of personal and contextual factors. For example, parents may have a lower sense of efficacy regarding their ability to help with children's homework, which may stem from their own level of education and/or academic skills. Even if parents have a high sense of self-efficacy and believe they can make a valuable contribution, their ability to do so may be limited by personal obligations, such as child and elder care, or work schedule. These latter contributors also may have an impact on the amount of available time and energy parents devote to being involved in their child's learning (Dauber & Epstein, 1993; Downer & Myers, 2010; Hill, 2010; Hoover-Dempsey et al., 2005; Hoover-Dempsey, Whitaker, & Ice, 2010; Joseph & Cohen, 2000; Okagaki & Bingham, 2010; D. C. Peña, 2000; Ramos, 2013; Smrekar & Cohen-Vogel, 2001).

Education programs also can inadvertently limit DLL family support for young children's in-school learning when staff do not speak and/or use languages other than English. For example, an examination of ECLS Kindergarten data shows that Hispanic immigrant parents of kindergartners are more likely than native-born White parents to report that language is a barrier to participating in school activities (Turney & Kao, 2009). In turn, Hispanic families whose home language is Spanish are less likely to feel comfortable reaching out to school staff in comparison to parents who are native English speakers (Gamoran, López Turley, Turner, & Fish, 2012). A case study of Mexican-American parents of students in pre-K through Grade 4 found that when their children's school conducted parent meetings predominantly in English, this limited families' ability to, and interest in, being involved in this activity (D. C. Peña, 2000). Interviews and focus groups with immigrant parents also highlight their disappointment at not being able to talk about their children's academic progress and issues with teachers due to such a mismatch and the lack of a school-provided translator (Park & McHugh,

2014; Ramirez, 2003). These situations also may implicitly send a message to parents that they do not have much to offer in terms of supporting their children's learning unless they can do so in English (Davis, 2010; Duenas, 2011; Pacini-Ketchabaw, Bernhard, & Freire, 2001).

In summary, while not all young Hispanic DLLs will be academically at risk, achievement gaps for the group as a whole are evident as early as entry into kindergarten. These issues appear to be strongly related to a child's proficiency in speaking and understanding English as well as a set of interrelated demographic factors that may influence the extent to which families can support young children's learning. A growing body of research explores instructional strategies for addressing these issues. To provide a context for our discussion of this research, we first provide a brief overview of the history of legislation regarding the education of DLLs as well as early childhood-focused professional position statements and learning standards.

Legislation, Position Statements, and Early Learning Standards for DLLs

The increasing number of DLLs enrolled in K–12 schools and early education programs is reflected in legislation enacted over the past 50 years as well as more recent professional organization position statements and state and federal early learning standards. As is highlighted in this section, these position statements have coalesced around the importance of supporting children's home language as a means for improving their English language capacity and families' involvement in learning. However, state early learning standards for DLLs not yet in kindergarten, as well as legislation on K–12 classroom language of instruction, are less consistent. There also is inconsistency in federal policy regarding at what age students are required to be identified as English language learners.

Legislative History Regarding the Education of English Language Learners

A brief historical review of U.S. norms and laws highlights the degree to which opinions have varied regarding best classroom practices for students who are not proficient in English. As an example, in the 18th and 19th century, it was common for both private and public schools to offer bilingual or non-English language instruction. However, beginning in the late 19th century and even up until the late 1990s, state and/or local laws stressed the assimilation of immigrants and their ability to speak English as well as a push for English-only instruction. Moreover, the attitude toward students who did not speak English often was one of sink or swim, meaning it was up to the students themselves to figure out how to successfully learn English and make the most of their time in the classroom (Cheung & Slavin, 2012; Hakuta, 2011; Ovando, 2003; Wiese & García, 1998).

The federal government began addressing the education of English learners in public school districts through a series of Supreme Court decisions and laws, including the Civil Rights Act (1964), the 1968 Bilingual Education Act (Title VII of the Elementary and Secondary Education Act, 1968), the 1974 *Lau v. Nichols* decision (1974), and the Improving America's Schools Act's (1994). The Bilingual Education Act required federally funded school districts to demonstrate how the needs of English learners were being addressed. This act also has been credited with the growth of English as a second language (ESL) classes as well as bilingual education classes (Ovando, 2003; Stewner-Manzanares, 1988; Zacarian, 2012).

In 2001 the No Child Left Behind Act (2002; see also Learning Point Associates, 2007) used the term *limited English proficient* (LEP) to describe students who are age 3–21 and are enrolled in or preparing to enroll in an elementary or secondary school, are born outside of the United States, or have a native language other than English (including a Native American or Alaska Native or native resident of the outlying areas). Also included in this definition are students whose difficulties in speaking, reading, writing, or understanding English may be sufficient to deny them the ability to meet a proficient level of achievement on a state's standardized assessment and/or to successfully achieve in classrooms where the language of instruction is English.

As part of this legislation, K–12 public schools are required to identify English learners and subsequently demonstrate via assessment scores that these students are attaining levels of academic achievement that are consistent with state learning standards and improving in their English proficiency (Abedi, 2007). However, it is up to states to determine which students should be classified as English learners (as well as by what means), what type of language assistance is to be provided in their K–12 classrooms, and which assessments will be used to demonstrate students' subsequent English proficiency

(Brassard & Boehm, 2007; Rhodes, Ochoa, & Ortiz, 2005). We discuss issues related to the use of assessments with DLLs in more detail below.

NCLB's definition of LEP students includes 3- and 4-year-olds. Title I dollars also are used to fund pre-K, albeit on a limited basis (Barnett, Carolan, Fitzgerald, & Squires, 2011; U.S. Department of Education, 2012). However, the NCLB requirement regarding LEP children demonstrating improvement in their English proficiency does not apply to preschoolers. This is partly due to Title I-required assessments not extending below Grade 3. In addition, states do not receive Title III funds to teach DLL preschoolers (Clewell, deCohen, & Murray, 2007). Also contributing may be the practical reality that even monolingual English-speaking preschoolers' language skills are developing, with the variation in development for this and other cognitive skills more evident in the preschool years than at any other time during the school-age period (Bowman, Donovan, & Burns, 2000; Snow & Van Hemel, 2008). All of these reasons may explain why only 27 of 54 state-funded pre-K programs report the number of DLLs enrolled (Barnett, Carolan, Fitzgerald, & Squires, 2012).

Classroom Language of Instruction Legislation

Because states may determine the type of language assistance to be provided to public K–12 students who have been identified as LEP, it may not be surprising that policies governing the use of English and home languages in classrooms differ. These policies range from structured English immersion only, to local education authority choice of different delivery models (e.g., structured English immersion for all subjects, small-group instruction, or language assistance from an ESL teacher or in a resource center for specific content areas), to bilingual education programming required when at least 20 students in a single school speak the same language.⁴ However, because political ideologies, historical norms, education outcome goals, and/or stakeholder preferences can drive policies regarding which language(s) teachers should use for any specific purpose and/or length of time (Espinosa, 2013; Freedson, 2010; E. E. García, 2011; Hakuta, 2011; Ovando, 2003), suffice it to say that this topic is contentious, and research on the effects of these policies cannot be adequately addressed here.

Half of all state-funded pre-K programs report that bilingual classes are permitted (Barnett et al., 2012), but just two states require pre-K classrooms serving young DLLs to be staffed by bilingual teachers. Illinois was the first state to mandate that as of July 1, 2014, teachers working in public school-administered pre-K classrooms that have at least 20 DLL students speaking the same language must be certified in both Early Childhood Education and Bilingual Instruction or ESL (Bridges & Dagys, 2012). Texas also requires bilingual instruction to be offered in pre-K when the district has an enrollment of 20 or more DLLs in any grade (Texas Administrative Code Title 19, Part 2, Chapter 89, Subchapter BB, Rule 89.1205). Other states may address bilingual preschoolers in their state education statutes,⁵ but they do not require bilingual teaching staff in publicly funded pre-K classroom serving DLLs (Severns, 2012).

Professional Position Statements

While state regulations on teachers' use of DLLs' home language in the classroom may not reflect a unified perspective, position statements on this topic issued by professional groups over the past 20 years are remarkably similar. For example, in 1995, the National Association for the Education of Young Children (NAEYC) recommended that programs serving young DLLs use and help preserve children's home language, including providing parents with strategies to support children's language development (National Association for the Education of Young Children, 2005). In 2003, NAEYC partnered with the National Association of Early Childhood Specialists in state departments of education to publish a position statement regarding early childhood curriculum, assessment, and program evaluation. This statement advised that the curriculum used in programs serving young children should be responsive to and support enrollees with non-English home languages. Programs serving infants and toddlers should use curricula that build on the home language as well (National Association for the Education of Young Children and National Association of Early Childhood Specialists in State Departments of Education, 2003).

More recently, the position statement of the Division for Early Childhood of the Council for Exceptional Children (2010) urged respect and support for children's home language and indicated that teachers' classroom practice should be responsive to family's ethnicity, culture, and language. And in 2010 the Teachers of English to Speakers of Other Languages

(TESOL) Association recommended that programs serving DLLs age 3–8 support the continued development of students' home language as a way to facilitate at-home learning and help advance students' early literacy skills. In addition, teachers and school administrators should be provided with multiple training opportunities in DLL language development and the ways in which culturally relevant instruction and materials can be incorporated into teachers' practice (TESOL, 2010).

Early Learning Standards

The needs of children for whom English is not their home language also are reflected to varying degrees in state early learning standards for what DLLs should know and/or be able to do at age 3 or 4 and/or after participating in a state's publicly funded early education program. A review by the federal Office of the Administration for Children and Families Early Childhood Learning & Knowledge Center shows that these expectations most often are related to language and literacy development. In some instances, the standards also reference the types of activities caregivers and teachers might engage in to support children's growth in this domain. However, just six states have distinct early learning guidelines for preschool-aged DLLs.⁶

Head Start is the federally funded program for economically disadvantaged 3- and 4-year olds. This initiative's Child Development and Early Learning Framework, which outlines the key areas of enrollees' development in 10 domains or learning areas, has an additional domain that is specific to DLLs. This English language development domain notes 15 markers of DLLs' capacity to comprehend and speak English and to understand and respond to books, storytelling, and songs that are presented in English (Office of Head Start, 2010).

In summary, federal and state legislation and learning standards reflect an awareness of the growing numbers of DLL students in publicly funded pre-K programs and K–12 school districts. However, while professional position statements emphasize support for young children's home language development and responsiveness to families' culture, NCLB provides states with wide latitude in the type of instruction preschoolers and K–12 DLLs will receive. As the next section discusses, this variation in classroom practice also may reflect what is—and is not yet—known about effective classroom instructional strategies for young DLLs.

Promising Classroom Instructional Strategies and Further Research Needed

In addition to a shifting policy landscape, a growing research base is attempting to shed light on the best practices for educating DLLs in preschool and the early primary grades. Much of this research focuses on the effects of using children's home language in the classroom and strategies for increasing students' English language and literacy proficiency. However, at present this research base is not yet sufficiently robust to guide more fine-grained policy decisions.

Classroom Language Approaches

As was highlighted in the previous legislative history overview, it is up to states to determine what type of language assistance is to be provided to public K–12 students who have been identified as LEP. Prior reviews of the different types of linguistic approaches used in classrooms serving preschool and early primary grade DLLs, as well as our examination of early childhood-focused studies using an English- and Spanish-speaking sample, demonstrate a wide continuum of on-the-ground possibilities. On one end are classrooms that rely solely on English-only or Spanish-only instruction, meaning that both the teacher's interactions with children and the curricula used are exclusively conducted in one language. When the language of instruction is English, this approach also is known as English immersion. Such classrooms might be supplemented with pullout classes for certain academic subjects or to help students develop their ESL skills (Brown, 2004; Rennie, 1993).

On the other end of the continuum are classrooms using a bilingual approach, with teachers using English and DLLs' home language. Which language teachers use at any time may be dependent on activity (e.g., whole-group instruction in English, but small-group instruction with a teacher who speaks children's home language) or academic domain (e.g., literacy vs. mathematics). Transitional bilingual classrooms also use both languages for instruction, but the ratio of English to Spanish increases over time. Classrooms also may be somewhat bilingual as a result of their staffing patterns, such as

using an English-only teacher and bilingual or home-language dominant teaching assistant or parent volunteer who acts as a translator (Bridges, Anguiano, & Fuller, 2010; Burchinal, Field, López, Howes, & Pianta, 2012; Espinosa, 2009, 2010b; E. E. García, 2011; Gort & Pontier, 2013; Parker, O'Dwyer, & Irwin, 2014; Piker & Rex, 2008; Potemski, 2009; Slavin & Cheung, 2005; Slavin, Madden, Calderón, Chamberlain, & Hennessy, 2011).

Programs also might deliberately aim to promote English and Spanish monolingual students' fluency in both languages through use of a two-way immersion approach. In these classrooms, instruction occurs in Spanish or English for some portion of the day or week (e.g., 90–10 or 50–50, a.m. vs. p.m.), but not simultaneously. Two-way immersion programs also may employ graduated or phase-in approaches that involve teachers modifying the amount of time English or Spanish are used (Barnett, Yarosz, Thomas, Jung, & Blanco, 2007; Bridges et al., 2010; Espinosa, 2010b; E. E. García, 2011; Howard, Sugarman, & Christian, 2003; Slavin & Cheung, 2005; Potemski, 2009; Slavin et al., 2011).

One additional and emerging type of classroom linguistic approach for DLL students is referred to as *translanguaging*, which is formally defined as “the act performed by bilinguals of accessing different linguistic features or various modes of ... languages ... to maximize communicative potential” (O. García, 2009, p. 140). In practice, this means teachers and DLL students may use whichever language or combination of languages best support teaching and/or students' learning at a particular time, rather than in response to a state or district policy, academic content area, group size, and/or particular classroom or day of the week. Typically the choice of language(s) used takes into account the speaking, comprehension, reading, and writing proficiency of the individuals who are communicating (e.g., students and peers or students and the teacher) and the actual learning context (e.g., students playing in the block corner or listening to the teacher talk about new science vocabulary words). The aim of this approach is to help DLL students optimize opportunities to learn and make sense of new concepts by asking questions, discussing, recording, and conveying what they know through whichever academic and/or social language(s) in which they are most proficient (O. García, 2011; O. García & Kleifgen, 2010; Gort & Pontier, 2013).

As mentioned earlier, 27 of 54 state-funded pre-K programs report that bilingual classes are permitted. Among these 27 programs, 14 also report that programs may offer monolingual non-English classes. In addition, 17 of the 27 programs have translators or bilingual staff available to enrolled preschoolers (Barnett et al., 2012). Beyond these data, to our knowledge, no methodologically rigorous research has examined the exact percentage of U.S. classrooms, schools, and/or districts using any specific approach to support preschool-aged DLLs' language development.

Effects of Classroom Language of Instruction

Of course, while data on the frequency with which any linguistic approach is used to teach young Hispanic DLLs would be interesting, more relevant to reducing achievement gaps for this group is research on the effects of any approach on children's early learning and linguistic proficiency. Conducting research on this topic is admittedly methodologically challenging. Recalling the factors that contribute to a child's proficiency in a first and second language, this challenge is due in part to the ages at which children are first exposed to English and the intensity of that exposure. Also contributing are variations in children's proficiency in Spanish and/or English within a classroom, school, or district at any one point in time. Moreover, children's proficiency in speaking and understanding English and their home language most likely will shift as the school year progresses, as will the degree to which children use one or both languages with their classroom peers. Further complicating such studies are determining which language teachers use in the classroom and for what purpose (e.g., oral language proficiency vs. academic subjects), the quality of that instruction, and the out-of-school factors which influence children's language development, including parent education and income and at-home support for proficiency in either language (Center for Early Care and Education Research—Dual Language Learners, 2011; Gutiérrez et al., 2010; Hammer, Jia, & Uchikoshi, 2011; Hammer et al., 2014; Lesaux, 2006).

While there is a need for more rigorous research on this topic, a small group of studies support a classroom focus on improving young DLLs' proficiency in their home language as an effective means for developing their early language and literacy competency in English. For example, a research evaluation of the effects of state-funded preschool education in 11 states showed that DLL enrollees' average reading and math scores were higher when they received greater amounts of instruction in Spanish and were placed in classrooms with more sensitive and responsive teachers (Burchinal et al., 2012; Vitiello, Downer, & Williford, 2011). A small pilot study contrasting the effects of a bilingual versus English-only targeted literacy intervention on the development of young DLLs' emergent literacy skills found that the bilingual approach produced significantly higher vocabulary and print knowledge gains (Farver, Lonigan, & Eppe, 2009). A third,

small randomized trial taking place in federally funded Head Start classrooms that differed only in teachers' language of instruction showed that enrollees in the Spanish instruction classes also had higher Spanish vocabulary and phonics scores (L. K. Duran, Roseth, & Hoffman, 2010). This particular finding is important because of related research demonstrating the potential for cross-linguistic transfer of such skills to children's emergent literacy in English (Anthony et al., 2011; Atwill, Blanchard, Christie, Gorin, & García, 2010; Dickinson, McCabe, Clark-Chiarelli, & Wolf, 2004; Farver, Xu, Lonigan, & Eppe, 2013; L. M. López & Greenfield, 2004).

Short-term studies taking place in kindergarten and the early primary grades are aligned with these preschool findings. In a nonrandomized study comparing the early literacy outcomes of kindergarten and Grade 1 DLL and English-speaking students who received different amounts of instruction in English and Spanish (90%–10% vs. 70%–30%, respectively), researchers found that a higher percentage of instruction in Spanish did not negatively affect the DLL students' English Language Arts progress. In fact, despite this group having lower initial test scores, they were able to catch up with their native English-speaking peers in this area (M. G. López & Tashakkori, 2004). Syntheses of studies comparing the effects of language of instruction on elementary and middle grade DLLs' academic outcomes also suggest that bilingual programs appear to have better results than all-English approaches (Cheung & Slavin, 2012; Rolstad, Mahoney, & Glass, 2005; Slavin & Cheung, 2005).

Three additional multiyear studies that tracked samples of Hispanic DLL kindergartners had somewhat contrasting, yet perhaps related results. The first study examined the academic oral English development of Spanish-speaking DLLs enrolled in 60 kindergarten and Grade 1 classrooms in 23 schools that used either a transitional bilingual (70% Spanish and 30% English) or structured English immersion (all subjects taught in English) approach. In addition, 11 of the 23 schools randomly received an intervention designed to enhance teachers' vocabulary instruction, provide extra assistance to the lowest performing students, and offer training to parents, including take-home literacy activities, resulting in four different conditions. This study found that students in all four classroom types experienced gains in their English oral proficiency. However, students in schools receiving the intervention acquired greater gains in comparison to those in the business as usual schools. In addition, the growth rate for students in the enhanced transitional bilingual and structured English immersion classrooms was the same (Tong, Lara-Alecio, Irby, Mathes, & Kwok, 2008), thus replicating additional scholarship suggesting that instruction in Spanish does not delay children's English proficiency development.

In the second study, researchers focused on changes in kindergartners' English and Spanish proficiency through Grade 2 when enrolled in classrooms where only English was used, mostly English was used, or English and Spanish were used for instruction. Similar to the first study, each of the three groups made significant gains in their oral language skills in both languages. However, the only children who reached age-appropriate proficiency in English and Spanish were placed in classrooms in which instruction was provided in both languages, and each language was used for communication among students, teachers, and other school staff as well (B. A. Collins, 2014).

The third multiyear study compared Grade 2, 3, and 4 English and Spanish language and reading outcomes for Hispanic DLL kindergartners who were randomly assigned to either structured English immersion or transitional bilingual education classrooms. In this study, transitional bilingual was defined as providing reading instruction in Spanish in Kindergarten, but in Grade 1 partly in English, and by Grade 3 completely in English. This study did not demonstrate an advantage for either linguistic approach in terms of children's final English reading skills. However, children in both classroom types participated in ESL sessions each day. And, teachers in the English immersion classrooms were able to provide explanations to children in Spanish (Slavin et al., 2011).

A potential takeaway from these studies, as well as the larger emerging research base on this topic, is that it is not a question of whether incorporating young DLLs' home language into learning activities is beneficial for their early achievement. Instead, the larger early education field needs more information on what type—or combination of types—of home language support, and at what level of intensity, are most effective for enhancing the achievement of young DLLs. Simply put—and as other scholars have noted—“we do not yet know . . . which approach to bilingual instruction works for whom, when, and how” (Goldenberg, Nemeth, Hicks, & Zepeda, 2013, p. 100).

This hypothesis is supported when we consider an additional multistate study of 1,451 kindergartners that took place in schools with large percentages of Spanish-speaking DLLs. In this study, researchers found that teachers' proficiency in using Spanish for instruction in bilingual kindergarten classrooms positively predicted student's end-of-the-year language and literacy outcomes (Cirino, Pollard-Durodola, Foorman, Carlson, & Francis, 2007). The topic of teachers' instructional proficiency is further explored below. First, however, another potential outcome of using DLLs' home language in the

classroom and schools may be increased parental participation in their children's learning. The research on this strategy is explored next.

Impact of School Linguistic Capacity on Parental Involvement

Research on the specific role teachers' bilingual capacity plays in promoting Spanish-speaking families' involvement in their children's academic achievement is extremely limited. However, the link between these two factors makes intuitive sense, based on what we know about the constraints to such involvement. For example, a small, non-experimental study examined the moderating effects of bilingual K–3 teachers on Mexican-American families' involvement. This study found a positive relationship between rates of school participation and teachers' fluency in Spanish. However, it did not identify why or how this language fluency might produce such a result (Tang, Dearing, & Weiss, 2012). A second small qualitative study of 21 low-income, immigrant Latino families found that mothers intentionally selected bilingual early care and education programs so that they could communicate with providers; improve their own at-home parenting skills, particularly related to behavioral challenges; and prepare for their children's transition into kindergarten. Also of importance was a setting where their children could learn English and maintain their home language (Vesely, 2013; Vesely, Ewaida, & Kearney, 2013).

Another study of 14 Head Start programs found that Latino parents relied on these programs to help them foster their children's at-home kindergarten readiness skills (McWayne et al., 2013). An additional small qualitative study found that a bilingual climate contributed to Latino families feeling more welcome at their preschoolers' and kindergartners' school (Durand & Perez, 2013). Because Latino family engagement during the kindergarten year can be predicted by the number of other parents with whom a family interacts (Durand, 2011), the impact of bilingual teachers in supporting higher enrollment rates of Hispanic DLL families is intriguing.

While this research base is not yet robust, it is aligned with additional scholarship in elementary school settings suggesting that one way to expand Latino home–school relationships is to hire administrators and teachers who speak the same language (Guerra & Nelson, 2013) and provide interpreters at school meetings and translate school documents (Niehaus & Adelson, 2014). Language friendly classrooms also may increase parental capacity to take advantage of school-based early literacy and math learning resources, which is particularly important given what we know about the role families play in supporting young children's development in these areas (Loera, Rueda, & Nakamoto, 2011; C. O. Lopez & Donovan, 2009). Use of families' native language also can reduce barriers to participation in school-based interventions designed to expand parents' at-home support for children's learning (Mendez & Westerberg, 2012; Vera et al., 2012). Finally, while parents may be more apt to positively respond to a specific invitation from their child's teacher (Anderson & Minke, 2007), this especially may be the case when that invitation is issued in the language that parents speak and/or read (Walker, Ice, Hoover-Dempsey, & Sandler, 2011).

Instructional Strategies to Support Young DLLs' Language and Early Literacy Skills

Of course, when addressing the Hispanic DLL achievement gap, policymakers need to be concerned about more than just teachers' linguistic proficiency and the language used in the classroom. However, research focusing specifically on best instructional practices to support young DLLs' emergent literacy development, particularly for children in low-income families, is not yet robust, either (Hammer et al., 2011; Snow, 2008). Yet this small research base, as well as syntheses of studies focused on K–12 students, suggests several promising strategies for enhancing young DLLs' emergent literacy.

DLL preschoolers' vocabulary and phonological skills are predictive of their emergent literacy skills in the early primary grades (Davison, Hammer, & Lawrence, 2011; Dickinson et al., 2004; Hammer, Lawrence, & Miccio, 2007; Hammer & Miccio, 2006; L. M. López & Greenfield, 2004; Páez & Rinaldi, 2006; Rinaldi & Páez, 2008). However, because young DLLs may not learn new English words, letter names, or letter sounds in the same incidental way as monolingual children, it is particularly important for preschool and kindergarten teachers to provide intentional and explicit instruction related to these areas. Such instruction should incorporate storybook reading in English, in children's home language, and using dual language books; learning age-appropriate rhymes and songs in each language; hands-on activities; and repeated occasions to use new words with peers and the teacher (Brydon, 2010; M. F. Collins, 2010; Espinosa, 2008; Farver et al., 2009; Gillanders & Castro, 2011; M. Han, Vukelich, Buell, & Meacham, 2014; Howes, 2011; Silverman, 2007; Stewart, 2004). Children in this age group also can benefit from direct instruction about the alphabet and the sounds each letter

makes in both languages, as well as exposure to learning how to write and opportunities to expand their pronunciation and sentence-construction skills during storybook reading (Leung, Silverman, Nandakumar, Qian, & Hines, 2011; Matera, 2011; Matera & Gerber, 2008; Naqvi, Thorne, Pfitscher, Nordstokke, & McKeough, 2013).

Research also suggests that the complexity of teacher talk during storybook reading and oral language instruction matters for DLL students (Gámez & Levine, 2013; Gort, Pontier, & Sembiente, 2012; Walsh, Rose, Sanchez, & Burnham, 2012). This includes incorporating the use of different types of questions as a means for providing children with the opportunity to discuss the story and its illustrations, and in so doing, learn new vocabulary and concepts (Brannon & Dauksas, 2014; Lonigan, Farver, Phillips, & Clancy-Menchetti, 2011). Moreover, teachers' use of English and Spanish bridging strategies, or providing expanded definitions of target vocabulary words in both languages, may help support children's acquisition of new words (Lugo-Neris, Jackson, & Goldstein, 2010). Teachers also can support DLLs' efforts to learn and use new words through the intentional creation of peer groups to promote low-stakes, informal conversations that will not be dominated by monolingual English-speaking children. These conversations can take place in a classroom's dramatic play, reading, writing, music, and art areas (Magruder, Hayslip, Espinosa, & Matera, 2013; Palermo & Mikulski, 2014; Piker, 2013).

In addition, echoing the parental involvement research highlighted earlier, young DLLs' language and literacy development may benefit when children are provided with books to read in their home (Mendelsohn et al., 2001; Perry, Kay, & Brown, 2008). Providing parents and children with the opportunity to create books that incorporate children's drawings and family photos and reflect their home language and day-to-day lives can be beneficial as well (Bernhard et al., 2006; Boyce, Innocenti, Roggman, Jump Norman, & Ortiz, 2010). Preschool DLLs' learning of new words also may be supported through watching videos that are specifically chosen because of their reinforcement of the focus of what is being read about and/or studied in the classroom (Silverman & Hines, 2009).

Studies taking place in the early primary grades also are aligned with this research. These studies suggest the benefit of explicit instruction in English letter-sound identification and vocabulary, including commonly used words and phrases as well as the language used in schools (e.g., basic mathematics terms) versus everyday conversations. In addition, this research demonstrates the value to DLLs of participation in one-on-one teacher-child conversations and small group activities (August & Hakuta, 1997; Calderón, Slavin, & Sánchez, 2011; Cheung & Slavin, 2012; Dixon et al., 2012; Lesaux, Geva, Koda, Siegel, & Shanahan, 2008; Vaughn et al., 2006).

In summary, while further research is needed to inform policies and practices for enhancing the achievement of young Hispanic DLLs, an emerging body of research highlights the benefits of incorporating children's home language in the classroom. Doing so not only has the potential to support students' language and literacy development, but also may support greater parental participation in their children's learning. Also potentially useful are intentional instructional strategies to bolster all of the skills that contribute to young children's proficiency in understanding and speaking English.

This research has implications for the skills and knowledge early educators should possess if they are to effectively teach young Hispanic DLLs. Yet, for a variety of reasons, it may not be easy for schools and other early education programs to recruit and hire a teaching workforce that is bilingual and has this specific knowledge base. These on-the-ground implementation challenges are discussed next.

On-the-Ground Implementation Challenges

Both the professional position statements and research highlighted above suggest that if early education programs are to support the continued development of young DLLs' home language and the use of linguistically and culturally responsive classroom practices, they likely will need to staff their programs with teachers who have some level of proficiency in these areas. Furthermore, the growing research base summarized above suggests that effective teaching of young DLLs requires a solid grounding in the instructional strategies that can help students acquire strong English language and literacy skills. However, hiring teachers with this set of qualifications may present challenges to early education policymakers and administrators.

Availability of Bilingual Classroom Instructional Staff

The first challenge early education stakeholders may face when attempting to implement research on supporting the learning of young DLLs is recruiting teachers who are bilingual. As was mentioned earlier, while half of all state-funded pre-K

programs report that bilingual classes are permitted (Barnett et al., 2012), just two states require pre-K classrooms serving young DLLs to be staffed by bilingual teachers. The low number of state policies requiring bilingual instruction in pre-K classrooms serving young DLLs could partially reflect the sheer quantity of home languages represented in schools and classrooms in districts across the country (Heineke, Kennedy, & Lees, 2013; Uro & Barrio, 2013), making it virtually impossible for any single teacher to be proficient in all of these languages. Another contributor could be federal guidelines (or the lack thereof) on the education of young DLLs. In addition—and as is the case with K–12 policies (Espinosa, 2013; Freedson, 2010; E. E. García, 2011; Hakuta, 2011; Ovando, 2003)—it is possible that current laws prohibiting bilingual instruction, historical norms, education goals, and/or stakeholder preference are playing a role.

However, a major contributing factor likely is an insufficient number of certified bilingual teachers to meet the demand (Bridges & Dagys, 2012; Castro, Espinosa, & Páez, 2011). For example, a study of state-funded preschool teachers in Illinois found that less than 6% met the new dual certification standards. In communities serving mostly Latino students, just 9% of teachers met these qualifications (Bridges & Dagys, 2012). In a study of 391 urban child care center directors in New Jersey, no more than 17% reported having three or more full-time staff members that are fluent in Spanish. On average, just one of their full-time child care staff members was fluent in Spanish (Ackerman & Sansanelli, 2008).

Similarly, a survey of key stakeholder groups within Head Start, the federally funded program for children in low-income families, found that programs had difficulty finding qualified bilingual teachers (National Head Start Training and Technical Assistance Resource Center, Pal-Tech, Inc., 2008). Furthermore, a recent analysis of Head Start program data showed that 88% of classrooms with DLLs include children who speak Spanish, but just 53% of classrooms use Spanish for instruction (Hulsey et al., 2011). Annual Head Start program data from 2011 to 2012 also demonstrate that just 23% of classroom teachers and assistants report being fluent in Spanish.⁷

These findings are mirrored in both state and nationwide reports on K–12 bilingual teacher shortages. A 2011 study commissioned by the Illinois State Board of Education found that bilingual teachers were ranked third in terms of district-reported shortages (Illinois State Board of Education, 2011). Another recent private sector survey found there is a “considerable shortage” of teachers with bilingual education training in the Northwest (including the RTT-ELC states of Washington and Oregon) and South Central regions of the United States (e.g., Texas) and “some shortage” in every other region of the country. In contrast, this same survey classified the supply of elementary pre-K teachers as being “balanced” or even having “some surplus” or “considerable surplus” in different regions of the United States (American Association for Employment in Education, 2010).

Simply put, these findings suggest an urgent need for a greater supply of Spanish bilingual early education teachers. The inadequate supply may stem from a variety of factors. For example, there may be an insufficient number of bilingual individuals in the United States, which is borne out by data on the country's overall foreign language proficiency (Malone, Rifkin, Christian, & Johnson, 2005). Lower Hispanic high school graduation rates also may mean this population is underrepresented in traditional post-secondary teacher preparation programs (Bireda & Chait, 2011). In fact, the American Association of Colleges for Teacher Education (2013) reported that of the 72,073 bachelor's degrees in education (and for all certifications) awarded in 2009–2010, 82% were awarded to White teacher candidates and just 4.2% were awarded to Hispanic teacher candidates. Other potential contributors among individuals who enroll in college are alternative employment options, perceptions regarding the status affiliated with being a teacher, and/or the salaries in the early education field (Carolan, 2013; SCOPE, 2013). The salary issue may be particularly salient, as state-funded pre-K teachers may be paid less than their comparably educated and experienced K–12 colleagues (Barnett, Epstein, Friedman, Sansanelli, & Hustedt, 2009; National Survey of Early Care and Education Project Team, 2013), and those working in Head Start and child care centers receive even lower compensation (Ackerman, 2010; Barnett, Carolan, Squires, & Brown, 2013; Wall, 2014).

Exploring all of the potential avenues for expanding the recruitment of the Hispanic bilingual early education teaching workforce is beyond the scope of this report. However, one short-term source of certified bilingual teachers may be the current noncertified staff working as translators, classroom assistants, and para-educators in state-funded pre-K, early care and education centers, Head Start settings, and public elementary schools (e.g., see Children's Forum, 2011; Karoly, 2012; Whitebook et al., 2006). At the same time, while these individuals may have the requisite linguistic proficiency, some may be first-generation college students and thus have little cultural capital regarding how to successfully navigate the post-secondary sphere. Others may lack proficiency in academic English. Required coursework also may be geographically inaccessible or unaffordable. Finally, as adult learners, they may face personal constraints in juggling family and work

obligations with the demands of being a student (Ackerman, 2005; Cruz, 2010; Maxwell, Lim, & Early, 2006; Ray, Bowman, & Robbins, 2006).

Potential strategies for addressing these challenges include providing financial assistance to cover the costs of college enrollment and offering coursework in languages other than English. Additional supports include offering online coursework or situating classes at nontraditional sites (e.g., local community colleges instead of the campus where faculty are based) and expanding the use of alternate certification pathways. Providing staff with mentors and/or counselors to help navigate the college environment also can be helpful (Diaz, 2004; Sakash & Chou, 2007; Whitebook, Schaack, Kipnis, Austin, & Sakai, 2013). School districts also can provide Spanish-speaking paraprofessionals with release time to attend college and work toward teacher certification (Lara-Alecio, Galloway, Irby, & Brown, 2004). Rewarding early educators with salaries that are more aligned with those in K–12 settings may be another important recruitment strategy.

Teacher Formal Qualifications and Competencies

While teacher linguistic proficiency is important for supporting young DLLs' language and literacy skills, also critical is a specific knowledge base about the ways in which students' home language should be used in the classroom as well as how such skills develop in this population of students. Accordingly, early childhood professional organizations (National Association for the Education of Young Children, 2005, 2009) and the majority of RTT-ELC states (Bright from the Start, Georgia Department of Early Care and Learning, 2007; California Department of Education and First 5 California, 2011; Colorado Office of Professional Development, 2008; Gelnow, Davis, Manning-Falzarano, DeFrank, & Waldvogel, 2009; Kurz-Riemer, 2004; A. Lopez, Zepeda, & Medina, 2012; Rous, Howard, Chance, DeJohn, & Hoover, 2011; Massachusetts Department of Early Education and Care, 2010; New Mexico Early Childhood Education Higher Education Task Force, 2011; Ohio Professional Development Network, 2008; Pennsylvania Office of Child Development and Early Learning, 2012; Rhode Island Workforce Knowledge and Competencies Workgroup, 2013; Vermont Northern Lights Career Development Center, 2013; Washington State Department of Early Learning, n.d.; Wisconsin Early Childhood Collaborating Partners, 2007) have defined the core competencies and knowledge classroom staff should possess when working with young DLLs. Mirroring the research presented above regarding effective instruction strategies, such knowledge includes how a child's first language typically develops as well as the process for developing early literacy skills in that language and English. In addition, it is important for teachers to possess an understanding of the role families play in supporting young children's learning and the strategies that can be used to promote social interactions in a child's home language and English. Also considered to be essential is knowledge about children's cultural backgrounds and the roles that at-home learning and home-school communication play in student's outcomes.

These competencies are similar to what K–12 research suggests are the skills needed by mainstream teachers to effectively instruct English language learners. When teaching students in elementary, middle, and high school, it is particularly important for teachers to understand the process of acquiring a second language as well as the specific academic language demands that are part of developing skills and knowledge in particular content areas. Also useful for prospective teachers who are completing their pre-service coursework is real-world practice with students for whom English is a second language (Lucas, Villegas, & Freedson-Gonzalez, 2008; McGraner & Saenz, 2009).

The importance of this knowledge base in early education settings is illustrated through a study of the literacy-focused instructional practices of 139 Head Start teachers in Spanish-speaking DLL classrooms. In this study, Spanish was used 30% of the time, and then mostly for non-instructional mothering-type purposes, including comforting children or clarifying behavioral expectations (Jacoby & Lesaux, 2014). The teachers in this study also believed that their DLL students would quickly and naturally learn English solely by hearing and absorbing the language in a sponge-like fashion (Jacoby, 2014).

Some teachers will begin to develop their DLL pedagogical knowledge before they even step foot in a classroom due to their pre-service enrollment in university-based preparation programs leading to a Bilingual, ESL, or Teacher of English to Students of Other Languages (TESOL) certification. Research analyzing the correlation between Hispanic Grade 4 students' NAEP reading scores and state requirements for teaching English learners found that such a focus may be beneficial to students. In this study, students in states that required teachers to have a specialist certification when teaching Hispanic English learners had scores that were 4.51 points higher compared to students in states that allow any teacher to work with this specific population (F. López, Scanlan, & Gundrum, 2013).

However, schools' capacity to hire teachers with these designations may be somewhat limited. National Center for Education Statistics data from the 2011–2012 school year show that only 0.3% of all elementary teachers and 1.2% of all secondary teachers in public schools have an ESL or bilingual certification (National Center for Education Statistics, 2013). Given these statistics, as well as the growing number of DLLs overall and Hispanic DLLs specifically, it is likely that the remaining mainstream teachers, both in early education and K–12 settings, will at some point teach at least one student for whom English is not their home language.

Research also suggests that teachers graduating from university-based early childhood teacher preparation programs often do not feel adequately prepared to work with young DLLs (Daniel & Friedman, 2005). Only 27% of Head Start teachers have completed some type of formal course on working with young DLLs (Hulsey et al., 2011). The feeling of being unprepared is not surprising in light of additional research on the degree to which teaching young DLLs is emphasized in early childhood-focused pre-service teacher preparation programs. These studies found that most programs do not devote more than a few credit hours to this topic (Maxwell et al., 2006; Ray et al., 2006; Zepeda, Castro, & Cronin, 2011). This can be an issue in preservice programs preparing elementary, middle, and high school teachers as well (Ballantyne, Sanderman, & Levy, 2008).

This research also suggests that many teachers—both certified and without formal credentials—will need professional development related to supporting DLLs' language and early literacy learning. Schools, curriculum developers, and/or technical assistance providers can offer such training. However, research on this topic finds that intensity matters. In contrast to more typical one-shot workshops, the professional development efforts that demonstrate positive effects on both teachers' practice and preschoolers' outcomes tend to use a three-pronged approach of sustained teacher training on implementing a research-based curriculum, ongoing one-on-one coaching to provide personalized feedback or modeling of appropriate practice, and meetings with groups of teachers to discuss on-the-ground issues and helpful strategies (Buysse, Castro, & Peisner-Feinberg, 2010; Landry, Anthony, Swank, & Monseque-Bailey, 2009; Landry, Swank, Anthony, & Assel, 2011; Wilson, Dickinson, & Rowe, 2013).

Professional development may be especially critical for staff working in privately funded early care and education settings that serve DLLs. This is because the minimum requirements to teach in such settings are far less stringent than in public K–12 settings, where to be considered highly qualified, teachers are required to have a minimum of a B.A., appropriate teacher certification, and subject matter expertise (Learning Point Associates, 2007). In contrast, just one state requires lead teachers (who supervise classroom staff) working in early care and education settings to have a 4-year college degree. No state requires classroom teachers in such settings to have a minimum of a B.A., much less teacher certification (Child Care Aware of America, 2013; Whitebook, Gombay, Bellm, Sakai, & Kipnis, 2009).

In summary, research suggests that the language of instruction used in the classrooms serving young Hispanic DLLs may be an important aspect of supporting this population of students' early learning outcomes, as well as encouraging family involvement in that learning. Also important is teachers' capacity to use a set of intentional instructional strategies to support young DLLs' language and early literacy skills. However, schools may have a difficult time recruiting staff that are both bilingual and have the requisite knowledge about how best to teach young DLLs. As the next section discusses, another potential challenge is the extent to which assessment data can effectively inform a variety of key instructional decisions in classrooms serving DLLs.

Informing Teachers' Practice through the Assessment of Young DLLs

As was highlighted earlier, if teachers are to effectively address preschool-aged DLLs' educational needs, they need a thorough understanding of the ways in which children learn and acquire language and develop their literacy skills. However, also needed is an accurate sense of students' linguistic proficiency in their home language and English, as well as their early academic knowledge (e.g., letter recognition and sounds) and skills (e.g., writing letters or beginning to phonetically sound out words). In addition, publicly funded early education programs may be required to track DLL student outcomes over the course of the school year and the degree to which these outcomes are aligned with a state's early learning standards. Therefore, one additional instructional strategy for enhancing young DLLs' achievement is through the collection of standardized and more informal assessment data (Espinosa, 2010a; National Association for the Assessment of Young Children, 2005; Solari, Landry, Zucker, & Crawford, 2011). Yet if the standardized data are to accurately inform teachers' practice and/or programmatic decisions, early education policy makers and stakeholders need to keep in mind some potential validity and reliability challenges.

Overall Validity and Reliability Challenges

There is a variety of standardized direct assessments and observational checklists and scales from which early education programs may choose to formally assess preschoolers (Ackerman & Coley, 2012). However, no matter what type of assessment is used, it can be challenging to accurately pinpoint what a preschooler knows and/or can do in a valid and reliable manner. *Validity* refers to the extent to which the accumulation of evidence collected as part of any assessment supports the interpretation of its scores for a particular purpose and for a specific population. *Reliability* refers to the degree to which any variation in the scores generated for a student reflects how that child performed on the assessment, rather than the capacity of the individual who administered and/or scored the measure to perform these functions as intended by the measure's developers (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 1999; Kane, 2013; Moss, Girard, & Haniford, 2006). Furthermore, these validity and reliability challenges are related to the processes used to collect assessment evidence from preschool-aged children and the assessments themselves.

The Assessment Process

Much of the challenge in generating valid and reliable assessment scores for preschoolers stems from the manner in which young children need to be assessed due to their developmental capacity. For example, we typically expect older students to read independently and respond to individual direct assessment items by filling in a bubble or circling, checking, or clicking on an answer; writing or typing an essay; or performing mathematical calculations (Wright, 2008). Few pre-K students will be proficient in reading and writing, so traditional self-administered assessments are not likely to provide accurate information about children's linguistic proficiency and/or academic knowledge (Snow & Van Hemel, 2008). To address this constraint, the assessment process for young children often involves an adult serving as an assessment administrator (in the case of a direct assessment) and/or observer (and using an observation checklist or scale to note children's demonstrated proficiency in a particular academic or social/emotional area; Ackerman & Coley, 2012).

At the same time, the nature of this assessment process can impact score validity. For example, not all children have been culturally socialized to and/or are comfortable with expressing themselves to authority figures such as a teacher or other school staff (Rothstein-Fisch & Trumbull, 2008; Snow & Van Hemel, 2008; Trumbull, Rothstein-Fisch, & Greenfield, 2000). Even if accustomed to answering questions posed by adults, young children may become distracted and/or not yet be able to consistently demonstrate their knowledge and skills, particularly on an on-demand basis (Brassard & Boehm, 2007). The resulting scores therefore may underestimate children's actual proficiency levels and contribute to an inaccurate conclusion about their abilities. This also is one reason why both professional position statements and experts in early childhood assessment advise against using scores from a single standardized assessment that has been administered at just one point in time to make consequential decisions about children (National Association for the Education of Young Children, & National Association of Early Childhood Specialists in State Departments of Education, 2003; Snow & Van Hemel, 2008).

Adult assessors or observers also must consistently demonstrate that they can accurately administer and score an assessment and/or observation, and in turn, effectively contribute to the evidence supporting the validity of score data for a particular purpose and population. Adequate capacity to engage in these tasks is measure-specific and thus may be dependent on a specialized knowledge base and particular skills as well as proficiency in the language used in the assessment. Such knowledge and skills may, in turn, be dependent on training on—and experience in—administering and scoring a measure as intended by its developers (Snow & Van Hemel, 2008). Accordingly, the joint position statement from the AERA, APA, and the NCME (1999) stressed that assessment administrators should be adequately trained and proficient in administering and scoring any measure. NAEYC (2009) also advised that the assessment of DLLs be administered by well-trained, bilingual, and bicultural staff.

Moreover, assessor/observer reliability should not be assumed, either before or subsequent to training on a measure. Instead, it should be confirmed for individuals at the conclusion of training and over time, as well as between multiple assessors/observers (and known as interrater reliability; McClellan, Atkinson, & Danielson, 2012). This ensures that children's assessment scores reflect their performance on a particular occasion, rather than on the capacity of the assessor or observer.

Score reliability also may be potentially impacted by the relationship an adult assessor or observer has with the student being assessed, particularly if the scores are perceived to contribute to some type of consequential decision for the student, teacher, or early education program (Harvey, Fischer, Weieneth, Hurwitz, & Sayer, 2013; Waterman, McDermott, Fantuzzo, & Gadsden, 2012). While such bias may not be intentional, it may result in an overestimation of children's proficiency.

Documenting a Measure's Validity for Generating Appropriate Evidence

Another challenge in assessing young children is a standardized direct or observational measure's validity for providing evidence that will inform a decision related to a specific population of students. To determine whether an assessment is appropriate, the measure's developers and/or researchers examine its psychometric properties. The psychometric process typically begins in the early stages of development, including considering which constructs will be focused on, examining the scholarly literature on the theoretical basis for these constructs, and meeting with experts to generate and review draft items. Recalling once again the definition of validity, particularly important during this initial process is explicitly linking the purpose of a measure with the claims that are to be made regarding which aspects of children's skills or knowledge are being measured as well as the evidence to back up those claims (Crocker & Algina, 2006; Darling-Hammond et al., 2010; Soucaco & Sylva, 2010; Zieky, 2012).

After piloting a direct assessment, its developers may conduct think-aloud interviews with students to determine their understanding of the pilot test items and thus why they may have responded to an item in a particular way. Teachers or others who administer observational assessments may participate in similar cognitive interviews as a means for informing potential problems with specific items. Parts of this iterative cycle may be repeated as feedback is incorporated into the measure revision process as well (Darling-Hammond et al., 2010; Mislevy & Haertel, 2006; Soucaco & Sylva, 2010; Zieky, 2012).

Additional psychometric research can be conducted once the development phase is complete. This can include field testing an assessment on a large, representative sample and ensuring that an assessment is appropriate for use with children from different demographic backgrounds. Research also can be conducted to determine a measure's validity with the scores from similar measures as well as its predictive validity (e.g., relationship between scores as measured by an assessment and children's academic outcomes). Also of interest may be the degree to which scores are stable over time, particularly when there otherwise is no reason to expect a change in children's performance (Crocker & Algina, 2006; DeVon et al., 2007).

Owing to the amount of data to be collected and analyzed, demonstrating the psychometric properties of a direct assessment or observation checklist or scale involves careful research that may be time-intensive, not to mention costly. As a result, assessment developers may not necessarily seek to determine the validity of assessments for specific demographic groups of children (Atkins-Burnett, Bandel, & Aikens, 2012). Policymakers also should be cautioned that widespread use of a measure with the target population does not necessarily mean an assessment has sufficient research documenting its psychometric soundness (Barghaus & Fantuzzo, 2014).

Given the variety of purposes for which child assessment data might be gathered, the issue of whether an assessment has demonstrated validity for measuring preschool DLLs' skills and knowledge is particularly salient. One example of why this matters is evidenced when considering the degree to which culture influences a student's interpretation of—and response to—individual items on an assessment in English (E. D. Peña & Halle, 2011). Research on DLL students enrolled in elementary schools suggests this issue is not just a matter of ensuring accurate translations of questions and answers from English to a student's home language. Instead, it also involves identifying the aspects of children's everyday experiences or interactions with others that influence the relevancy of the questions and/or correct answers (Luykx et al., 2007; Solano-Flores, 2011; Solano-Flores & Nelson-Barber, 2001; Solano-Flores & Trumbull, 2003).

Additional position statements issued by professional organizations regarding the optimal program inputs for early education programs serving DLLs also reflect these validity and reliability concerns. For example, the Division for Early Childhood stated that educators must ensure that assessments are "reliable and valid for the population with whom they are being used" (Division for Early Childhood, Council for Exceptional Children, 2010, p. 5) The position statements of TESOL (2010) and NAEYC and the National Association of Early Childhood Specialists in State Departments of Education (2003) urged schools and other early education programs to use assessments that are culturally and linguistically

responsive. This is also a requirement in Head Start settings, as per the Improving Head Start for School Readiness Act (2007).

Purposes for Assessing Children and Related Validity and Reliability Challenges

There are a variety of decisions that can be informed by assessment data. However, each purpose brings a set of potential validity and reliability challenges. Recalling the definitions of both terms, these include ensuring that the measures used are appropriate for generating relevant evidence to support specific instructional and/or programmatic decisions for DLLs, and that the individuals who administer these assessments have sufficient knowledge and linguistic proficiency.

Identifying Children's Home Language

As was highlighted earlier in the report, some students may need special language assistance to fully benefit from a school's instructional program. Schools also may need to communicate with parents in a language other than English as a means for enhancing family support for children's learning. Therefore, a prime purpose for assessment in early education classrooms is to identify students' home language.

One common way of making such identification is through use of what is known as a home language survey. In fact, 19 of the 54 state-funded pre-K programs report that at the beginning of the school year they ask parents or guardians to complete such a measure (Barnett et al., 2012). Such surveys are widely used in K–12 settings as well (Bailey & Kelly, 2013; R. P. Duran, 2008; Liquanti & Bailey, 2014).

Home language surveys typically are available in a variety of languages and ask respondents to answer one or more questions, such as which language a child first learned to speak, whether the child frequently speaks a language other than English to communicate at home or with friends, and which language adults in the home most frequently use to speak to the child. The survey also may ask parents which language(s) they read or write, so that the school can better facilitate communications with students' families. In addition, teachers may be asked to indicate whether they have observed the child using another language in the classroom (e.g., Maine Department of Education, n.d.; New Jersey Department of Education, Office of Preschool Education, n.d.).

While the aim of these surveys is aligned with the purpose of identifying children's home language, research on these measures shows that they may not be standardized, even within states. Some surveys also have been criticized for asking too few or irrelevant questions. One potential consequence is that a child's home language classification may be dependent on the district in which he or she is enrolled (Bailey & Kelly, 2010, 2013; Goldenberg & Quach, 2010).

Determining Children's Linguistic Proficiency

While it can be helpful to identify a preschool-aged DLL's home language, that knowledge alone may be insufficient for determining what type of language support services are most appropriate. Therefore, a second assessment purpose is to inform the degree to which a child is proficient in speaking and understanding English and his or her home language. In programs with more than one model of linguistic instructional approach (e.g., English monolingual plus Spanish monolingual, two-way Spanish/English immersion, or English monolingual teacher with bilingual classroom assistant), the results of such assessments have the potential to help determine which format might best support a young DLL's learning.

There are challenges associated with gathering sufficient evidence to inform a determination of a preschool-aged DLL's linguistic proficiency as well. For example, there are only a few standardized direct assessments that have varying amounts of psychometric evidence for use as a measure of preschool-aged DLLs' English or Spanish language proficiency (Brassard & Boehm, 2007; L. K. Duran, Innocenti, & Robertshaw, 2013). One large scale study of Spanish-English bilingual preschool and kindergarten students found that the choice of measure may matter when classifying proficiency levels in younger children (Bedore et al., 2012). In addition, reliance on a single measure of English language proficiency may prematurely classify a student as English proficient, and in turn, overpredict that student's capacity to succeed in a monolingual English classroom (E. E. García, Lawton, & de Figueredo, 2010).

Also potentially impacting a proficiency determination is whether it is based on scores solely from an English or home language measure, the sum of the English and home language monolingual measures, or the use of conceptual scores, which allows a correct answer in either language to count (Bandel, Atkins-Burnett, Castro, Wulsin, & Putnam, 2012; E. D.

Peña, Gillam, Bedore, & Bohman, 2011; Tápanes, 2007). Because young DLLs may have smaller vocabularies in each individual language (Hammer et al., 2014), reliance on the score from a single language assessment may incorrectly estimate the degree to which a child is overall linguistically proficient (Brassard & Boehm, 2007). When assessing the proficiency of older K–12 students, some states may place more weight on the NCLB-required reading and writing sections of the test versus the items that focus on speaking and oral comprehension skills, rather than giving equal weight to all four sections (Liquanti & Bailey, 2014).

In addition, the standardized measures designed for DLL preschoolers primarily focus on measuring discrete aspects of children's language skills (e.g., expressive and receptive vocabulary) as opposed to the degree to which a student is functionally proficient in understanding and speaking academic versus social language in an early education classroom. As a result, these assessments may identify students who clearly are—and are not—proficient English speakers, but may not be as useful for identifying all of the children who need assistance with their everyday communication and academic linguistic proficiency within a classroom context (Barrueco, López, Ong, & Lozano, 2012; Mancilla-Martinez, Christodoulou, & Shabaker, 2014; Siders, 2003).

Owing to the small number of psychometrically sound English and other language proficiency assessments available for use with preschoolers, early education teachers or school administrators may be tempted to informally translate and use an existing English vocabulary-focused assessment with their DLL students. However, such a process may not produce score data that is valid for informing a determination of linguistic proficiency. For example, assessment developers need to consider the dialects children use, as well as the frequency with which specific words are used in different geographic regions (Anthony et al., 2011; Solano-Flores, 2008). In addition, the translations may not be accurate, or the substituted words may not have the same level of difficulty as was found in the original assessment (Atkins-Burnett et al., 2012; Golan et al., 2013). This issue is especially important when using adaptive assessments that order the items in terms of their relative difficulty, as the level of difficulty of any word may differ depending on the language or dialect used. Adaptive assessments also may under represent the number of words a young DLL knows, as they typically have scoring rules which preclude continuing with an assessment after a child answers a certain number of items incorrectly (Bandel et al., 2012). Accordingly, the Division for Early Childhood advised education stakeholders to use extra caution in interpreting the results of assessments that have been informally translated into a child's language, rather than undergoing a more formal research-based translation (Division for Early Childhood, Council for Exceptional Children, 2010).

It also should be noted that these proficiency issues are not confined to the preschool sphere. A review of the K–12 research on this topic shows there is no common definition across states for what it means to be considered *English proficient* (Rebarber et al., 2007). Instead, where a student falls on the proficient continuum may depend on such variables as the assessment used (Hauck, Wolf, & Mislavy, 2013), particularly in terms of its emphasis on everyday communication versus academic English (Abedi, 2007). Also contributing to varying determinations is whether the assessment is based on observational data in the classroom versus a direct assessment of linguistic proficiency (Lara et al., 2007), and for older students, the overall emphasis on listening, reading, speaking, and/or writing (Solano-Flores, 2008).

Screening for and Identifying Special Needs

As per the requirements of the federal Individuals with Disabilities Education Act (2006), a third purpose for assessing young DLLs is to evaluate children for potential learning delays or disabilities. The first step in this process takes place through the use of screening measures. Such screenings are not meant to serve as diagnostic or planning measures, but instead to determine whether children might be eligible for special support services. Once such a determination is made, any follow-up evaluations should be comprehensive, so that they also can pinpoint the child's abilities and needs and identify the strategies and resources to address their delays or disabilities (NAEYC & National Association of Early Childhood Specialists in State Departments of Education, 2003; National Joint Committee on Learning Disabilities, 2007).

When using disability screening measures, there is the potential for school personnel to misidentify DLLs who are not yet proficient in speaking and/or understanding English as potentially needing further evaluation for a language impairment (Bernhard et al., 2006; Espinosa & López, 2007; Schilder, 2013). Similar to the research highlighted earlier regarding teacher competencies to effectively enhance DLLs' language and literacy skills, scholars in the language impairment field specifically urge that school personnel have a thorough understanding of bilingual language acquisition so that they can distinguish between typical and atypical development (Bedore & Peña, 2008). NAEYC's (2009) position statement also

advised the use of children's home language when screening for possible identification of special needs as a means for mitigating this issue.

A review of 10 of the most commonly used developmental screeners aimed at preschool-aged children shows that nine of the measures provide materials in English and Spanish. However, the degree to which each assessment has undergone psychometric research varies. Furthermore, none of these measures is reported to have rigorous evidence of reliability and validity for DLLs (Halle, Zaslow, Wessel, Moodle, & Darling-Churchill, 2011).

Informing Teachers' Practice and/or Early Education Program Inputs

A fourth purpose for collecting assessment data is to determine DLLs' academic subject matter (e.g., early reading and math) knowledge and skills so that teachers' classroom practice can be tailored to students' specific learning needs. This purpose has been receiving a lot of attention recently due to the focus on what are known as kindergarten entry assessments (KEAs). One major aspect of state RTT-ELC applications has been their respective plans to develop or enhance existing KEAs (Wat, Bruner, Hanus, Scott-Little, & Schultz, n.d). And, in the fall of 2013, the U.S. Department of Education awarded \$15.1 million to two state consortia (with a total of 17 states) and Texas to improve their KEA plans (U.S. Department of Education, 2013a, 2013b).

In addition to helping teachers differentiate their instruction at the beginning of the school year, data on what young children know and can do also may be used to determine the degree to which specific classroom curricula and/or other targeted interventions are enhancing children's skills or learning in a particular area over the course of a school year. This especially is the case if the same assessment (or a different form of the same assessment) is used to establish an initial baseline or benchmark measure and then used on an ongoing basis. Because the goal of these subsequent administrations is to determine whether desired outcomes have been achieved—such as meeting a program's early learning standards—such a measure ideally will contain items that specifically are related to the aims of the curriculum, intervention, or early education program (Snow & Van Hemel, 2008).

Ongoing formative assessment may be especially critical for DLL students, as the data optimally will provide teachers with the opportunity to examine their instructional strategies and how they might be modified to help students develop their academic content skills and/or proficiency in speaking and understanding English (Alvarez, Ananda, Walqui, Sato, & Rabinowitz, 2014). When gathered at the end of the school year, these data also might help policymakers and other early education stakeholders gain an overall sense of students' readiness for the next grade. Such data also can contribute to decisions regarding which program or learning standards need to be revisited as a means for improving children's outcomes (Ackerman & Coley, 2012; Barrueco et al., 2012).

As is the case with the other uses outlined above, the strength of the evidence generated by an assessment is dependent on the appropriateness of the assessment itself for that purpose and population. For example, literacy assessments for preschool-aged DLLs need to take into account the typical developmental progression of early phonological awareness when children are developing proficiency in both their home language and English (L. M. López, 2012). In addition, accurately gauging young DLLs' knowledge and skills in other academic areas can be problematic if students are not sufficiently proficient in English to understand the language and wording used as part of an assessment's questions and answers. In short, when relying on score data from assessments in English to make some type of decision about an individual DLL student, test administrators need to distinguish between inadequate content knowledge and a student's lack of English language proficiency (Abedi & Liguanti, 2007; Alvarez et al., 2014; Pitoniak et al., 2009; Robinson, 2010). Some DLLs may be better able to demonstrate their content skills when tested in their home language rather than in English. All of these issues have implications for the KEAs that states may be using or developing (Espinosa & García, 2012).

In summary, standardized direct and observational assessment data can play an important role in informing teachers about a DLL student's home language, linguistic proficiency, potential special needs, and content knowledge. This information also can inform appropriate classroom language-of-instruction approaches and which teaching strategies might best enhance young DLLs' learning. However, the standardized assessments available to the early education field may not have adequate psychometric strength for informing teachers' daily practice and decisions about individual DLL students. Also, teachers and other early education stakeholders who administer assessments need to be aware of the linguistic and cultural factors that may contribute to an underestimation of DLL students' skills and knowledge, or incorrectly suggest that children have special needs beyond those related to their English language proficiency. These findings, as well as those related to the availability of bilingual teachers who have the specialized knowledge necessary for effectively teaching

young DLLs, have implications for future federal investments related to improving the quality of early education for high needs preschoolers and are discussed next.

Potential Short-Term Target Investment Areas for Enhancing Hispanic DLL Preschoolers' Achievement

This report focuses on instructional strategies for improving the achievement of Hispanic DLL preschoolers and is situated within a federal focus on improving access to quality early learning as a means for increasing the kindergarten readiness of high needs children. This topic is a salient issue, not only due to the growing population of young Hispanic DLLs across the United States, but also because of this group's potential academically at-risk status. Moreover, research on several early education instructional strategies shows promise for both mitigating the risks related to, and developing, children's linguistic proficiency and families' proficiency in supporting children's learning.

However, the field could benefit from further research to clarify which instructional strategies are most effective for enhancing the language and early academic skills of young Hispanic DLLs with differing levels of English and home language proficiency. This research needs to include more information on what type or combination of types of home language support, and at what level of intensity, are most effective for enhancing this population's achievement. Also needed are strategies for addressing some key on-the-ground implementation challenges that many early education classrooms likely will face as increasing numbers of Hispanic DLLs enroll in preschool programs. The assessment of young DLLs remains a critical issue and one that should be carefully informed by knowledge of early development and what is needed to create assessments that are valid and fair for different groups of students.

By highlighting these topics, the report aims to provide a rationale for why enhancing the kindergarten readiness of young Hispanic DLLs should be considered for future federal investments. Such a focus may be especially relevant given current and pending federal efforts to expand access to high quality early education, including RTT-ELC and the recently announced Preschool Development and Expansion grants. Furthermore, because these federal efforts encompass both expanded access and improving quality, it makes sense to direct part of the investment toward support for research on the early education instructional strategies that show promise for reducing kindergarten entry and longer-term achievement gaps between Hispanic DLLs and their monolingual peers.

In addition, given the short-term challenges early education programs likely will experience as they enroll greater numbers of DLLs, it also will be useful to focus on enhancing teachers' linguistic and instructional proficiency, as well as the development and/or enhancement of assessments to be used in these programs. These two topics are aligned with RTT-ELC's focus on enhancing the capacity of the early care and education workforce and instituting methods for measuring children's outcomes and progress. However, our emphasis here is on the specific inputs that are critical to enhancing the achievement of young Hispanic DLLs.

Enhancing the Linguistic and Instructional Proficiency of the Early Education Workforce

A growing body of research supports developing young DLLs' early language and literacy competency in English through improvement of their home language proficiency. Some of children's home language support can be provided through interactions with native-speaking family members, neighbors, and friends. However, providing such support at school likely will require teachers who are fluent in children's home language.

Based on the differences in the percentage of children ages 0–4 identified as Hispanic/Latino in the 20 RTT-ELC states (see Appendix B), there likely are regional variations across the United States in the demand for certified Spanish-bilingual preschool teachers. Such variations may contribute to the current variety of classroom language-of-instruction policy models that already have been adopted in response to the increasing number of DLL students. However, when we consider the United States as a whole, the number of young Hispanic DLLs who could benefit from participating in English-Spanish bilingual early education classrooms appears to be greater than the capacity of schools and programs to offer seats in classrooms staffed by individuals who meet these criteria.

In the event future federal investments target enhancing the school readiness of young Hispanic DLLs, one immediate implication of this report is that a focus on expanding the supply of early education teachers who are proficient in Spanish likely will be required, as well. Expanding the capacity of teacher and school staff to communicate with parents in their home language also shows promise for potentially increasing family involvement in children's at-home and in-school

learning. This type of home–school connection may be especially relevant given the demographics of Hispanic DLLs who are at the greatest risk for falling behind.

One potential source for such expansion may be currently working, but not certified early care and education staff. Useful lessons for how such growth can be facilitated might be found in the recent history of states that quickly needed to ramp up the qualifications of the early care and education workforce in response to new state-funded pre-K policies (Ackerman, 2005; Lobman, Ryan, & McLaughlin, 2005; Ryan & Lobman, 2006). Illinois also provides a case study in how states might tweak their pre-service teacher preparation programs in response to new regulations requiring preschools to be staffed by bilingual teachers (Heineke et al., 2013).

In addition to linguistic proficiency, our research review suggests that specialized knowledge is required to effectively teach young DLLs. The position statements of various professional organizations regarding teacher competency also stress several key strands of knowledge. In addition to overall child development, this knowledge includes understanding of language and early literacy development in children who are learning a second language, the role families and at-home learning play in supporting young children's developmental outcomes, and strategies that can be used to promote social interactions in a child's home language and in English. Also important is teachers' knowledge about and sensitivity to the family and cultural contexts in which Hispanic DLLs live.

At present only a very small percentage of elementary teachers have an ESL or bilingual degree. Their mainstream colleagues may not feel adequately prepared to work with young DLLs as well. One step toward addressing inadequate teacher instructional proficiency is to provide currently licensed teachers with intensive professional development related to the effective instruction of DLLs. Detailing the content of such professional development is beyond the scope of this report. However, it likely will need to include sustained teacher training, ongoing one-on-one coaching to provide personalized feedback or modeling of appropriate practice, and meetings with groups of teachers to discuss on-the-ground issues and helpful strategies.

Assessing Young Hispanic DLLs' Outcomes

The recruitment and professional development of the early education workforce certainly will be a key issue in any investment focused on improving the kindergarten readiness of young Hispanic DLLs. However, a second implication of this report is that the standardized assessments used by that same workforce to determine students' linguistic proficiency, potential special needs, and academic knowledge will be equally important. In addition to helping inform teachers' practice, such data can shed light on the programmatic inputs and/or teaching and learning standards that should be revised as a means for improving children's outcomes.

While assessment data hold the promise of informing a wide variety of purposes, the extent to which they can do so in a valid and reliable manner is dependent on the appropriateness of a measure for any purpose and population, as well as the capacity of teachers or other school personnel to administer and score the measure as intended by its developers. To be sure, this caveat is not exclusive to settings serving young DLLs. However, because a child's proficiency in speaking and understanding English likely will affect ability to demonstrate his or her knowledge and skills on an assessment that is provided in English only, this caution is particularly salient.

As a result, if measuring young Hispanic DLLs' outcomes is considered to be critical for enhancing children's academic achievement, there also should be an investment focus on the assessments used with young Hispanic DLLs. This includes the development and/or enhancement of assessments that can inform decisions about children's linguistic proficiency, special needs, and content knowledge as well as support for research on whether translated forms are true equivalents and the degree to which assessments aimed at this population are psychometrically sound. Also needed is adequate funding for training on using and scoring the assessments and tracking the reliability of assessors and observers over time.

At first glance, this second focus appears mainly to be about improving the psychometric quality of the assessments available for use in early education programs. However, this actually is an instructional proficiency issue. In addition to determining young DLLs' content knowledge and skills, having an accurate sense of students' linguistic proficiency might help inform classroom language approaches, as well as the resources necessary to support family engagement in children's learning. Simply put, if teachers don't have access to accurate data about their Hispanic DLL students, it makes it even more difficult to determine the most effective way to enhance their short-term learning outcomes and long-term achievement.

Conclusion

The RTT-ELC initiative, as well as other plans to increase access to high quality early education, presents a timely opportunity to enhance the quality of early education all children receive before they enter school. At the same time, these initiatives are being proposed within the context of a growing population of young Hispanic DLLs. This population faces demographic and instructional issues that will continue to contribute to academic achievement gaps if left unaddressed. Given what we know about promising instructional strategies for young DLLs and the short-term challenges that still need to be addressed in implementing such instructional strategies, the time may be right for early education stakeholders to focus specifically on the young Hispanic DLL population as a means for reducing long-term achievement gaps.

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Notes

- 1 Personal correspondence with Mark Hugo Lopez, Director of Hispanic Research, Pew Research Center, and based on data from the 2011 American Community Survey.
- 2 See <http://www.whitehouse.gov/the-press-office/2013/02/13/fact-sheet-president-obama-s-plan-early-education-all-americans> for the full plan
- 3 For an overview of the pending Congressional plans to increase access to early education, see Lindsay, K. (2013). *A comparison of preschool plans*. Washington, DC: First Focus. Retrieved from <http://firstfocus.net/resources/fact-sheet/comparison-pre-K-plans/>
- 4 Examination of state policy data available at http://www.colorincolorado.org/web_resources/by_state/
- 5 For example, New Jersey requires district boards of education to determine preschool DLLs' language development needs and then provide appropriate instructional programs based on the state's learning standards, but beyond this does not mandate that teachers be bilingual (NJSA 6A:15).
- 6 See <http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/cultural-linguistic/center/state-guidelines/snapshot.html>
- 7 Office of Head Start PIR data. Of a total of 92,586 classroom teachers and assistants, 25,602 reported that are proficient in a language other than English. Of these, 80.4%, or 21,303, report proficiency in Spanish.

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Appendix A

Number and Percentage of Children Age 0–5 Identified as English Learners in RTT-ELC Awardee Applications

State	# 0–5 English learners	% 0–5 English learners
California ^a	993,754	36
Colorado ^b	82,664	20
Delaware ^c	7,090	10
Georgia ^d	119,479	15
Illinois ^e	100,894	11
Kentucky ^f	23,831	7
Maryland ^g	12,450	3
Massachusetts ^h	12,952 (age 3–5 only)	17 (developmental disability/delay may be higher; 30,000 children)
Michigan ⁱ	65,595	9
Minnesota ^j	35,642	8
Nebraska ^k	174,906	29
New Mexico ^l	54,644	31
North Carolina ^m	72,780	10
Ohio ⁿ	24,440	3 (developmental disability/delay is higher at 5.3%)
Oregon ^o	33,458	14
Pennsylvania ^p	21,727	2 (developmental disability/delay is higher at 10.4%)
Rhode Island ^q	5,103	10
Vermont ^r	833	3 (developmental disability/delay is higher at 9.2%)
Washington ^s	158,942	33
Wisconsin ^t	19,848	5

Note. Percentages with decimals have been rounded to the nearest whole number.

^aData from *Race to the Top—Early Learning Challenge Application* (p. 17) by the State of California, 2012, Sacramento, CA: Author.

^bData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. 93) by the State of Colorado, 2012, Denver: Author.

^cData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. 18) by the State of Delaware, 2011, Dover, DE: Author.

^dData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. 67) by the State of Georgia, 2013, Atlanta: Author.

^eData from *Race to the Top—Early Learning Challenge Phase 2 Application: From Birth to Kindergarten and Beyond* (p. 64) by the State of Illinois, 2012, Chicago: Author.

^fData from *Kentucky ALL STARS: Accelerating Learning the Statewide Through an Advanced Rating System*. (p. 14) by the State of Kentucky, 2013, Frankfort, KY: Author.

^gData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. 20) by the State of Maryland, 2011, Baltimore: Author.

^hData from *From Birth to School Readiness: The Massachusetts Early Learning Plan 2012–2015. Grant Proposal: Race to the Top—Early Learning Challenge* (p. 25) by the State of Massachusetts, 2011, Boston: Author.

ⁱData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. 34) by the State of Michigan, 2013, Lansing, MI: Author.

^jData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. 20) by the State of Michigan, 2013, Roseville, MN: Author.

^kData from *Race to the Top—Early Learning Challenge Application for Initial Funding New Jersey's Early Learning Plan* (p. 33) by the State of New Jersey, 2013, Trenton: Author.

^lData from *Race to the Top—Early Learning Challenge Application for Phase 2 funding* (p. 40) by the State of New Mexico, 2012, Santa Fe, NM: Author.

^mData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. 42) by the State of North Carolina, 2011, Raleigh, NC: Author.

ⁿData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. VI(a)(1)-3) by the State of Ohio, 2011, Columbus, OH: Author.

^oData from *Race to the Top—Early Learning Challenge Phase II Application* (p. 43) by the State of Oregon, 2012, Salem, OR: Author.

^pData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. 30) by the State of Pennsylvania, 2013, Harrisburg, PA: Author.

^qData from *Race to the Top—Early Learning Challenge Application for Initial Funding* (p. 39) by the State of Rhode Island, 2011, Providence, RI: Author.

^rData from *Race to the Top—Early Learning Challenge Application for Funding* (p. 60) by the State of Vermont, 2013, Montpelier, VT: Author.

^sData from *Race to the Top - Early Learning Challenge Grant Application* (p. 18) by the State of Washington, 2011, Olympia, WA: Author.

^tData from *Race to the Top—Early Learning Challenge Application for Phase 2 Funding* (p. 49) by the State of Wisconsin, 2012, Madison, WI: Author.

Appendix B
Children Age 0–4 in RTT-ELC States Identified as Hispanic, 2000 Versus 2012

State	2000 ^a	2012 ^b
California	1,194,774/2,491,833 47.90%	1,362,450/2,541,497 53.60%
Colorado	81,867/299,040 27.40%	110,313/337,568 32.70%
Delaware	4,561/51,596 8.80%	9,131/56,279 16.20%
Georgia	49,586/597,073 8.30%	111,860/675,032 16.60%
Illinois	177,777/875,986 20.30%	209,031/816,278 25.60%
Kentucky	6,782/265,733 2.60%	18,287/279,535 6.50%
Maryland	23,004/353,233 6.50%	54,285/365,224 14.90%
Massachusetts	45,386/397,384 11.40%	64,145/365,557 17.50%
Minnesota	19,527/330,015 5.90%	32,598/348,338 9.40%
New Jersey	100,067/563,574 17.80%	143,954/527,649 27.30%
New Mexico	70,798/130,440 54.30%	84,809/143,536 59.10%
North Carolina	46,463/539,954 8.60%	106,093/619,940 17.10%
Ohio	25,416/753,669 3.40%	42,485/694,870 6.10%
Oregon	37,305/223,281 16.70%	53,690/232,516 23.10%
Pennsylvania	43,544/726,154 6.00%	82,878/719,703 11.50%
Rhode Island	10,517/63,950 16.40%	13,484/55,068 24.50%
Vermont	458/33,944 1.30%	740/30,521 2.40%
Washington	58,487/394,846 14.80%	96,751/443,157 21.80%
Wisconsin	24,853/342,324 7.30%	42,683/350,581 12.20%

^aData from Latino Kids Data Explorer by National Council of La Raza, retrieved from <http://www.nclr.org/index.php/latinokidsdata>.

^bData from data provided by *Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States and States: April 1, 2010 to July 1, 2012* by the U.S. Census Bureau, retrieved from <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

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