Early Childhood Family Education: Language and Pre-Academic Skills for Latinx Dual Language Learners

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The number of young children from culturally and linguistically diverse backgrounds continues to rise in preschools across the United States. While it is known that preschool experiences promote kindergarten readiness and overall success in later years, particularly regarding literacy and numeracy skills (Phillips et al., 2017), less is understood about the impact of preschool experiences on children who have culturally and linguistically diverse backgrounds. Dual language learners (DLLs) are one prominent subgroup of culturally and linguistically diverse students for whom the significance of the relationship between academic skills and preschool participation is growing as an important topic for early childhood educators and researchers (López & Foster, 2021).

While only 26 states track DLL enrollment in preschool programs, DLLs made up 26% of the total preschool enrollment during the 2016–17 academic year (Friedman-Krauss et al., 2020; Office of English Language Acquisition, 2019), an increase of approximately 3% from the 2014–15 academic year (Barnett et al., 2016). Children who are DLLs are defined as those who have at least one parent/guardian (hereinafter referred to as “parent”) who speaks a language other than English at home (Park et al., 2017). The overwhelming majority of DLLs in the U.S. are Latinx1 students whose home language is Spanish (López & Foster, 2021). When DLLs enter kindergarten, an achievement gap may already be established such as being less able to recognize English letters, count to 20, or write their names compared with their English-dominant peers (Ansari & López, 2015; Luo et al., 2021).

Attending preschool may be particularly advantageous for DLLs for several reasons. First, preschool enrollment for these students enhances and promotes the acquisition and

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1 “Latinx” is used in this paper recognizing that it is not a widely used term among the population and is meant to be inclusive of multiple genders and descriptors, including Hispanic, Latino, and Latina (Salinas & Lozano, 2019).
development of English language proficiency (Ansari & López, 2015; Phillips et al., 2017). They also can make significant gains in language and emergent literacy skills in both their native language (L1) and English (L2) when enrolled in formal preschool settings (Peisner-Feinberg et al., 2016). Also, DLLs have been shown greater gains in academic, language, and social-behavioral skills when they attend public preschool programs (Ansari & López, 2015; Gormley, 2008). These gains include acquiring proficiency in English, showing success in reading, and performing in math at rates similar to native English speakers (Halle et al., 2012). Despite these advantages, however, many DLLs do not attend early childhood programs. DLLs nationwide are estimated to make up only one-quarter of the total preschool enrollment (López & Foster, 2021; Office of English Language Acquisition, 2019).

Access to early childhood education may be limited for DLLs for a variety of reasons, including but not limited to, a nationwide scarcity of publicly funded preschool programs in ethnically diverse communities and the prohibitive cost of private or family childhood centers (Ansari & López, 2015; Crosby et al., 2019). DLLs also may not be enrolling in preschool due to barriers related to ethnicity or socioeconomic status, which can overlap with language factors that limit access to preschool (Espinosa et al., 2017; Luo et al., 2021). To this end, increasing access and enrollment of young children in preschool may require family engagement practices targeted to meet specific and multiple community needs for DLL populations.

Increased provisions in the Every Student Succeeds Act (ESSA, 2015) provide evidence that family engagement and education should be included in education efforts. ESSA (2015) emphasizes the evaluation of school family engagement policies, including how meaningful consultation with parents is used and what opportunities, events, and activities are offered to involve family members. ESSA even requires some local education agencies (i.e., those receiving Title I funding) to increase coordination with families to provide high-quality
early learning experiences that lead to ready transitions to kindergarten. In many ways, early childhood education programs can leverage their strategic planning for parent and family engagement by acknowledging this federal focus on family engagement. This leverage may also be rooted in the fact that national associations and well-respected federal programs recognize the inclusion of family engagement as part of the holistic provision of preschool services.

The National Association for the Education of Young Children (NAEYC; n.d.), for example, outlines principles for family engagement that include providing learning activities for the home and in the community, as well as reciprocal communication and information sharing. Head Start programs serve close to a quarter of a million DLLs (Head Start, 2020) and have included family engagement as part of its theory of change since the program was developed (U.S. Department of Health and Human Services, 2018). Moreover, increasing family engagement for DLLs is justified by research supporting the effectiveness of including family engagement in early childhood programs (e.g., Castro, 2014; Espinosa, 2013; Grant & Ray, 2019), as doing so may lessen the achievement gaps between White, English-dominant students, and DLLs and other culturally and linguistically diverse students in the United States (Jeynes, 2005; Wong & Hughes, 2006).

To foster ongoing, meaningful family engagement, effective early childhood programs have utilized two-generation and strengths-based approaches (Epstein et al., 2019). Two-generation approaches are centered on providing both parents and their children with ongoing education and support (Lechuga-Peña & Brisson, 2018). Valuing the strengths of DLLs and their families means, among other things, incorporating families’ preferences, expertise, or background experiences into the curriculum or classroom (Jain et al., 2019). Further, when preschool teachers value the strengths that DLLs and their families possess, the
potential for academic and social success in early childhood programs is higher (Peisner-Feinberg et al., 2016).

The current study presents the results of an approach to early childhood family education (ECFE) built on a two-generation and strengths-based model to support DLLs and their families. The primary aim of the ECFE program implemented as part of this study was to focus on bi/multilingualism of DLL families as an asset that supports both young children and their families to increase the perceived value of preschool programming. The primary aim of the study was to investigate the extent to which the ECFE program influenced the families and young children who participated, including the extent of change related to children’s language, literacy, and pre-academic skills; the home literacy environment; parent perception of their own literacy skills; and parent actions regarding early literacy at home.

Four primary research questions guided the study:

1. How did participation in the ECFE program affect DLLs’ language skills?
2. How did participation in the ECFE program affect DLLs’ pre-academic skills?
3. What effect did participating in the ECFE program have on DLL families’ perceptions of the home literacy environment?
4. Was the ECFE programming socially valid with DLL families?

Two-Generation Approach to ECFE

A joint policy statement from the U.S. Department of Health and Human Services and the U.S. Department of Education (2016) highlighted the importance of building family engagement programs based on a two-generation approach. A two-generation approach comprehensively focuses on both parents and their children (Lechuga-Peña & Brisson, 2018). Traditional educational support programs for early learners often focus on parents and children separately. Families from economically disadvantaged communities are particularly underserved by traditional models (Chase-Lansdale & Brooks-Gunn, 2014; Sama-Miller &
Baumgartner, 2017). Instead, a two-generation approach focuses on simultaneously strengthening the family’s ability to educate and nurture their children’s development while working directly with the child. For example, a Minnesota ECFE program focused on building parenting skills, parent-child relationships, and understanding children’s behavior in families from low-income backgrounds (Mueller, 1998). As a result, 92% of lower-income families improved their awareness and understanding of children and child development. The families also experienced an increase in their confidence as parents and their feelings of social support. Furthermore, child language and social-emotional skills improved as a result of this Minnesota ECFE program.

Two-generation programs address the needs of both children and their caretakers, and components might include workshops focused on parenting skills, job and education training support to parents, mental health services, and health screenings (e.g., Hernandez & Napierala, 2014; Lombardi et al., 2014). As a result, two-generation programs have been shown to engage more parents and promote academic aptitude and achievement among students (Lechuga-Peña & Brisson, 2018; Zalaznick, 2019). More broadly, two-generation programs “are likely to foster trusted, connected communities for parents and to be strong allies that share the hopes, expectations, and efforts to promote children’s healthy development” (Chase-Lansdale & Brooks-Gunn, 2014, p. 27).

Specifically, a two-generation approach in preschool is predicated on the assumption that including family support services in preschool programming can generate greater ongoing academic and economic success, particularly for families from economically disadvantaged communities (Chase-Lansdale & Brooks-Gunn, 2014). Unfortunately, a large percentage of DLLs, particularly Latinx children, come from low-socioeconomic home environments (Luo et al., 2021; Romo et al., 2018); therefore, effective implementation of
two-generation early childhood programs for DLL families may be considered a social justice issue.

**Strengths-Based Approach to Working with Latinx DLLs in ECFE**

In addition to using a two-generation approach, programs can also embrace a strengths-based approach that builds upon families’ existing assets (Epstein et al., 2019). Resulting successes from using a strengths-based approach to ECFE include (a) fostering strong family bonds, (b) including more social support networks, and (c) capitalizing on the strengths of the cultures and languages of families (Jain et al., 2019). Also, specific to DLL families, parents are often more likely to engage in the community and schools when practitioners understand and appreciate their strengths (Gross, 2014; Martínez, 2018; Williams, 2019).

Some DLL families are particularly situated to benefit from strengths-based ECFE programs. For example, many Latinx families share the core pillar of *la familia* (Bustamante & Hindman, 2020). Strong family traditions anchor their child-rearing values, such as eating meals daily with their families (Murphey et al., 2014). In addition, most Latinx children live in two-parent households where the potential for emotional and economic well-being is present. Relatedly, some Latinx children enter kindergarten on equal ground—or even exceeding—their White, English-dominant peers on important social-emotional skills (Murphey et al., 2014).

As with many other DLL families in the U.S., Latinx families perceive education as a means to achieve economic success. Enrollment in early childhood education programs among Latinx families is on the rise. In 2013, early childhood enrollment included 44% of all Latinx three- and four-year-olds nationwide (López et al., 2017). Despite known persistent achievement gaps, the standardized assessment scores of Latinx students are improving (López et al., 2017; Murphey et al., 2014). More Latinx children than ever before are
graduating from high school. In addition, Latinx persons 25 or older with a high school diploma have risen from 53% in 1995 to 72% in 2018 (Krupnick, 2019). Record numbers are also enrolling in institutions of higher education (Santiago et al., 2019). These findings suggest that a strength of many DLL families, particularly Latinx families, is the valuing of education programs and services.

Bi/multilingualism, such as that experienced by DLLs, is also a prominent asset to be considered in a strengths-based approach. Valuing bi/multilingualism in the context of this study implies perceiving students’ bi/multilingualism as an asset and capitalizing upon it (Castro et al., 2017; Kennedy & Romo, 2013). Research supporting bi/multilingualism as a cognitive advantage is well established, demonstrating that bi/multilingual children routinely attain higher levels of academic success in both their first and second languages when they learn in settings that value their bi/multilingualism (e.g., Bialystok, 2001, 2018; Blom et al., 2017). Bi/multilingualism has also been shown to promote children’s early language and literacy development, especially when both parents and educators encourage and foster development in both their home and target languages (Castro et al., 2017; Castro et al., 2020). When properly understood, bi/multilingualism is seen as an advantage and strength, not a deficit (Martínez, 2018).

While bilingual education has been shown to be the most effective form of teaching for bi/multilingual children (Bialystok, 2018; National Academies of Sciences, Engineering, and Medicine, 2017), valuing bi/multilingualism encompasses more than bilingual teaching. For example, sending home books in both DLLs’ native languages and English for parents to read with their children is an activity that demonstrates a keen awareness that promoting proficiency in the native language is valued. Another component includes encouraging DLLs who share the same native language to speak to one another in their native language in educational settings, communicating that their bi/multilingualism is valued. Reading
translanguaged children’s books like *Side by Side/Lado a Lado: The Story of Dolores Huerta and Cesar Chavez/La Historia de Dolores Huerta y César Chávez* (Brown, 2009) is another way to communicate to children their home culture and language are valued. Activities like these and many others are important for all bi/multilingual students, but they can be especially important for students whose first language is Spanish, given the less-prestigious status of the Spanish language in many English-dominant cultures (Veltman, 1990; Winstead & Wang, 2017).

**Method**

**Context**

The current study’s program was designed to promote the pre-academic skills and language skills of young children through a collaborative model with an aim to build family capacity and increase engagement within the local schools and community as a response to community-identified needs. The current study was located in a community which housed a preexisting early literacy community-based committee. The committee was formed with representation between several community agencies, non-profits, corporations, and a university. This committee, along with the first author (i.e., the primary investigator of the current study), created the ECFE program when kidcount and state data (Annie E. Casey Foundation, 2021) noted that many of the young children in the community were not attending state-funded preschool, as well as not meeting local school test score expectations in kindergarten.

Almost half of the population in the small southeastern city in which the study took place identified themselves as Latinx (50.8%), and 49% of the community’s population spoke a language other than English in the home (U.S. Census Bureau, 2019). Additionally, community households held a median income of $30,662 and household members were largely high school graduates (63.3%), with some completing higher education programs.
(12.7%; U.S. Census Bureau, 2019). Of note, 45.2% of kindergarten students arrived at the local school without prior formal schooling from the state preschool program. The program’s target population was Latinx families with preschoolers who were not enrolled in formal preschool programs.

The 8-week ECFE program was implemented in a local city-owned-and-operated community center. The community center was chosen because it was centrally located within walking distance of the target participants’ homes, and it was a place where many residents brought their families on a daily basis. The community center had a large gated playground, a splash pad, a concession stand, a fitness center, a gymnasium, and rooms for the community to provide classes or for rent for parties and events. The facility was free to use for participants and for the current study.

To best reach the target participants, the primary investigator, community leaders, and the local school district designated the city community center as the site of the intervention due to its proximal convenience and familiarity with the participating families. The last ECFE session occurred in a local public school to familiarize the participants with the local schools in case they were unfamiliar or fearful of the local school district. The school district superintendent, school principal, and a few local teachers were in attendance at the public school during the last session.

**Participants**

Participants were recruited through several means, including bilingual flyers and word-of-mouth at (a) the local Women, Infant, and Children (WIC) offices, (b) local school district social workers, and (c) non-profit organizations that work with families in need (e.g., United Way). Participants included both preschool-aged children \( n = 32 \) and their parents or legal guardians \( n = 15 \). Some adult participants brought more than one child participant to the program, thus the greater number of child participants. Participant inclusion criteria
included: (a) children aged three to five who were not enrolled in a formal learning environment at the time of the study, and (b) families spoke either English and/or Spanish as a first language in the home.

Participants signed up for the study by attending an in-person information session. At the session, the parents were provided with information regarding the study and the consent forms. All information and consent forms were presented in both English and Spanish, and if adults indicated they needed assistance in reading the consent forms, bilingual translators assisted them. After receiving consent, the research team randomly selected the intervention and comparison groups. Families were told they would participate in one of two classes being offered: (a) intervention group: ECFE with pre-academic and language skills with an added healthcare component or (b) comparison group: family games and activities without explicit instruction. All families who signed up for the program were accepted. To maintain a focus on family strengths, specifically the core value of being together and supporting each other as a family, siblings were permitted to attend the classes. All children were accompanied by an adult participant. Attendance was taken at each session. Only the data of the families who attended the entire program were included in this study.

**Intervention Group Participants**

When participants signed up and provided consent for the ECFE, participant families were then randomly divided into the intervention and control groups. The intervention group consisted of 15 child participants and seven parent/adult participants. The intervention group was randomly selected from the list of participants. All adult participants in this condition were the children’s biological mothers. The primary language spoken at home by the parents in the intervention group was Spanish (86%). One mother participant reportedly primarily spoke English in the home (14%), yet the mother’s child primarily spoke Spanish and the father spoke Spanish. All child participants reported their primary language was Spanish, so
all 15 children in the intervention group were considered DLLs. The mean age of the child participants in the intervention group was four years old (48 months). Reported highest parent educational attainment was: (a) 8th-grade education (42.86% of participants; \( n = 3 \)), (b) high school diploma (14.29%; \( n = 1 \)), (c) some college (14.29%; \( n = 1 \)), and (d) college (28.56%; \( n = 2 \)). The adult participants reported, on average, that they had 27 children’s books in the home.

**Comparison Group Participants**

The comparison group consisted of 16 child participants and eight parent/adult participants. The adult participants consisted of five biological mothers, two biological fathers, and one biological grandmother. The primary language of the comparison group of adult participants was Spanish (87.5%; \( n = 7 \)). The grandmother participant spoke English, but her grandchild’s primary language was Spanish. All child participants’ primary language was Spanish and they were classified as DLLs. The mean age of the child participants in the comparison group was three years and six months (42 months). Reported highest parent educational attainment was: (a) 8th-grade education (50% of participants; \( n = 4 \)), (b) high school diploma (12.5%; \( n = 1 \)), (c) college (12.5%; \( n = 1 \)), and, (d) graduate school (25%; \( n = 2 \)). The adult participants reported, on average, that they had 24 children’s books in the home.

**Procedures**

Group sessions that provided families with learning opportunities were designed consistent with a two-generation approach to family engagement. Participants were recruited by local agencies using flyers and word of mouth. At the sign-up session, families filled out a bilingual participant consent form and as a pretest measure, as well as the Get Ready to Read! Literacy Checklist for the Home assessment (National Center for Learning Disabilities [NCLD], 2016. The child participants were assessed using the Peabody Picture Vocabulary Test, 4th edition (PPVT-4; Dunn & Dunn, 2007), and the Local School District Pre-
Academic Readiness Scale (see Figure 1). The principal investigator and two additional researchers assessed all child participants. The assessors were accompanied by bilingual volunteers. After assessments were completed, the families were given information about the upcoming study and asked to return the following week. The instructors of both groups included certified pre-kindergarten teachers and bilingual social workers who served as parent coordinators for the local school district, and AmeriCorp volunteers.

During the five weeks following the sign-up session (Weeks 2–6), the families arrived at the community center each Saturday. Saturdays were chosen in order to accommodate participants’ work schedules. The day began with breakfast provided by a local non-profit organization. After breakfast, families attended their respective classes (i.e., intervention groups and comparison groups; sessions described below). On the week of the final class (Week 7), the families met at a public school, with an orientation from the superintendent and a tour from the school principal. Families then broke into their respective classes (i.e., the intervention group and the comparison group) at the public elementary school.

The following week (Week 8), all families returned to the community center for a celebration day. All families completed the posttests (i.e., Get Ready to Read Home Literacy Environment Checklist, PPVT-4, local school district pre-academic readiness scale). The intervention adult participants participated in a focus group to determine the social validity of the programming. The focus group was completed in an English/Spanish bilingual manner (i.e., the question was first asked in English, then asked in Spanish). The focus group was guided by semi-structured interview questions (Appendix A). A local non-profit organization provided lunch on this final day, and another local non-profit provided the families with children’s books. All families received a $50 gift card for participation in the study.
Intervention Sessions: Parent-Child Interactive Class with Pre-Academic, Language, and Healthcare Focus

The intervention group class was an hour and 45 minutes long and simulated a typical preschool day, highly enriched with language, emergent literacy, and early numeracy learning. The class was taught by a local pre-kindergarten teacher and a public school parent coordinator and spoke Spanish. The families spent 45 minutes in the family preschool class, participating in common preschool activities. The preschool class used the Opening the World of Learning Curriculum (OWL; Dickinson et al., 2014) to inform classroom activities, and each week had a different focus book and theme. Activities included an opening circle time with songs and a storytime session, small-group activities (e.g., arts and crafts, playdough, early numeracy, emergent literacy), and a closing circle and song.

The teachers infused parent instruction within the small group activities, such as the importance of playdough on fine motor skills and basic concepts (e.g., colors, shapes), and the importance of reading to children daily regardless of the language or literacy skills of the parent or guardian. The infusion of child development knowledge within the child-centered activities was valued as important to the parent education piece of the intervention, as one strength of Latinx culture is informal support at home (Bustamante & Hindman, 2020; Tinkler, 2002). After these activities, the children were taken outside for games and playground activities while the parents remained in class with a community health educator.

For the first session with the community health educator, the parents created individualized family action plans. The parents included actions such as less television or digital time for the children, more reading at home, less fast food, more healthy meals, and less soda and more water for the children. In the following sessions, the community health educator introduced the families to the non-profit resources in the community, such as the local health center and the WIC program. The parents participated in healthy cooking
demonstrations and had active discussions concerning the differences in resources, foods, and activities in the United States as compared to their home countries. This was also a time for parents to bond with one another and create a small social community with each other. Importantly, all activities were provided in both English and Spanish. Supplemental materials were sent home weekly that included related activities and information.

**Comparison Sessions: Storytime, Games, and Activities**

The comparison group class was also an hour and 45 minutes long and was conducted at the same time as the intervention group session. It was located in the gymnasium and was set up in stations with volunteers running each station. This class was led by a volunteer stationed in the community and bilingual volunteers from the local United Way. In this class, the children and their families participated in stations, such as storytime, games, science experiments, and other activities (e.g., puzzles, crafts). There was not a curriculum guiding the activities provided to these children and their families. All storybooks, activities, and games were provided in English and Spanish. Arts and crafts activities, books, and family games were sent home weekly.

**Outcome Measures**

**Child Outcome Measures**

The PPVT-4 (Dunn & Dunn, 2007) is a norm-referenced instrument for measuring the receptive vocabulary of children, ages 2 years 6 months up to the age of 90 and above. The PPVT-4 contains 228 test items, each consisting of four-color pictures as response options on a page. For each item, the examiner says a target word, and the examinee responds by selecting the picture that best illustrates that word’s meaning. Form A was used in the current study. The PPVT-4 manual reported internal consistency using Cronbach’s coefficient α for Form A that ranged from .93 to .97 for a preschool-aged group (Dunn & Dunn, 2007).
A local school district academic readiness scale was created by the local school district of the current study. The readiness scale was validated by the pre-k teachers and the PI of the current study. The academic readiness scale measured basic beginning kindergarten skills such as basic colors; recognition of letters, numbers, shapes, and colors; early math concepts; and fine and gross motor skills. This measure is used by the local school district of the current study to assess all preschool and kindergarten students at school entry. The assessment was written in English but verbally translated into Spanish for the participants. For sample questions, see Figure 1.
**Figure 1**

*Sample of the Local School District Pre-Academic Readiness Scale*

<table>
<thead>
<tr>
<th>Interview</th>
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</thead>
<tbody>
<tr>
<td>1. The child can tell his or her name</td>
<td></td>
</tr>
<tr>
<td>a. 0 points: no response</td>
<td>8. The child can recognize numerals: 1, 2, 3, 4, 5, 6, 7, 8, 9, 0</td>
</tr>
<tr>
<td>b. 1 point: First name</td>
<td>a. 0 points: no numerals</td>
</tr>
<tr>
<td>c. 2 points: First and last name</td>
<td>b. 1 point: 1-5 numerals</td>
</tr>
<tr>
<td>d. 3 points: Entire name</td>
<td>c. 2 points: up to 6-8 numerals</td>
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<tr>
<th>Work Samples</th>
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<tbody>
<tr>
<td>2. The student can write his or her name</td>
<td>9. The child can recognize the letters out of sequence (1 point per letter)</td>
</tr>
<tr>
<td>a. 0 points: no letters</td>
<td>(materials: 10 checkers of the same color)</td>
</tr>
<tr>
<td>b. 1 point: some letters accurately</td>
<td>10. With one group of 2 checkers and one group of 8 checkers say: “Which of these two groups has more checkers in it?”</td>
</tr>
<tr>
<td>c. 2 points: first name legibly</td>
<td>a. 0 points: incorrect response</td>
</tr>
<tr>
<td>d. 3 points: first and last name legibly</td>
<td>b. 1 point: correct response</td>
</tr>
</tbody>
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<tr>
<th>3. The child can copy a square, circle, and triangle</th>
<th>11. With one group of 6 checkers and one group of 4 checkers say: “Which of these two groups has fewer checkers in it?”</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 0 points: no shapes</td>
<td>a. 0 points: incorrect response</td>
</tr>
<tr>
<td>b. 1 point: one shape</td>
<td>b. 1 point: correct response</td>
</tr>
<tr>
<td>c. 2 points: two shapes</td>
<td>12. With two groups of 5 checkers, say: “Which of these two groups has more checkers in it?”</td>
</tr>
<tr>
<td>d. 3 points: three shapes</td>
<td>a. 0 points: incorrect response</td>
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<tr>
<th>4. The child can count</th>
<th>b. 1 point: correct response</th>
</tr>
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<tbody>
<tr>
<td>a. 1 point: 0-5 or 1-5</td>
<td>13. The child can cut a pattern</td>
</tr>
<tr>
<td>b. 2 points: 0-14 or 1-14</td>
<td>a. 0 points: does not cut the paper</td>
</tr>
<tr>
<td>c. 3 points: over 15</td>
<td>b. 1 point: cuts, but barely on the pattern</td>
</tr>
</tbody>
</table>

| 5. The child can count 5 objects | c. 2 points: cuts, and on pattern 50% accurately |
| --- | d. 3 points: cuts, and on pattern 75% or more |
| a. 0 points: no | 14. Fine Motor |
| b. 1 point: yes |  |

<table>
<thead>
<tr>
<th>Visual Recognition</th>
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<tbody>
<tr>
<td>6. The child can identify basic colors: Blue, Green, Red, Brown, Yellow, Purple, Orange, Black</td>
<td>Total Possible Points: 54</td>
</tr>
<tr>
<td>a. 1 point: 1-4 colors</td>
<td></td>
</tr>
<tr>
<td>b. 2 points: up to 8 colors</td>
<td></td>
</tr>
<tr>
<td>c. 3 points: 9 or more colors</td>
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<tr>
<th>7. The child can recognize shapes: Circle, Square, Rectangle, Triangle</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>a. 0 points: no shapes</td>
<td></td>
</tr>
<tr>
<td>b. 1 point: 1 shape</td>
<td></td>
</tr>
<tr>
<td>c. 2 points: 2-3 shapes</td>
<td></td>
</tr>
<tr>
<td>d. 3 points: 4 shapes</td>
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**Parent Outcome Measures**

The Get Ready to Read! Literacy Checklist for the Home (NCLD, 2016) is a parent/guardian self-report survey that measures the home literacy environment. The checklist includes 37 true/false questions. The questions are based on the physical home literacy environment, parent actions regarding early literacy at home, and parent perception of their own literacy skills. This survey is located free and online, translated into English and Spanish (getreadytoread.org).

To examine the social validity of the ECFE program, specifically in the ways it was appropriate and/or responsive to DLL family needs, a one-hour focus group was conducted on the last day of the study. The focus group was facilitated by bilingual research assistants, and only the intervention group adults participants took part in the focus group. The focus group was guided by semistructured interview questions and was held in a conference room in the intervention-site building. The focus group was audio-recorded and transcribed. The questions—minus elaborations—that guided the focus group discussion are included in Appendix A.

**Research Design and Data Analysis**

A randomized pretest-posttest group design was employed to respond to research questions one through three. For research questions 1 through 3, a one-way analysis of covariance of dependent variables (ANCOVA) was used to determine the differences between posttest scores for the comparison and intervention groups on the PPVT-4, the Academic Readiness Scale, and the Get Ready to Read Literacy Checklist. ANCOVAs were used to control for pretest scores due to the variability of the children’s ages and ability levels. SPSS version 27 for Windows was used as a statistical tool for the analyses. For all ANCOVAs, the pretest scores were held constant as the covariant.
For all analyses, a test of homogeneity of regression was performed. A nonsignificant result of this analysis assures that the covariate (i.e., pretest scores) and the dependent variable (i.e., posttest scores) have similar slopes (i.e., no interaction effect). All analyses are reported with a nonsignificant test of homogeneity of regression. Effect sizes (Cohen’s $d$ index) were calculated for each outcome variable (Cohen, 2013). Effects for each targeted early numeracy task were determined as small (.10), medium (.25), or large (.40; Cohen, 2013). Furthermore, Levene’s test of equality of variance was analyzed on each ANCOVA to meet the assumption that the variances between the samples were equal between the groups. Each analysis met this assumption as well. All pre- and posttests were scored by research assistants unaware of the group assignments.

For research question four, a focus group was conducted to determine the social validity of the intervention (Carter & Wheeler, 2019). Focus group data were open coded and analyzed using a constant comparative approach (Glaser & Strauss, 1967). Initially, we read the focus group transcription twice and engaged in analytic memoing of thematic patterns (Saldaña, 2021). To reveal themes in the discussion, codes were used to understand what was significant. Findings were collated in an electronic document according to identified and agreed-upon themes.

### Results

The current study investigated an ECFE program for DLL children and their families. An ANCOVA examined the differences in the mean values of posttest measures (i.e., PPVT-4, Academic Readiness Scale, Get Ready to Read! Literacy Checklist for the Home) after taking the pretest measures into account. Overall, the intervention group experienced significant gains results on both the PPVT-4 and the Academic Readiness Scale. While the Get Ready to Read! Literacy Checklist for the Home did not show significant results for
either group, both groups experienced mean gains in scores with the intervention group showing the greatest gains (Table 1).

Table 1

*One-Way Analysis of Covariance of Dependent Variables between Groups*

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peabody Picture Vocabulary Test 4th Ed. (PPVT-4)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest (covariate)</td>
<td>1</td>
<td>5950.72</td>
<td>5950.72</td>
<td>171.87</td>
<td>.058</td>
<td>.860</td>
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<tr>
<td>Posttest</td>
<td>1</td>
<td>289.92</td>
<td>289.92</td>
<td>8.374</td>
<td>.007**</td>
<td>.230</td>
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<tr>
<td>Error</td>
<td>28</td>
<td>969.42</td>
<td>34.622</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>278871</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic Readiness Scale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest (covariate)</td>
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<td>3912.09</td>
<td>3912.09</td>
<td>195.58</td>
<td>.000</td>
<td>.875</td>
</tr>
<tr>
<td>Posttest</td>
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<td>321.90</td>
<td>321.90</td>
<td>16.09</td>
<td>.000**</td>
<td>.365</td>
</tr>
<tr>
<td>Error</td>
<td>28</td>
<td>560.06</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>18821</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Get Ready to Read! Literacy Checklist</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest (covariate)</td>
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<td>32.90</td>
<td>32.90</td>
<td>2.58</td>
<td>.134</td>
<td>.177</td>
</tr>
<tr>
<td>Posttest</td>
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<td>6.842</td>
<td>6.842</td>
<td>.537</td>
<td>.478</td>
<td>.043</td>
</tr>
<tr>
<td>Error</td>
<td>12</td>
<td>152.807</td>
<td>12.734</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>16324</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. **p < .01*

**Language Skills**

Research question one investigated the effects of the ECFE program on children’s language skills as determined by the PPVT-4. The PPVT-4 measures an individual’s oral vocabulary and receptive language skills by the examiner showing students four pictures and providing an oral vocabulary term. The students are requested to point to the correct picture.
depicting the term. The PPVT-4 provides raw scores and standard scores. Standard scores were analyzed for the purposes of the current study.

The intervention group experienced higher posttest mean scores ($M = 95.37, SD = 17.87$) than the comparison condition ($M = 91.8, SD = 12.32$). Holding the PPVT-4 pretest scores constant, there was a significant difference in the standard score of the intervention group with a small effect size, $F(1,28) = 8.37, p = .007, \eta^2 = .230$ (Cohen, 2013). Thus, based on the results of the PPVT-4 scores, the children in the intervention group experienced significantly higher oral vocabulary knowledge than the comparison group.

**Academic Readiness Skills**

Research question two investigated the effects of the ECFE program on children’s academic readiness skills, as measured by a locally created readiness scale. The readiness scale measured basic beginning-kindergarten skills such as basic colors; recognition of letters, numbers, shapes, and colors; early math concepts; and fine and gross motor skills. This scale produced total raw scores. The intervention group had a higher mean posttest score ($M = 23.80, SD = 12.14$) than did the comparison group ($M = 19.12, SD = 12.66$). Holding the pretest scores constant, there was a significant difference in posttest means on the pre-academic scale with a small effect size, $F(1,28) = 16.09, p < .001, \eta^2 = .365$ (Cohen, 2013). Therefore, the children in the intervention group experienced significant gains in pre-readiness skills, as compared to children in the comparison group.

**Get Ready to Read! Home Literacy Environment**

Research question three examined the effects of the ECFE program on the perceptions of the home literacy environment of the participating families. This self-report measure was completed by the adult participants and is based on the physical home literacy environment, parent actions regarding early literacy at home, and parent perception of their own literacy skills. The checklist produced total raw scores. While there was a greater posttest mean score
by the intervention group ($M = 33, SD = 2.77$) than the comparison group ($M = 32.57, SD = 4.68$), there was not a significant difference after holding the pretest scores constant, $F(1,12) = 0.537, p = .478, \eta = .043$.

Social Validity

The fourth research question evaluated the social validity of the intervention (Carter & Wheeler, 2019) to determine if the adult participants believed the programming was both appropriate and beneficial and the way(s) in which the ECFE program was appropriate and effective for DLL families. To answer this research question, families were interviewed in a focus group after the completion of the intervention. The transcription of the focus group interview was analyzed using a constant comparative approach (Glaser & Strauss, 1967) and coded for core insights, common phrases and beliefs, and consistent themes about program components and outcomes (Saldaña, 2021).

Findings suggested the social validity of the ECFE program was high and that the program was considered both beneficial and appropriate. Four primary themes and three secondary themes were identified. A brief description of the identified themes and the number of times each theme was coded within the focus group transcription in descending order is included in Table 2 below. For brevity, only the three most prominent themes will be elucidated in detail below.
Table 2

**Identified Themes from Focus Group Discussion**

<table>
<thead>
<tr>
<th>Identified Theme</th>
<th>Times Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Themes</strong></td>
<td></td>
</tr>
<tr>
<td>Promoted learning at home</td>
<td>11</td>
</tr>
<tr>
<td>Improved children’s language and literacy skills</td>
<td>9</td>
</tr>
<tr>
<td>Benefitted parents, siblings, and other family members</td>
<td>6</td>
</tr>
<tr>
<td>Spurred interest in additional ECFE programming</td>
<td>5</td>
</tr>
<tr>
<td><strong>Secondary Themes</strong></td>
<td></td>
</tr>
<tr>
<td>Enhanced children’s social and emotional development</td>
<td>3</td>
</tr>
<tr>
<td>Communicated sincere appreciation for being able to participate</td>
<td>3</td>
</tr>
<tr>
<td>Parents gained knowledge concerning child development</td>
<td>2</td>
</tr>
</tbody>
</table>

**Promoted Learning at Home**

Mentioned 11 times and thus the most prominent theme identified, parents perceived that the program promoted learning in a variety of forms at home. Parents commented on how their children were now picking up more books and showing more interest in books. One parent remarked, “My son is excited for bedtime because he wants a story read to him.” Another mother reported how she had made it a priority to find more time to spend engaged in quality activities with her child: “Instead of watching a soap opera or a show, I now find time to read to my child.” Parents also reflected on how they now recognized learning starts at a very young age and comprised more than simply reading to their children but also included doing a variety of everyday activities together with their children, such as completing chores, cooking, working on art projects, etc. One mother celebrated how she had worked with her children to develop fine motor skills with hands-on activities such as designing a piñata. Overall, participants noted how their children were more enthusiastic
about spending time with them and even requested more opportunities for spending quality
learning time together.

**Improved Language and Literacy Skills**

Another prominent theme mentioned nine times during the focus group discussion
was that parents thought their children’s language and literacy skills improved as a result of
participation in the ECFE program. Focus group participants drew attention to their
children’s enhanced decoding, fluency, vocabulary, comprehension, and oral communication
skills. Even motivation to read was among the areas of improvement mentioned. For
example, a mother noted how she regularly heard her child “sounding out words,” while
another recalled, “The rhyming songs help.” Parents discussed how her children’s vocabulary
had increased with statements like “The program helped them use the right words” and “The
vocabulary increases—developed by words, phrases, then sentences.” Parents also said their
children’s comprehension and oral communication skills improved as parents spent more
time engaged in read-alouds and book conversations with their children. One mother even
explained how she asked her son to expand on what he recalled from the book they read
together: “But where did he [the character] eat?”

**Benefitted Family Members**

Coded six times, the third most prominent theme was that parents reported how the
program benefited all family members in a variety of ways. Most significantly, parents
mentioned how they benefited from the program as much as their children. This theme was
evident throughout the focus group discussion as some parents were able to use the
metalanguage of literacy and learning, such as “vocabulary,” “phrases,” “sentences,” etc., as
reported for the theme above. One parent put it simply, “I even learned from the program.”
Another struggled to explain how she and her children benefited from the program except to
conclude: “It [the program] is good for me and my children.” One mother commented more
specifically, comparing the ECFE program to her older children’s schooling experiences, noting how being part of the learning meant that she was able to “see what [my child] is learning.”

Another mother extended the benefits to her older children, recalling how she had noticed a difference between her 8-year-old child and her younger child in the ECFE program: “I didn’t talk with my 8-year-old enough, but I noticed that talking with my younger child has helped.” Another parent described how her preschool-aged child models literacy best practices for her younger sibling: “This [program] helps my whole family. What my 3-year-old is learning here will help my 1-year-old daughter eventually.” As these examples and selected themes demonstrate, the social validity of participation in the ECFE program was high and included widespread benefits and positive outcomes for those who participated in the program directly and those tangentially involved.

**Discussion**

Access to quality ECFE programs for DLLs and their families is a critical issue. Consistent with previous research (Epstein et al., 2019; Greenfader & Miller, 2014), this study suggests policymakers, community members, educators, and other stakeholders might ensure quality ECFE programs when they are built on two-generation and strengths-based approaches. Practitioners, schools, and communities should also strive to include families by creating and maintaining ECFE programs that value and promote the cultural and linguistic diversity of the communities they serve (Jain et al., 2019).

Latinx families often perceive their role as parents as separate and distinct from the role of their children’s teachers (Bustamante & Hindman, 2020). Traditional parents believe it is their responsibility to teach their children how to behave appropriately, to respect adults and other authority figures, and to follow directives. In contrast, they believe schools are solely responsible for teaching literacy, numeracy, and other academics (Bustamante &
Hindman, 2020; Gross, 2014). However, when Latinx parents “are approached with respect for what they are doing, they are very receptive to taking on new roles” (as cited in Gross, 2014, para. 9). This study provides an example of how culturally and linguistically diverse families, specifically those whose children are DLLs, can be encouraged to become engaged in an active kindergarten preparatory role through participating in training sessions related to children’s literacy, language, and pre-academic skills.

The researchers in this study utilized a formal vocabulary test (PPVT-4) to measure growth in participants’ language and literacy skills and a pre-academic scale to measure basic kindergarten readiness skills. In congruence with Peisner-Feinberg et al.’s (2016) findings, participants’ pre-academic improvement significantly. This significant growth in pre-academic skills further corroborates that DLLs are particularly well-positioned to benefit from preschool programs founded on strengths-based, two-generation approaches where DLL students and their families feel valued and are encouraged to be active participants in their children’s learning (Castro et al., 2017; Jain et al., 2019; López & Foster, 2021; Williams, 2019; Zalaznick, 2019). For pre-academic skills, the children’s area of most growth included writing their name, copying shapes, counting objects, color recognition, letter recognition, using more/less, and cutting skills.

There was not a significant effect size on the Get Ready to Read! Literacy Checklist for the Home. However, the intervention group did experience greater gains. Interestingly, for the intervention group, the marked improvements were that the adult participants had an increased self-perceived ability to help their child rhyme. Additionally, the adult participants’ perception of their reading skills increased. The item measuring the adult participants’ perception of their reading skills stated: “I am a good reader” (True/False) and was reported overwhelmingly “true” by the participants. Importantly, the intervention increased the parents’ perceived skills of reading, while not actually targeting parents’ reading skills. This
increase in perception may have been due to embedded parent education instruction by the
teachers. For example, during the storytime, the teachers encouraged the parents to read to
their children in their home language. Additionally, parents were encouraged that if they were
not sure of how to read the exact words, to talk about the pictures of the book with their
children.

Taken together, these findings are consistent with the impact of two-generation
approaches that strengthen families’ perceptions of their ability to support their children’s
learning (Epstein et al., 2019; Lechuga-Peña & Brisson, 2018; Mueller, 1998). One question
on the Get Ready to Read! The Literacy Checklist for the Home asked about the number of
books in the home. There was a marked improvement overall in the number of children’s
books in the home from pre- to post-intervention. This augmentation of home libraries is
likely due to the families receiving books and learning materials throughout the intervention
to build their home library and literacy environment. However, this may also speak to the
value of two-generation and strengths-based early education programs to promote home
literacy practices among DLLs and their families (Epstein et al., 2019; Grant & Ray, 2019;
Luo et al., 2021). When parents of DLLs feel valued as fellow participants and contributors to
their children’s educational success, they may be more empowered to read with their children
and spend more time engaging in other home literacy practices (Luo et al., 2021).

The final research question regarded the social validity of the intervention with the
DLL families. Determining this required asking families directly their perceived value and
use in their own homes and community. The families noted in the focus group interview they
did, in fact, perceive the program as beneficial. Some were concerned initially about the time
commitment, but in the end, the families reported positive outcomes of the intervention
program. One family suggested that the program continue and be offered more frequently so
all DLL families in the community can benefit. A common theme was the education they
gained would benefit all members of their family. These findings suggest, consistent with the strength of Latinx families valuing education (Bustamante & Hindman, 2020; Murphey et al., 2014), the participants considered the knowledge and skills they received as a result of the intervention important, thus further demonstrating their commitment to learning.

**Implications**

Two important policy implications align with the current study and its findings. The state involved in the current study funds full-day universal preschool for four-year-old children across the state. While the program places a clear emphasis on the importance of families, the requirements to involve families are limited or lacking comprehensive inclusion and engagement (e.g., providing a family handbook and parent orientation). Many children who are DLLs may not attend formal preschool and instead stay at home with their family through their first five years (Castro et al., 2020); therefore, one primary implication highlighted by this study is the need for increased state-allocated resources for helping parents build the skills to be their child’s first teacher (Choi et al., 2021). In the current study, the community saw a need for ECFE. The community founded a birth to five committee and they leveraged local agencies to support family education, particularly with a focus on DLLs and their families.

Second, while the current federal education law (ESSA) includes building school capacity within the district which includes meaningful consultation with employers, business leaders, organizations, etc., in K–12 settings, similar early childhood/preschool regulations are much harder to identify. A similar standard in preschool programs for meaningful community involvement for school improvement would emphasize the importance of effective and meaningful engagement of parents and family members in education. Also, ESSA’s Title I update suggests schools establish a parent advisory board composed of representative groups of parents/family members that adequately represents the needs of the
population served for purposes of developing appropriate parent and family engagement policy. This is a particularly important mechanism for change in the early childhood community and even more important for DLL students and their communities (Espinosa et al., 2017; Luo et al., 2021; Zalaznick, 2019).

**Limitations**

There are some limitations to this study that should be mentioned. The researchers believe some of the considerations made on behalf of the families may have negatively affected the data and the power of the study. For example, the intervention and comparison group had differences in the family demographics. These differences could impact the intervention effect. Additionally, many of the families knew each other from the local community. In the first week, two families asked to switch groups to be with their friends. Although this change of groups slightly shifted the numbers of the groups and the families who shifted had their data removed from the database, the researchers determined before the study began the families’ comfort, experience, needs, and desires would be kept as the first priority. Researchers also believed allowing the participants to change groups at the beginning of the study was the most responsive to family needs and would encourage families to continue participation. Finally, both groups had a small sample size. While the study was open to all families, overall this study and future research would benefit from higher sample sizes.

**Conclusion**

Decades ago, a poignant argument was made by Kagan and Garcia (1991) regarding preschoolers acquiring the English language, specifically that limited policies were being implemented because of deficit beliefs about language development. Deficit discourse continues to be prevalent among teachers about the language skills and talents of Latinx language learners (e.g., Ogletree & Griffin, 2020). Kagan and Garcia also noted the
complicated political nature of the topic, a lack of demographic imperative, and the difficulty of generating research in this area. For this study, we add that in addition to concerned policies that address DLLs, a lack of related support and models of ECFE for this population further exacerbates issues of access and impact.

Despite earnest advocacy for family engagement, there is little evidence for quality models and approaches toward implementing these practices in the field of early childhood, and the core components of family engagement are often ambiguous, especially for DLLs and other culturally and linguistically diverse children and their families (Jain et al., 2019; Luo et al., 2021). This study offers evidence that a two-generation, strengths-based approach to family engagement is effective in changing the language and pre-academic skills of children and improving family perceptions of program participation and their intervention skills.
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Appendix A

Focus Group Interview Questions

1. What have you learned about helping your child prepare for school?

2. How comfortable do you feel preparing your child for school? Do you feel more comfortable now than before classes started?

3. Have you tried any of the activities you learned from your classes at home? Which activities?

4. Have you changed the way you read or talk to your children? How?

5. Have you changed anything in your house to make books, writing, or art more available to your children? What have you changed?

6. What has been most meaningful about the classes and why?

7. What made you come to the classes? Would you come back to classes again, even without an incentive?