



First 5 California Dual Language Learner Pilot Study: Summary of Study Findings

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In 2016, the First 5 California (F5CA) Commission approved funding for the Dual Language Learner (DLL) Pilot, a significant statewide investment in identifying and expanding promising practices to support DLLs—children aged 5 and younger living in households where a language other than English is spoken. These children represent more than half of the state’s birth-to-5 population (UCLA Center for Health Policy Research, 2020), and thus are a critical focus for the early learning and care system. Young children exhibit a natural propensity for learning multiple languages (Brisk & Harrington, 2007; Koenig & Woodward, 2012; McCabe et al., 2013), and the numerous cognitive and social benefits of bilingualism (NASEM, 2017) make investment in these children even more important. Although the knowledge base for how best to support the learning and development of these young children is growing, much remains unknown. A central component of F5CA’s statewide investment to support DLL children was the [DLL Pilot Study](#), a large-scale study conducted by the American Institutes for Research (AIR) and partners.

The goals of the study were to describe the range of supports available in early learning and care settings and examine how they relate to language development and learning outcomes for infant,

Recommendations for Policy and Practice

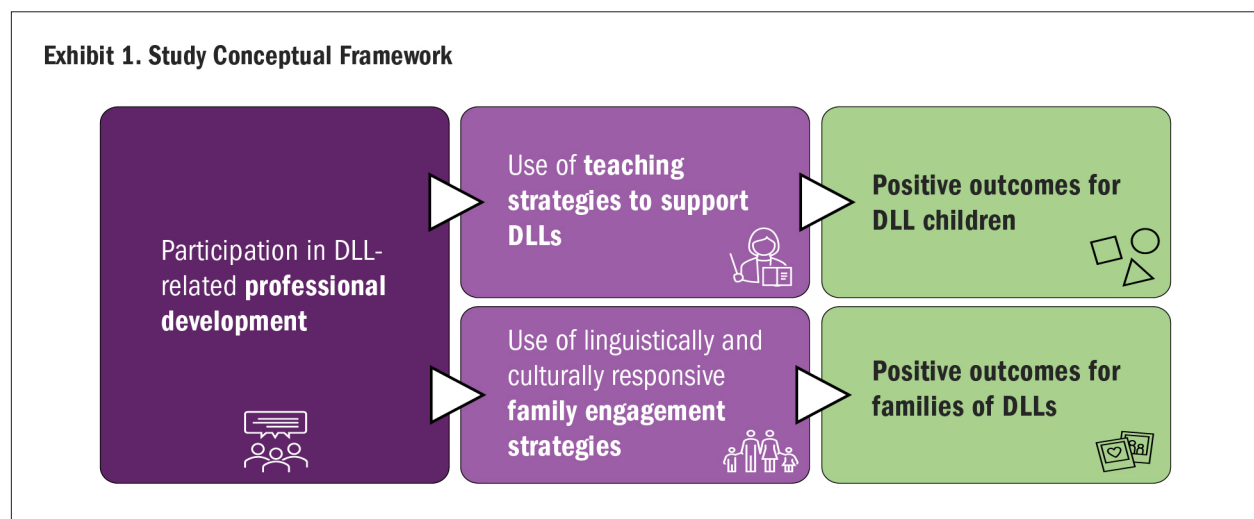
To best support DLLs in early learning settings throughout California’s mixed delivery system:

- Widely disseminate key messages about the benefits of bilingualism and the value of home language use to encourage families, programs, and communities to prioritize children’s bilingual development.
- Include knowledge of language development and best practices for supporting DLLs from birth through age 5 in educator competencies.
- Enact policies to broaden the language diversity of the early learning and care workforce and encourage multilingual educators to use the home language in early learning classrooms.
- Expand access to and support early educators to participate in professional development focused on working with DLLs and their families.
- Provide early learning programs with books and materials in children’s home languages to share with young DLLs and their families.
- Support the development and use of culturally and linguistically responsive tools and assessments to identify DLLs upon enrollment and monitor their learning and development in English as well as in the home language.
- Encourage two-way communication with families that includes (1) gathering information about families’ language, culture, and learning goals to inform instruction, and (2) providing information and engagement opportunities that are culturally and linguistically responsive.

toddler, and preschool-aged DLLs. We were specifically interested in three core topics related to early learning settings:

- **Instructional strategies**, including home language use and culturally and linguistically responsive practices. Instructional strategies were of primary interest to the study because of existing research that shows that young DLLs in early learning and care programs benefit from specific classroom practices targeted at supporting their unique developmental trajectories (Castro et al., 2011; Espinosa & Crandell, 2020; NASEM, 2017).
- **Strategies to engage families** in their children’s learning and encourage them to support home language use. Research suggests positive effects of parent engagement in their DLL children’s language and literacy development on DLL learning outcomes (Boyce et al., 2010; Caesar & Nelson, 2014; Hammer & Sawyer, 2016), and thus including family engagement was important for the study.
- **Professional development (PD)** to ensure that educators have the knowledge and tools to support DLLs’ learning. Given the evidence suggesting that early education teachers who participate in DLL-specific PD can improve their use of culturally and linguistically responsive instruction and promote DLL children’s learning in the classroom (Buysse et al., 2010; Castro et al., 2017), the study also included a focus on PD.

These three focus areas are interconnected, and the DLL Pilot Study was designed to test some of these interconnections. For example, DLL-related PD is intended to support teachers’ intentional use of the home language and other supportive instructional strategies; these strategies are in turn intended to improve children’s language, social-emotional, and early academic outcomes. Similarly, DLL-related PD may also help teachers incorporate linguistically and culturally responsive family engagement strategies, which are in turn intended to improve families’ practices to support their child’s development. Exhibit 1 illustrates the relationships examined through the study.



While much of the research literature has focused on preschool-aged children from Spanish-language backgrounds in center-based care, the DLL Pilot Study extended this growing body of research by examining practices (1) across different early learning settings (family child care homes and center-based programs), (2) across diverse language groups (Spanish, Cantonese, Mandarin, and Vietnamese), and (3) among DLLs of different ages (infants and toddlers as well as preschoolers). The study findings are intended to inform policy, practice, and the scaling of promising strategies throughout the state to support DLLs.

This final summary brief includes findings from a Background Study (which documented the landscape of supports for DLLs in California), an In-Depth Study (which examined the relationship between current practices across the state and child and family outcomes), and the Expansion Study (which documented how the 16 counties worked to scale up supports for DLLs locally through additional funding from F5CA). The Background Study includes a sample of early learning program administrators (centers and family child care homes [FCCHs]) that is representative of the state as a whole, and findings from this study are therefore generalizable to California’s early learning and care programs. The In-Depth Study was not designed to produce generalizable results, although the samples of participants are large and broadly inclusive of different parts of the state where DLLs live and learn, and therefore reflect the experiences of many DLLs, families, and educators. The primary value of the In-Depth study is to describe the relationships between strategies and outcomes and to identify promising practices. The Expansion Study offers lessons learned for implementation and statewide scaling of supports for DLLs.

This summary brief highlights results that are presented in more depth in the study’s [research briefs](#), including evidence of the connections between professional development, educator practices, and child and family outcomes. For example, **analyses from the study show that:**

- **more home language use in early learning classrooms is associated with positive outcomes, particularly for preschool-aged DLLs,**
- **family engagement resources and materials that early learning programs provide to families—particularly in the home language—can support families’ use of home learning activities with their children, and**
- **more DLL-focused professional development is associated with teachers’ use of more evidence-based instructional practices for DLLs and culturally responsive engagement with DLL families.**

STUDY SAMPLE AND DESIGN

The DLL Pilot Study used a mixed-methods approach to address several broad research questions:

1. What is the landscape of supports for DLLs in California?
2. What is the range of instructional, family engagement, and professional development strategies in early learning and care settings to support DLLs?
3. How do these strategies relate to outcomes for educators, DLLs, and families?
4. How are counties working to sustain and scale these strategies?

The study was conducted in 16 focal counties across California, which were selected from each region of the state based primarily on the percentage of DLL children in the county and the diversity of languages represented.¹ The presence of existing initiatives to support DLLs was also considered. As part of the Background Study, we conducted interviews with county stakeholders in 2018 and surveys of administrators from a state representative sample of 744 licensed centers and family child care homes (FCCs) in 2018–2019.² We conducted a thematic analysis of interview data and a descriptive analysis of site directors' responses to the survey, applying sampling weights to estimate statewide percentages.

The In-Depth Study was conducted in 2019–2020 in a subsample of 174 early learning and care programs, selected based on their DLL populations served, the DLL-focused supports they provide, and their availability to participate in the study. Within this sample, the study included the following elements:

- Surveys of early learning and care teachers (lead teachers, assistants, and aides) about their beliefs, experiences, and practices with DLLs
 - 572 teachers of preschool-aged DLLs in 271 classrooms
 - 217 teachers of infant and toddler DLLs in 103 classrooms
- Direct assessments of 1,604 DLLs aged 3–5 from four home language groups (Spanish, Cantonese, Mandarin, and Vietnamese) on language (English and home language), early literacy, math, and executive function skills
- Teacher and parent ratings of language and general development (for 324 infants and toddlers) and social-emotional skills (for children birth to 5) across all language groups
- Surveys of 1,791 parents of DLLs about their background, beliefs, experiences, and home language and learning practices

Analyses for the In-Depth Study consisted of a descriptive analysis of parent and teacher survey responses and regression models run separately for each predictor (e.g., amount of DLL-related PD) and each outcome (e.g., particular instructional strategies), and for each of the four home language groups the study focused on. These models controlled for a number of background characteristics.

AIR also conducted an implementation evaluation of the expansion phase to explore how the pilot counties expanded capacity within their early childhood systems to support DLL children and their families and to document challenges, successes, and lessons learned. We conducted a qualitative analysis of interviews with project leaders in all 16 counties and 28 participating parents, eight focus groups with participating child care providers for a total of 65 early educators, and notes from monthly meetings of the Community of Practice that was established for counties to share information and experiences. Data were collected between October 2021 and April 2022.

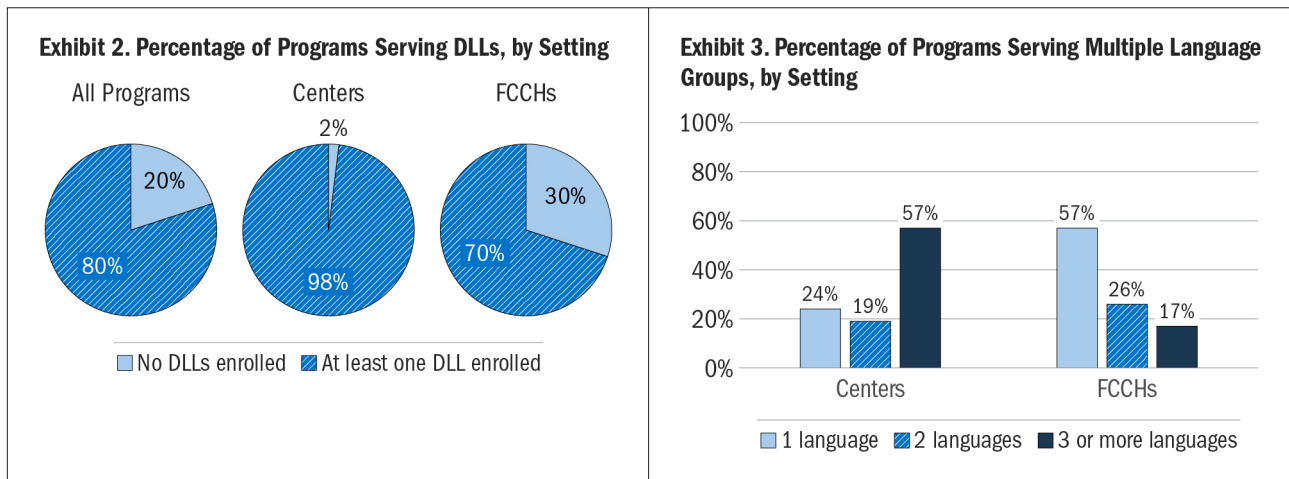
¹ The 16 participating counties were Butte, Calaveras, Contra Costa, Fresno, Los Angeles, Monterey, Orange, Riverside, Sacramento, San Diego, San Francisco, Santa Barbara, Santa Clara, Sonoma, Stanislaus, and Yolo.

² Overall the response rate was 74%. In total, 744 programs responded to the survey, including 476 centers and 268 FCCs. Statistical adjustments were made to ensure the sample reflects the population of early learning programs in California. The survey was administered online or by phone in English, Spanish, Mandarin, Cantonese, and Russian between April 2019 and April 2020.

The Landscape of Early Learning and Care Programs Serving DLLs in California

Given that California is one of the most linguistically and culturally diverse states with one of the largest populations of DLL children birth to age 5, it is important to understand where and how these DLLs are served in early learning programs. Drawing on data from the state-representative program director survey administered just before the onset of the COVID-19 pandemic, we examined the landscape of early learning and care programs serving DLLs throughout the state, including the distribution of DLLs across programs and programs' approaches to identifying and serving DLLs.

Nearly all centers and most family child care homes in California serve DLLs, and many programs serve a linguistically diverse population of children. Eight out of ten licensed early learning and care programs served at least one DLL (Exhibit 2). Almost all centers (98%) and 70% of FCCHs served at least one DLL. In addition to being somewhat more likely to serve DLLs, centers also had greater language diversity. While the majority of FCCHs (57%) serving DLLs had only one language represented in their program, most DLL-serving centers included children representing three or more language backgrounds (Exhibit 3). And while Spanish is the most common language spoken in the state's early learning programs, particularly in FCCHs, Mandarin, Tagalog/Filipino, Cantonese, Vietnamese, Arabic, Korean, Hmong, Russian, and Hindi are among some of the other common languages represented in California's early learning settings.



Most programs that serve Spanish-language DLLs also have Spanish-speaking adults on staff; however, programs do not always have bilingual/multilingual staff for other language groups or in all setting types. A language match between early learning program staff and Spanish-language DLLs was observed in a majority of the centers (85%) and FCCHs (64%) that serve these children. However, there are far fewer programs that have at least one staff member who speaks the same language as non-Spanish-language DLLs served by the program, especially in FCCHs (e.g., Vietnamese [26% of centers and 4% of FCCHs], Arabic [37% and 17%, respectively], and Tagalog/Filipino [39% and 7%, respectively]). Thus, DLLs from different language backgrounds may have very different opportunities for home language support in their classrooms.

As of 2019, DLLs were generally identified in early learning and care programs using informal methods.

Before programs can plan instruction to help support DLLs' development, they need to first know which children are DLLs and what their language backgrounds and needs are. To investigate how this process happens, site directors were asked how they identify DLLs in their programs. Directors were most likely to report that they ask the parent or caregiver about the child's language informally (82%), or that they

observe the child during program activities or during interactions with their family members (73%) to determine if the child is a DLL. Fewer programs reported using formal strategies such as administering a home language survey or using direct language assessments.

Administrators from centers, programs receiving Head Start or State Preschool funds, and programs serving a high proportion of DLLs were more likely to report using these formal strategies for identification. Although many programs ask about children's language background to determine if they are DLLs, fewer than half of program directors (43%) reported that they collect information on the number of DLL children in their program. Programs receiving Head Start or State Preschool funding were much more likely to report that they collect this information compared to other programs. Recent state legislation (AB 1363) to systematize the identification of DLLs and the collection of information about DLLs in the California State Preschool Program may change these program practices.

EXPANSION STUDY: DLL IDENTIFICATION

In Community of Practice meetings held in 2021, county leaders commented on the lack of a shared definition of "DLLs" and a standardized approach, including tools, for identifying DLLs in early learning programs. These leaders suggested that an investment in infrastructure—such as building out a data system within the Quality Counts California (QCC) system—is needed to help collect, manage, and use high-quality data on DLL children and to link to K-12 systems.

Beliefs About Bilingualism

This study also examined beliefs about bilingualism among participants at different levels of the early learning system, from county stakeholders to parents of DLLs, given the importance and potential impact of these different values. Positive attitudes about home language use are important because teachers with these attitudes tend to use practices that are supportive of DLLs' language development (Carley Rizzuto, 2017; Garrity & Guerra, 2015), which may also contribute to better academic outcomes for children (Oh & Mancilla-Martinez, 2021). English-centric views, on the other hand, can limit opportunities for DLLs to become fully bilingual and reap the variety of benefits associated with bilingualism (Arellano et al., 2018; Collins, 2014; Lindholm-Leary, 2014). These beliefs may be malleable, however. Research shows that teachers who participate in PD focused on culturally responsive pedagogy and positive beliefs about bilingualism demonstrate more favorable teacher attitudes about DLL students (Gardner-Neblett et al., 2020; Mellom et al., 2018; Spies et al., 2017).

Belief in the value of bilingualism is present throughout the early learning system, though not universally held or always translated into policy and practice. Nearly all county stakeholders interviewed for the Background Study reported that they view bilingualism as an asset and understand the important work of early learning providers in responding to the needs of DLLs. Through the state representative survey, we

found that more than 80% of early learning program directors in both center- and home-based settings believe in the importance of children developing their home language. In addition, the majority of program directors from both centers and FCCHs understood that children’s home language knowledge transfers to their second language learning and believed that English-speaking classrooms can create discomfort for DLLs, particularly at the beginning of the school year. However, the policies and priorities implemented in programs do not always align with this high regard directors report having for bilingual development. Less than a quarter of programs (18% of centers; 15% of FCCHs) have a policy statement or strategic plan focused on how they will serve DLLs. In addition, English continues to be the main priority for many programs.

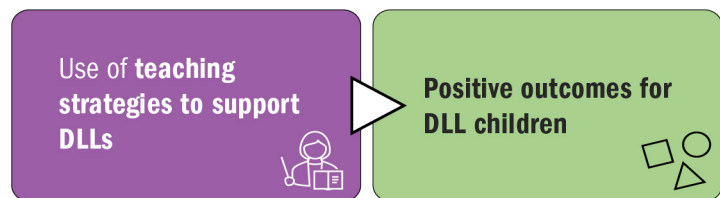
Parents of DLLs also reported valuing bilingualism for their children; 88% reported on the parent survey that they wanted their child to grow up to speak both the home language and English. This sentiment was especially prevalent among higher income families; nearly all (97%) families earning \$100,000 or more per year reported that they wanted their child to become bilingual. The relationships between programs’ family engagement efforts and families’ valuing bilingualism is discussed further in the family engagement section below.

Although there is some room for expanding beliefs about the value of bilingualism, the general context of widespread support for children’s bilingual development can make the creation and scaling of programs and policies to facilitate that development easier.

Instructional Strategies for Young DLLs

Young DLLs in early learning settings benefit from specific classroom practices that are targeted at supporting their unique developmental needs, given their varied cultural and linguistic backgrounds (Castro

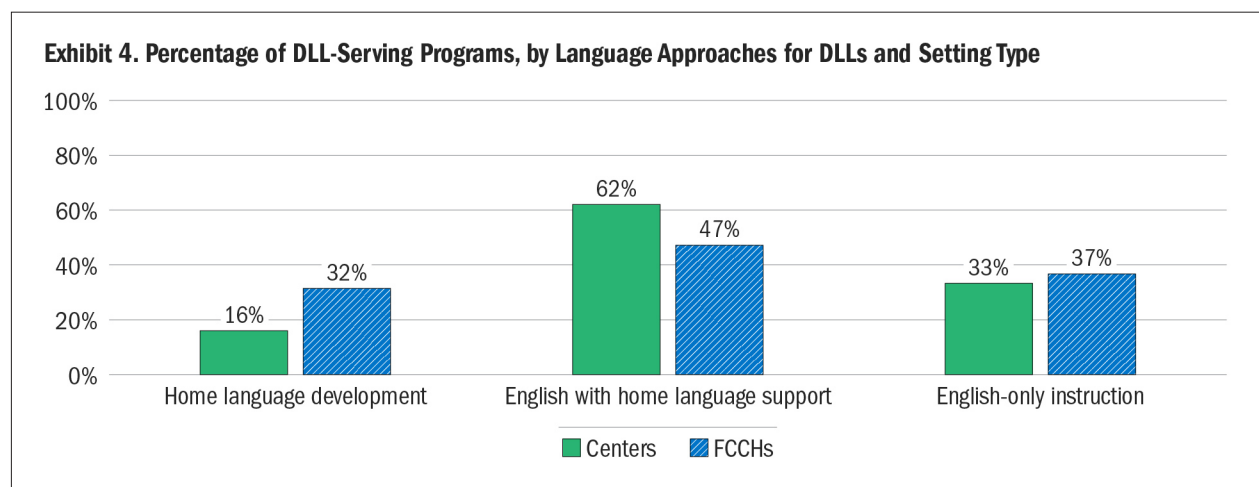
et al., 2011). For example, recent research underscores the benefits of using the home language in the classroom to support young DLLs’ learning, which can lead to better language and learning outcomes for DLLs, not only in their home language but also in English (NASEM, 2017). This section describes instructional practices that early learning and care programs in California use with DLLs and highlights those practices that the study found to be related to language and learning outcomes for children. We include outcomes in both English and the home language, for preschool-aged children and for infants and toddlers, and for DLLs from the four language backgrounds included in the study: Spanish, Cantonese, Mandarin, and Vietnamese.



Instructional Strategies for DLLs in Early Learning and Care Settings: Statewide Snapshot

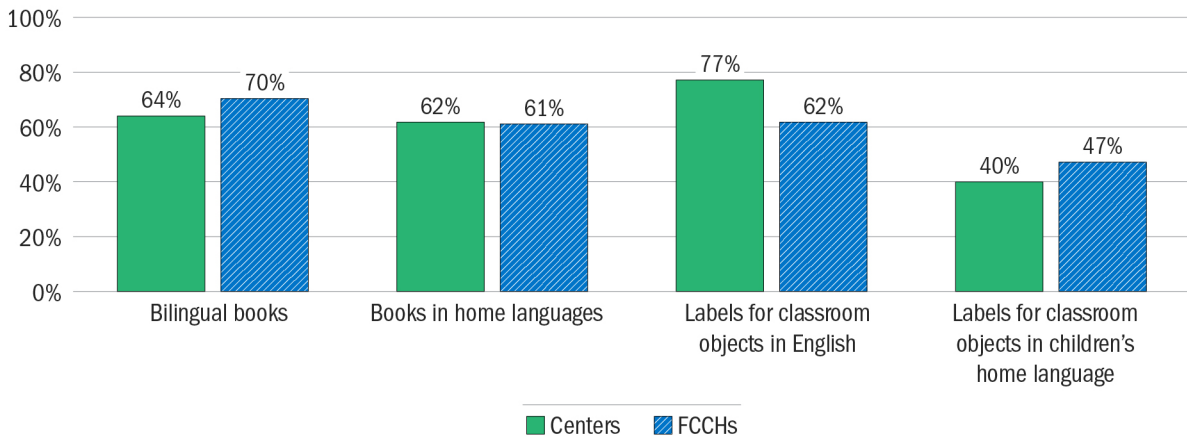
Responses from the site director survey provided information on the types of language models and instructional approaches early learning programs used with DLLs statewide. Before examining relationships with children’s outcomes, this section first describes those practices across the state.

Most early learning and care programs across California use the home language in classrooms with DLL children to some degree, but at least a third of these programs use only English for instruction. DLLs are most likely to be in a program that provides English instruction with some home language support (Exhibit 4). In these programs, home language support includes practices such as translating concepts during instruction and incorporating the home language through activities like music and poetry. At least one third of programs used *only* English for instruction (33% of centers; 37% of FCCHs). Fewer programs (16% of centers; 32% of FCCHs) used an intentional approach designed to develop DLLs’ home language, which includes dual language programs with different amounts of home language use (e.g., 50/50 models, where 50% of the day is taught in English and the other 50% is taught in the home language; 90/10 models, where the home language is used 90% of the instructional time and English is used for 10%; and home language–only models). Programs that use children’s home language (either a home language development model or English with home language support) tend to serve larger proportions of DLLs, while programs with English-only instruction tend to serve smaller proportions of DLLs. However, more than half of program directors, including those with a home language development approach, reported not following a specific curriculum to support DLLs in their care.



In general, early learning and care programs across California have some linguistically supportive materials available for DLLs, but more resources are needed. More than six out of 10 center and FCCH directors reported having bilingual books and books in the home language available for their DLLs (Exhibit 5). Less common was the presence of labels in children’s home languages; programs tended to have more labels in the classroom in English than in the home language. However, more resources are still needed; over 70% of program directors across settings reported challenges in finding high-quality books in languages other than English and bilingual books. Programs that serve larger proportions of DLLs are more likely to report having books in the home language and bilingual books available, but in classrooms that serve smaller proportions of DLLs, resources to help develop their home language may be limited.

Exhibit 5. Percentage of Centers and Family Child Care Homes With Books and Labels in Different Languages



THE REALITIES AND CHALLENGES OF APPROPRIATELY ASSESSING DLLS

What is the state of DLL assessment in California?

Results from the statewide survey of program directors found that many centers and FCCHs use assessments to monitor DLL learning, but few assess DLLs in their home language. Most programs that assessed DLLs reported conducting assessments in English, while only 35% of centers and 26% of FCCHs serving Spanish speakers assess those children in Spanish. Even fewer programs that serve children from other language groups assess them in their home language (15% of centers and 6% of FCCHs).

What makes assessing DLLs in the home language a challenge?

The limited assessment of DLLs in the home language is likely due in part to the lack of high-quality, validated assessments in multiple languages. This is a significant challenge for educators wanting to capture the full range of DLLs' skills; it also had direct implications for our study. To measure the wide range of skills for infant, toddler, and preschool-aged DLLs from Spanish, Cantonese, Mandarin, and Vietnamese language backgrounds, we drew on some existing assessments, and translated and adapted others when suitable assessments were not available. In our [Research Brief](#) on Challenges in Assessing California's Diverse Dual Language Learners, we describe our approach and highlight the challenges and issues involved in DLL assessment. We emphasize that assessments for DLLs must be normed and validated on populations of children who speak the target language *and* live in the United States, must reflect the cultures being represented, and must be equated to ensure difficulty levels and scores are comparable across languages.

Why is it important to assess DLLs in the home language?

Supplemental analyses of a sample of Spanish-language DLL children that were part of the in-depth study showed that although most of these DLLs in our sample earned higher math scores as assessed in English, one out of five performed better on math as assessed in Spanish. Specifically, Spanish-dominant DLLs were most likely to score higher on math as assessed in Spanish (69% of Spanish dominant DLLs performed higher on math as assessed in Spanish). These findings indicate that assessing math skills in the home language may be particularly important for DLLs who are dominant in their home language to avoid the risk of underestimating their skills if only assessed in English.

Promising Classroom Practices for Preschool-Aged DLLs: In-Depth Study Findings

Teacher surveys administered as part of the in-depth study also provided information on the specific classroom practices utilized by the teachers in each study classroom. Drawing on these survey responses, we examined a range of classroom language and learning supports, including use of the home language by teachers who speak the languages of the DLLs in the classroom as well as strategies that teachers could use regardless of their own language skills. Using data from direct child assessments—including measures of English and home language development, cognitive and pre-academic outcomes, and social-emotional skills—of 1,604 preschool-aged DLLs, we identified instructional practices associated with positive learning outcomes. Key findings from these analyses are described in this section.³

Use of the Home Language

First, we consider language use in the classroom and its relationship to children’s learning outcomes. Specifically, we examined the percentage of time English and DLLs’ home languages were used in the classroom, the use of activities in English and the home language, and the use of bridging strategies in the home language to build English.

More use of Spanish in the classroom was associated with better performance of preschool-aged Spanish-language DLLs on several outcome measures, including oral comprehension in English.

According to teachers’ survey responses, teaching teams in the study spent more time on average speaking in English than in the home language. In classrooms with DLLs from Spanish-language backgrounds, teachers reported using Spanish about one third of the time, on average. However, the more time teaching teams reported using Spanish in the classroom and the less time they reported using English, the better children from Spanish-language backgrounds performed on Spanish vocabulary and oral comprehension, basic mathematics, bilingualism,⁴ literacy skills, executive functioning, social-emotional well-being, and English oral comprehension. The frequency of activities in Spanish was also positively associated with children’s skills, though for fewer outcomes.

In addition, Spanish-language DLLs who were in “primarily Spanish” classrooms significantly outperformed those in classrooms with less Spanish use on Spanish language outcomes, pre-academic outcomes, and executive functioning. Specifically, children in “primarily Spanish” classrooms performed significantly better than similar children in each of the other three types of classrooms we identified (*Balanced*, *English with Spanish support*, and *Nearly all English*) on Spanish vocabulary, bilingualism, and executive functioning. Additionally, children in *Primarily Spanish* classrooms performed significantly better than those in *English with Spanish support* classrooms on two additional outcomes (math as assessed in Spanish and literacy skills), and significantly better than those in *Nearly all English* classrooms on two other additional outcomes (oral comprehension in both English and Spanish). In contrast, the latter three groups—*Balanced*, *English with*

³ Analyses of the relationships between the strategies and child outcomes controlled for some background characteristics, such as age and home language use (though exactly which ones were included differed by analysis, based on initial explorations of the data).

⁴ Using vocabulary scores in English and the home language, we created a **bilingual score** for each child that represents both *proficiency* in each language and the *balance* of proficiency across the two languages.

Spanish support, and *Nearly all English*—did not perform significantly better than *Primarily Spanish* on any outcomes. Also, being in a *Primarily Spanish* or *Balanced* classroom did not have any negative effects on any English skills for these Spanish- language DLLs.

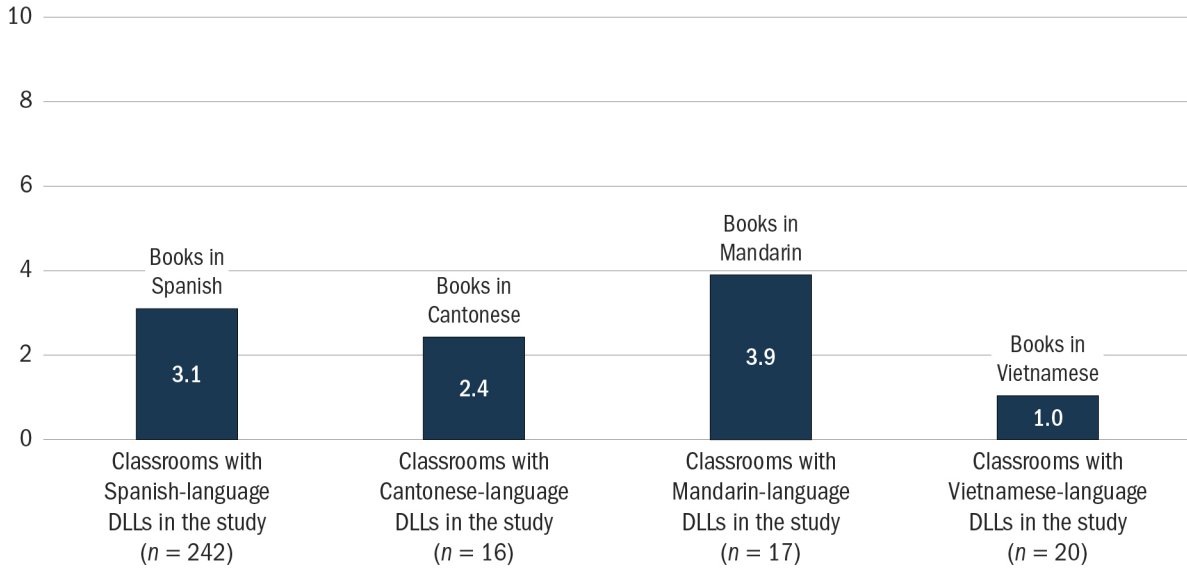
More home language use was also associated with several positive outcomes for DLLs from Asian-language backgrounds, though not consistently across the different Asian languages examined in this study. Teachers with DLLs from Asian-language backgrounds used those home languages much less frequently than Spanish, on average (10% for Mandarin, 11% for Cantonese, and 6% for Vietnamese), and often used other home languages, reflecting the linguistic diversity of classrooms serving these DLLs. Similar to Spanish-language DLLs, however, we found that use of the home language (both in terms of percentage of time and frequency of activities) was positively associated with vocabulary skills in the home language and bilingualism for DLLs from Cantonese- or Mandarin-language backgrounds. This pattern was not observed for Vietnamese-speaking DLLs, perhaps due to the small sample of classrooms with Vietnamese-language DLLs, or the multilingual environments these DLLs are often in (often with many Spanish speakers), or other unmeasured factors.

Strategies for Supporting DLLs, Regardless of the Languages Teachers Speak

Given that not all educators working with DLLs can speak all of their students' languages, the study also examined practices that all teachers can use to support DLLs, regardless of their own language skills. This included consideration of the number of books the classroom had in the home language (per DLL of *that* home language); the use of basic words or phrases like “hello” and “thank you” and singing songs in the home language; and the use of general instructional strategies to support DLLs that do not require home language use, such as using body language and gestures to convey meaning.

Among classrooms with Spanish language DLLs, the number of books in Spanish and the use of songs and basic phrases in Spanish was positively related to outcomes assessed in Spanish for Spanish-language DLLs. On average, classrooms serving Spanish-language DLLs had approximately 3.1 books in Spanish per Spanish-language DLL (Exhibit 6). Having more books in Spanish in the classroom (per DLL from a Spanish-language background) was associated with more positive outcomes on vocabulary and oral comprehension, measured in Spanish, as well as higher bilingualism scores among Spanish-language DLLs. The use of basic Spanish phrases and songs by teachers (even those not fluent in Spanish) was positively related to all outcomes assessed in Spanish (vocabulary, oral comprehension, and basic mathematics), as well as literacy skills and executive functioning for these DLLs. However, the use of basic phrases and songs was negatively associated with English vocabulary scores for DLLs from Spanish-language backgrounds.

Exhibit 6. Average Number of Classroom Books in the Home Language per DLL of That Language Background



Some of the classroom practices that do not require teacher proficiency in the home language of their DLLs were also positively related to outcomes for DLLs from Asian-language backgrounds. Given the lower incidence of teacher language match between teachers and DLLs from Asian-language backgrounds (compared to those from Spanish-language backgrounds), practices that do not require teacher proficiency in the home language may be especially important. Compared to Spanish, the availability of books in the home language was generally less common for Cantonese (average: 2.4 books per DLL) and Vietnamese (average: 1 book per DLL), but not Mandarin (average: 3.9 books per DLL). Having home language books was also not as consistently related to outcomes for DLLs from the different Asian-language backgrounds, though a few significant findings emerged. Specifically, the number of books in the home language (per DLL of that home language) was positively associated with Cantonese oral comprehension for Cantonese-language DLLs and with English vocabulary and bilingualism for Mandarin-language DLLs. We also found a few positive relationships with outcomes for the use of basic phrases and songs in Cantonese for Cantonese-language DLLs and the use of general (language-independent) strategies for working with DLLs (such as using gestures and body language) for Mandarin-language DLLs. None of these practices were positively related to child outcomes for Vietnamese-language DLLs.

TIME SPENT IN EARLY LEARNING AND CARE PROGRAMS MAY PROMOTE DLL OUTCOMES

Previous research suggests that earlier age of entry into early childhood programs and longer duration benefit child outcomes, including outcomes for DLLs (Yazejian et al., 2015; Zaslow et al., 2010). This study's findings support that prior research.

Duration of enrollment in early learning and care programs was positively associated with the skills of preschool-aged DLLs from a Spanish-language background. On average, preschool-aged DLLs in the study had attended their early learning program for just over a year (14.2 months for the Spanish-home language sample, 16.4 for Cantonese, 15.5 for Mandarin, and 13.3 for Vietnamese, on average). The longer preschool-aged DLLs from a Spanish language background had been at their program, the better they performed on English language skills, math as assessed in English, literacy skills, and bilingualism. This may suggest that there is a benefit to consistent exposure to language and content in early learning settings irrespective of the specific instructional strategies used there.

Attending an early learning program for a longer period was also associated with positive developmental outcomes for the youngest DLLs. Infant and toddler DLLs who had attended their early learning and care program for a longer period had stronger communication skills, problem-solving skills, and personal-social skills. On average, the infants and toddlers attended their early learning and care program for 13.5 months, with some children having attended the program since shortly after birth and others having just started. Again, this finding suggests that more sustained participation in early learning and care programs may improve outcomes for DLL infants and toddlers, independent of specific instructional practices.

Classroom Practices for Infants and Toddlers: In-Depth Study Findings

We also examined several language and learning supports for infant and toddler DLLs, including *English language and learning supports* (e.g., percentage of classroom time in English, teachers' proficiency in English), *Spanish language and learning supports*⁵ (e.g., percentage of classroom time in Spanish, teachers' proficiency in Spanish, number of books in Spanish), and *language-agnostic learning supports* (e.g., general strategies to support learning, as described above). We compared teachers' reports of these classroom practices to data from several indirect child assessments (observation measures completed by teachers and parents) of the language and general development of 324 DLLs who were between 8 and 36 months of age, to identify promising practices for these young DLLs.

Overall, we found that more language input was associated with more advanced linguistic knowledge and skills among infant and toddler DLLs. The observed associations between educators' practices and learning outcomes for infants and toddlers were almost all language specific, meaning that language input, resources, and strategies in one language generally related to more advanced linguistic knowledge and skills in that same language. In other words, greater use of English in the classroom was associated with

⁵ We were not able to examine practices specific to Cantonese, Mandarin, or Vietnamese because of the very small number of classrooms with DLLs of these languages.

better scores on English assessments and greater Spanish exposure in the classroom was associated with better scores on Spanish assessments (for Spanish-language DLLs). More specifically:

- Similar to preschool classrooms, teaching teams among infant and toddler DLLs averaged more time in English than in Spanish (59% vs. 39%), despite there being similar numbers of teachers who spoke each language (about two). Greater use of English in the classroom (as measured by the number of teachers speaking English) and higher English proficiency among teachers was associated with stronger communication skills among DLL infants and toddlers. Higher English proficiency among teachers was also related to stronger personal-social skills for these young DLLs. English language and learning supports (such as the frequency in which teachers engaged in activities with young children in English) in the classroom were generally positively related to young DLLs' English language skills (though results were not consistent across all measures and age groups).
- Additionally, for DLLs from a Spanish-language background, classroom Spanish exposure was positively related to children's Spanish skills, while English exposure was in some cases negatively associated with Spanish language skills, especially for the youngest group. It may be that cross-language transfer (i.e., when Spanish use in the classroom is positively associated with some aspects of English language development) is more common when children are older and have more developed language skills.

Although some relationships between classroom practices and developmental outcomes for infant and toddler DLLs were detected, as described here, many other relationships were *not* detected, which is an indication that there is much more we need to understand about the connections between instructional approaches and outcomes for these youngest DLLs.

Family Engagement

The relationships that early learning and care programs build with families also matter to a child's development and learning. There are many ways that programs can successfully engage with

families, but one particularly important component of involving DLL families in their child's learning is linguistically and culturally responsive communication with families. Programs do this by valuing, encouraging, and learning about the home language and culture of families, and by being sensitive to their language preferences, as well as providing resources and information that can help promote family engagement at home (González et al., 2006). In turn, prior research suggests that families' engagement with their children at home, specifically focused on language and literacy development, can promote positive learning outcomes for DLLs (Bernhard et al., 2006; Boyce et al., 2010; Caesar & Nelson, 2014; Hammer & Sawyer, 2016). In this section, we describe how program administrators support family engagement and how these strategies were related to family members' beliefs and practices to further support their child's learning and language development.



Family Engagement Efforts in Early Learning and Care Settings: Statewide Snapshot

Before examining the relationships between family engagement strategies and family outcomes, we first examined program-level approaches in place statewide, as reported by program directors.

Early learning programs across California often reached out to engage families of DLLs, though there is an opportunity for more engagement and concrete supports.

Data from the state-representative survey of program directors revealed that many programs acknowledged the importance of families' language and cultural strengths by communicating with families to identify their cultural background (69% of programs) and inviting them to the classroom to lead activities in their home language (51%). Nearly four in 10 program directors (38%) specifically reported helping families recognize that their home language and culture are strengths that should be cultivated at home and in the program. Fewer programs provided resources to support DLLs' learning at home, such as lending libraries (33%) or home-based activities designed to support children's in-school learning (32%). In sum, directors of early learning programs across California reported valuing families' cultural and linguistic backgrounds and taking actions to encourage children's learning and development, even if those values and actions did not always translate into concrete material supports for families.

EXPANSION PHASE: SUPPORTS FOR FAMILIES

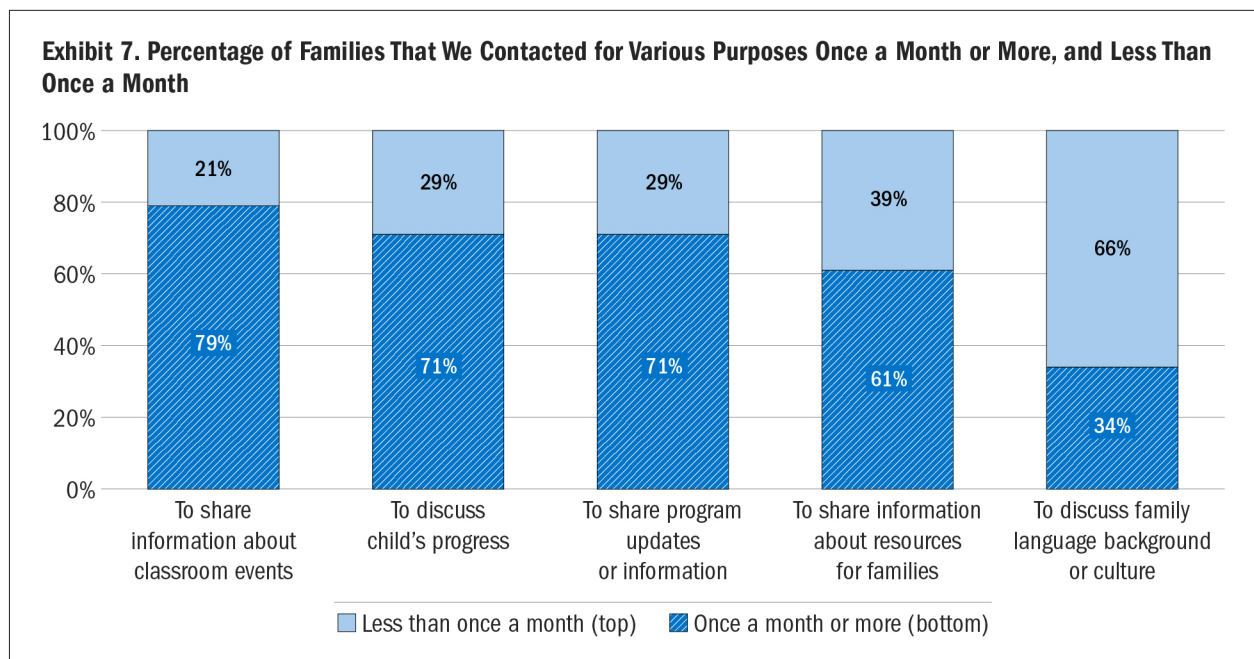
Through the expansion phase grants, counties offered a mixture of services to families of DLL children, including trainings and broader family support efforts. All of these included a focus on language development in some way. Approximately 11,000 families were directly served through the expansion phase projects. Counties worked with school districts, libraries, family resource centers, and other partners to deliver training and supports. In addition, over 50,000 books, including many in families' home languages, were distributed to families of DLLs in the 16 counties. County leaders, early educators, and families participating in the study praised the distribution of books as a valuable resource.

Promising Family Engagement Strategies

Drawing on data from a survey of the families of DLLs, we next explored parents' reports of programs' strategies for engaging them and the relationships between those strategies and families' attitudes and beliefs, and their support for children's learning at home. Promising strategies to effectively engage DLL families that emerged are described in this section.

Receiving affirming messaging about bilingualism and cultural diversity from their child's early learning and care program was associated with families valuing bilingualism. Across language groups, almost all families (88%) reported wanting their children to grow up to speak both their home language and English. Most families (85%) also reported receiving affirming messages about the benefits of their child learning two languages. Families that received these positive messages about bilingualism and cultural diversity were more likely to value home language skills as an aspect of school readiness.

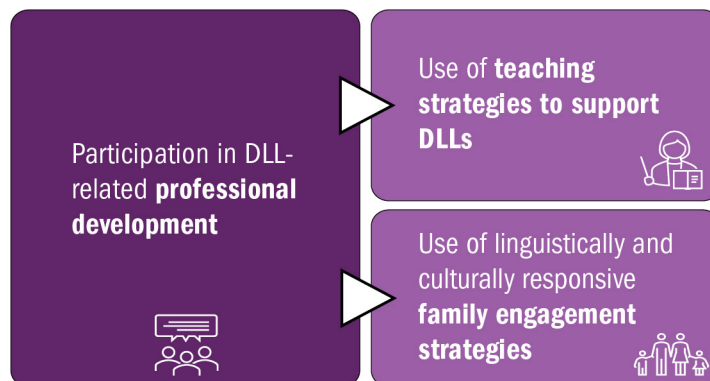
Furthermore, families whose programs contacted them more frequently were more likely to attend program activities, assigned more importance to kindergarten readiness skills, and engaged their child in learning activities at home more frequently. Most families reported being contacted by their program in their home language routinely (at least once a month) to discuss the child’s progress (71%) and receive information about classroom events (79%; Exhibit 7). Families that were in programs where they were contacted frequently by their program were found to place more value on skills that are commonly associated with school readiness (e.g., counting, good problem-solving skills), participated with their child more often in learning activities at home, and were involved in site-based activities more often. Relatedly, the study found a strong positive relationship between families that reported attending site-based activities more frequently with (1) families placing importance on their child’s home language skills as a factor for school readiness and (2) the regularity with which they participated in their child’s learning at home.



Providing learning materials to DLL families was associated with their engaging in more learning activities with their child at home. Approximately four out of five families (81%) reported receiving home learning materials such as word and number games and conversation starters for families to use with their child, and these were often provided in both the home language and English. Families with a child attending a center-based program were more likely to report receiving home learning materials from their program than families with children enrolled in FCCHs (83% and 63%, respectively), though receiving materials in English only was more commonly reported by families with children attending centers compared to FCCHs (31% versus 18%, respectively). Overall, providing these materials to families was associated with greater engagement of families in at-home learning activities like reading and counting with their child; this was particularly true when those materials were made available in the home language. Generally, DLL families engaged in a range of activities with their child that research indicates should support their learning and development; for example, approximately three out of four families reported counting (76%) and singing songs (76%) with their child at least three times per week.

Professional Development

DLLs need trained and prepared professionals to support their learning and development. In general, professional development (PD) is effective for promoting teacher practices associated with strong child outcomes (Egert et al., 2018), as illustrated in the study's conceptual framework (Exhibit 1). Prior research also shows that early educators who participate in *DLL-specific* PD engage in more culturally and linguistically responsive instruction, which can promote DLL children's learning in the classroom (Buysse et al., 2010; Castro et al., 2017). This study sought, therefore, to document the PD experiences of the workforce serving DLLs in California and to examine the ways that teachers' participation in DLL-related PD was linked to how they support DLLs in their classrooms and how they think about and work with DLLs and their families.



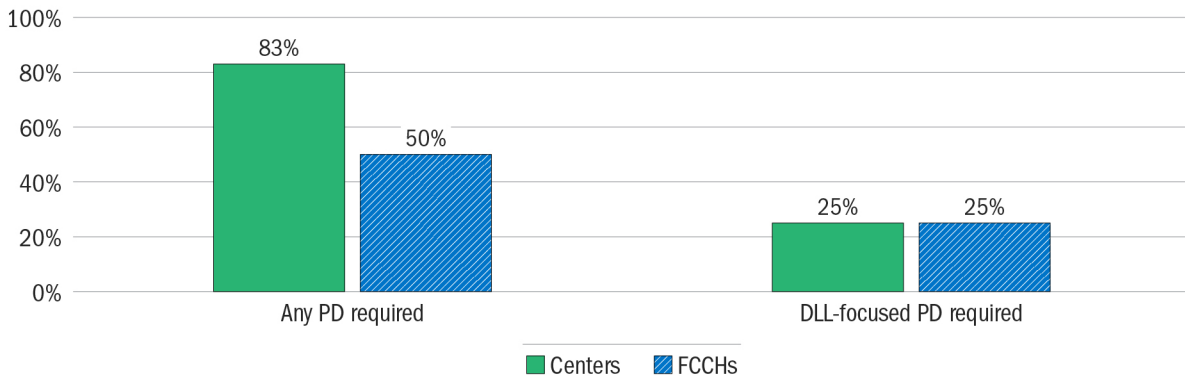
PD for Teachers of DLLs in Early Learning Settings: Statewide Snapshot

We first explore the need and requirements for participation in PD related to supporting DLLs and the supports offered to facilitate and encourage PD participation in place in early learning and care settings across the state.

Overall, there is a shortage of educators in early learning and care settings who are trained to work with DLLs and their families. Most center directors and FCCH providers reported challenges with staffing, including not having enough early educators trained to work with DLLs and their families and able to speak the home language of the DLLs enrolled at their site. Access to PD for educators was also a common challenge. About three quarters of center directors (78%) and FCCH providers (75%) reported that there was not enough funding available for PD.

Furthermore, early educators across settings are rarely required to participate in PD specifically focused on supporting DLLs. In 83% of centers and 50% of FCCHs, at least some of the educators or caregivers were required to participate in PD activities in the year prior, but in only 25% of programs (both centers and FCCHs) were early educators required to participate in PD *specifically* focused on teaching and supporting DLLs (Exhibit 8). This suggests that even though FCCHs have fewer PD requirements overall, the emphasis of the required PD is more likely to be on supporting DLLs. Educators that were more likely to be required to participate in DLL-focused PD were those in Head Start/Early Head Start and Title 5 programs (compared to educators in programs that were not publicly funded), programs that participated in Quality Counts California (QCC), and programs serving a large proportion of DLLs. Although participation in DLL-focused PD is not required statewide, more PD opportunities related to DLLs have become available recently, including training for educators in models such as SEAL and the Language Learning Project, through grants from the California Department of Education to local PD providers and developers.

Exhibit 8. Percentage of DLL-Serving Programs Reporting DLL-Focused PD Requirements



Educators in centers received more supports to participate in PD than educators in FCCHs. In

order for early educators to participate in the PD opportunities that are offered, programs need to have supports such as paid training time and substitutes in place. These types of supports were more common in centers than FCCHs. For example, while 69% of centers provided staff with substitute teachers to attend PD, only 29% of FCCH providers provided the same supports. Additional supports included paid time off for PD and bonuses or stipends for participation, which were also somewhat more common in centers (60% received paid time off and 29% received bonuses or stipends) than FCCHs (51%, and 26%, respectively). It is important to note that two out of five FCCHs (41%), and only a small percentage of centers (16%) that required PD for early educators, reported not offering *any* of these three supports to their staff. This lack of resources and incentives may limit the ability of early educators to continue their professional learning, especially FCCH providers.

EXPANSION PHASE: LESSONS FOR SCALING PROFESSIONAL DEVELOPMENT

From the Evaluation Phase implementation study, several promising practices with implications for scaling professional development emerged:

Communities of practice (CoPs) and coaches can help educators retain and apply what they learn through training. County leaders emphasized the value of CoP meetings for deepening educators' understanding of effective DLL instructional strategies between training sessions, and the value of coaches to help educators embed new practices into their classrooms and home-based programs.

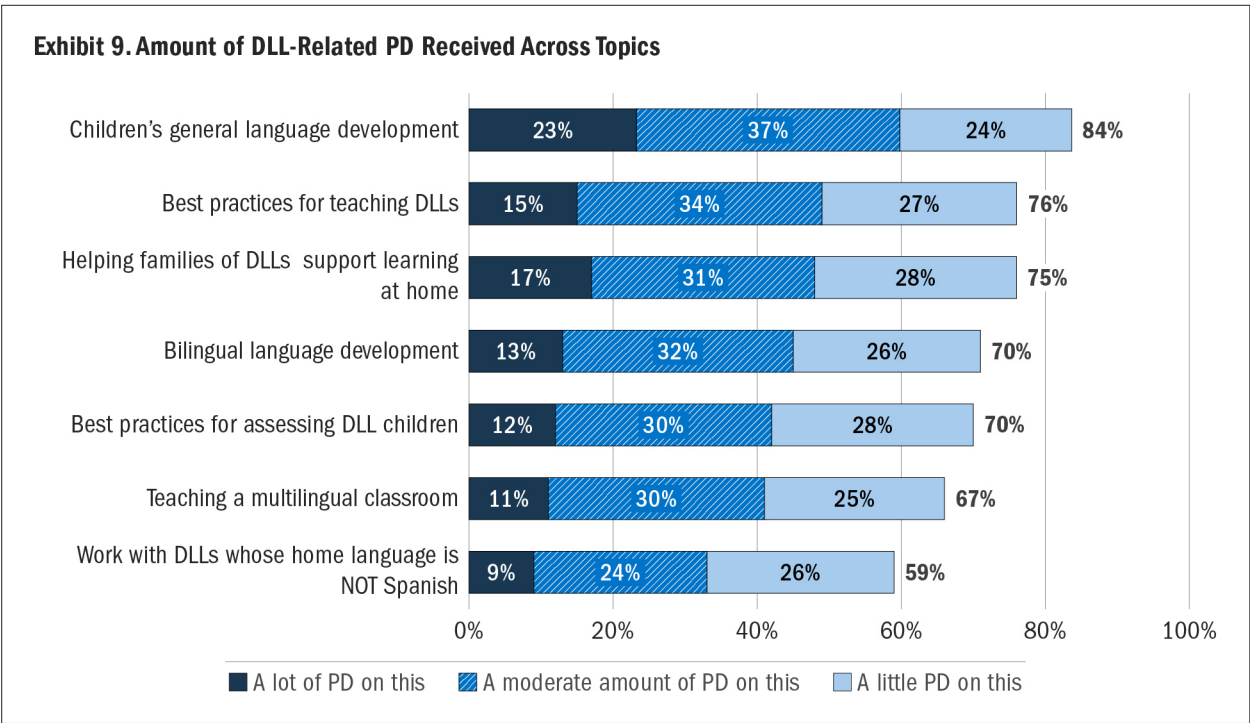
Provision of professional development in teachers' home languages was well received by early educators, and may facilitate retention and effective implementation of DLL instructional practices. County leaders reported participants were appreciative of the opportunity to learn and share in their home language.

Integration of DLL-focused training and supports into local Quality Counts California (QCC) systems will elevate DLL issues and help ensure that quality improvement efforts include more intentional practices to support DLLs in early learning programs.

Relationships Between DLL-Related PD and Teacher Practices

Given this statewide context, we examined the relationships between PD and teacher practices by comparing the beliefs and reports of use of evidence-based practices for working with DLLs and their families for teachers who reported receiving varying amounts of DLL-related PD.

Although most teachers reported receiving at least a *little* DLL-related PD, fewer than one in four reported receiving a *lot* of PD on any given topic related to teaching DLLs, and nearly all teachers wanted more. For most of the topics, 40% to 60% of the teachers reported having received at least a moderate amount of PD on the topic, but fewer than 20% reported having had a *lot* of PD on the topic (see Exhibit 9 for select topics). In addition, 92% of teachers indicated a need for additional PD to successfully support DLLs in their classroom.



Overall, we found that teachers who received more DLL-related PD were more likely to:

- **Have more pro-bilingual attitudes.** For example, they were more likely to agree with statements like “DLLs learn English better when they are also developing their home language” and “Children who speak more than one language tend to be more skilled at understanding other people’s viewpoints.”
- **Express higher confidence in their ability to support DLLs across a variety of developmental domains.** This relationship was specific to supporting Spanish-language DLLs, and not detected for confidence in supporting Mandarin- or Cantonese-language DLLs.

- **Use evidence-based instructional practices.** Specifically, the amount of DLL-related PD a teacher participated in was positively related to their use of general strategies for working with DLLs (e.g., gestures, hands-on materials, cultural activities), use of instructional strategies in English, use of instructional strategies in the home language,⁶ and use of strategies in the home language to support English.⁷
- **Use a larger number of linguistically and culturally responsive family engagement strategies.** Specifically, teachers who received more DLL-related PD were more likely to report collecting more language-related information from families at intake, involving parents in the classroom, and providing parents with materials and activities related to language development and bilingualism. This is especially noteworthy given the relationships between these practices and families' support for their child's learning.

Professional development can help educators learn and practice evidence-based strategies to support DLLs' learning and engage effectively with their families. Many of the instructional and family engagement practices linked to participation in DLL-focused PD were also associated with child or family outcomes, as described earlier. For example, teachers' use of instructional activities in Spanish was associated with several positive outcomes for DLLs from Spanish-language backgrounds, and providing materials and activities to families related to bilingualism was related to parents' positive attitudes about bilingualism.

DLL-RELATED TEACHER CERTIFICATIONS

Having a teacher with a DLL-related certification was associated with higher performance among Spanish-language DLLs. Children in classrooms in which a teacher held a certification such as CLAD or BCLAD performed significantly better, compared to children in classrooms where no teacher had such a certification, on all three outcomes assessed in English as well as Spanish oral comprehension and basic mathematics as assessed in Spanish. Though these certifications are typically held by K-12 teachers, not early educators, this finding does suggest that specialized training focused on DLLs may matter for children's learning and development.

Recommendations for Policy and Practice

Many early learning and care leaders recognize the value of bilingualism and demonstrate an increasing interest in effectively supporting the development of DLLs in early learning settings. However, the extent to which practices and systems are in place to effectively support DLLs in early learning and care settings varies across the state and from program to program. Though efforts like the expansion phase grants facilitated collaboration across agencies and counties, a lack of coherence and integration of efforts across systems, counties, and the state remain roadblocks to consistent implementation of practices for DLLs. Drawing on the wide range of data collected as a part of the First 5 California DLL Pilot Study, this

⁶ For Spanish and Vietnamese only.

⁷ In Spanish and Vietnamese, and marginally for Mandarin.

comprehensive study provides the field with new findings that can help inform policy and practice for educating young DLLs across the state. From these findings, we offer several recommendations for strengthening the early learning and care system to support DLLs.

- **Widely disseminate key messages about the benefits of bilingualism and the value of home language use to encourage families, programs, and communities to prioritize children’s bilingual development.** Stakeholders across the early learning system endorsed the value of developing bilingualism. However, these beliefs are not universally held, and are not always translated into effective practices to support DLLs. The wide dissemination of research-based information about the benefits of bilingualism and basic practices to support home language development—at home and in early learning settings—is important for building a common strengths-based understanding of DLLs and their learning potential. Multiple avenues for sharing these key messages should be considered, from statewide public information campaigns to working through early learning providers and other trusted messengers to share information with parents, since we have seen evidence that sharing information this way can support parent knowledge and beliefs.
- **Include knowledge of language development and best practices for supporting DLLs from birth through age 5 in educator competencies.** Although the state offers guidance documents on serving DLLs, there are no universal requirements for providers to have a foundational understanding of language acquisition for DLLs or best practices for serving DLLs in pre- or in-service training. The addition of such requirements would ensure a basic level of understanding among educators to guide their practice and form a foundation for ongoing professional learning on this topic.
- **Enact policies to broaden the language diversity of the early learning and care workforce and encourage multilingual educators to use the home language in early learning classrooms.** According to program directors, the most common challenge facing early learning and care programs is finding and retaining staff who speak the home language of the DLLs in their program. At the same time, we know this language match is important; we found consistently positive child outcomes when the home language was used more often. Efforts should be made to recruit teachers who (fluently) speak children’s home languages, with the goal of programs having at least one teacher who can speak the home language of DLLs in the program. Incentives such as higher pay and stronger benefits (for all early educators) may be needed to recruit such staff.
- **Expand access to and support early educators to participate in professional development focused on working with DLLs and their families.** Almost all teachers in the study reported a need and desire for more DLL-related PD, and site directors reported this as one of the biggest challenges in their work. We found a consistent relationship between participation in DLL-focused PD and positive practices and beliefs among teachers. For teachers who speak the home language of the DLLs in their program, PD should include training on how to be intentional in using the home language in the classroom, and at the program level, training could focus on adopting a formal language model or policy for DLLs. For teachers who do not speak the home language fluently, strategies that can be implemented with DLLs regardless of teacher language skills (such as

singing songs and using basic phrases in the home language) should be emphasized. County leaders implementing PD through expansion phase grants reported that offering training in languages other than English was needed and well received by educators, and that following training with coaching and communities of practice helped educators to embed new practices in their work. Providing incentives and supports, such as stipends or paid time off, to enable participation will also be important to ensure equitable access for all, including FCCH staff. Efforts to scale up PD should be informed by counties' successes and lessons learned in the expansion phase projects, including their efforts to integrate DLL-focused PD into their Quality Counts California (QCC) systems.

- **Provide early learning programs with books and materials in children's home languages to share with young DLLs and their families.** While this study found positive associations between the presence of home language books in the classroom and several child outcomes, many program directors reported that finding high-quality books in children's home languages was a challenge. Providing concrete learning materials to families was also associated with more engagement of children in at-home learning activities. Children would benefit if the state or counties were to coordinate the provision of materials to early learning programs—including classroom materials such as books in the home language and other information and resources that educators can share with families in their home language to use to support children's learning at home. This effort has already begun through F5CA's expansion funding, and the response from families has been very positive.
- **Support the development and use of culturally and linguistically responsive tools and assessments to identify DLLs upon enrollment and monitor their learning and development in English as well as in the home language.** This study found that most programs rely on informal methods of identifying DLLs, and fewer than half of programs report collecting information about the overall number of DLLs they serve, which could be useful for informing policy. County leaders participating in the expansion phase CoPs discussed the importance of having a clear definition of a dual language learner and reliable, low-burden tools to identify them. Monitoring the learning and development of DLLs—across domains and including both English and home language development—is also important for informing instructional decisions and family engagement strategies, as well as for evaluating program effectiveness and contributing to accountability measures. Few programs assess DLLs in the home language, likely because there are very few valid, reliable, and developmentally appropriate assessments that are available in multiple languages (especially languages other than English and Spanish). However, we know that assessing children only in English can underestimate their knowledge and skills. Investing in the development of multilingual assessments would facilitate better monitoring of DLL progress.

- **Encourage two-way communication with families that includes (1) gathering information about families’ language, culture, and learning goals to inform instruction, and (2) providing information and engagement opportunities that are culturally and linguistically responsive.** This study found that families whose programs contacted them more frequently tended to be more engaged in both school and at-home activities with their child, and that families whose programs provide information on the benefits of bilingualism tended to hold more positive attitudes about bilingualism as a priority for their child. Supporting early educators to engage in two-way communication with families; learn about the home languages, culture, and parent language learning goals for their child; and provide information on the benefits of bilingualism and activities that they can do with their child can also contribute to DLLs’ development and continued learning.

LIMITATIONS AND FUTURE RESEARCH

Although the study revealed a number of important findings, there are limitations to this research and important directions for future work.

- The analyses conducted here are limited by the correlational design of the study, and thus do not allow for causal interpretations about the directionality of relationships between classroom practices and contexts and DLLs’ development, as well as DLL-related PD and teacher practices. Future research should design experimental research to provide more rigorous evidence for these relationships.
- Despite targeted recruitment efforts, this study’s sample sizes for Cantonese, Mandarin, and Vietnamese-language DLLs (particularly among the infant and toddler ages), and the number of programs and classrooms in which they were found, were very small. Future research should focus more explicitly on these groups (and DLLs from other non-Spanish languages as well) by carefully identifying and recruiting large numbers of their early learning programs.
- Due to the pandemic, this study was unable to collect the full range of measures intended, including two timepoints of child assessments and direct observations of classroom interactions. Thus, we relied largely on survey data from teachers and parents, which may be limited. Future research could collect more direct measures, of both classroom practice and child skills, to understand how teachers arrange and lead their classrooms and what children truly know and can do at a given point in time.

With the large and diverse population of young DLLs in California and the growing awareness of the value of multilingualism and the tremendous potential held in these young learners, it is imperative that state and local decisionmakers invest in strategies to ensure that DLLs—and the educators and families that support them—have the resources and supports they need to reach their potential. Lessons from the F5CA DLL Pilot Study, in tandem with the growing body of research literature on DLL learning and development, can and should be used to inform the selection of those strategies.

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About the First 5 California DLL Pilot Study

In 2015, First 5 California committed \$20 million for a “DLL Pilot” to identify and promote effective, scalable strategies that early learning and care programs can use to support DLLs and their families. A key component of this initiative was a study focused on three high-leverage areas: instructional practices, professional development for early educators, and family engagement. The study examined the practices used across different early learning settings, diverse language groups, and DLLs of varying ages and backgrounds, and the extent to which various practices are associated with child and family outcomes. Sixteen counties, selected to be broadly representative of California’s DLL population, participated in the DLL Pilot: Butte, Calaveras, Contra Costa, Fresno, Los Angeles, Monterey, Orange, Riverside, Sacramento, San Diego, San Francisco, Santa Barbara, Santa Clara, Sonoma, Stanislaus, and Yolo. The study was conducted by the American Institutes for Research in partnership with Juárez & Associates; CRI; School Readiness Consulting; Allen, Shea & Associates; and Stanfield Systems, Inc. Guidance was provided by a DLL Input Group composed of stakeholders, advocates, and state and national experts on DLLs.

For more information about the study and to read other study briefs and reports:

<https://californiadllstudy.org/>

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