Review Article

Early Language Interventions for Young Dual Language Learners: A Scoping Review

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Purpose: The aim of this article was to provide a systematic scoping review of the literature describing early language interventions for young children who are dual language learners, including children with early language deficits.
Method: The search conducted yielded a total of 27 sources describing 70 language strategies or procedures for dual language learners from 9 months of age to 3 years 11 months of age. The majority of sources were recommended practices (*n* = 12) followed by descriptive

studies (*n* = 7). There were a total of 6 intervention studies and 5 research review studies.
Results: Strategies were collated and categorized into 5 major types: general approach, caregiver based, interaction based, language strategies, and early literacy strategies.
Conclusion: A preliminary evidence map was created to chart each strategy and sources that included the strategy and to indicate the highest strength of recommendation observed across sources. A discussion of compelling and promising strategies is presented.

In the United States, it is projected that, by 2030, the proportion of children enrolled in formal education who are dual language learners (DLLs) will rise to 40% (Crawford, 2013). A number of different definitions have been used for DLLs. For the purpose of this study, the term *DLL* will be used to describe children who come from homes where a language other than English is spoken and who are exposed to or will be exposed to English when enrolled in intervention or educational programming (for a review, see U.S. Department of Health and Human Services, 2016). Young DLLs are a very diverse group by many measures and may have very diverse home language and English language exposure and usage patterns (Hammer et al., 2014). Although there are less data on young children, census data showed that 27% of children under the age of 6 years were DLLs, and data from Head Start showed that 29% of children enrolled were DLLs (Administration for Children and Families, 2013; Capps, Fix, Ost, Reardon-Anderson, & Passel,

2004). The increasing number of DLLs enrolled in early intervention and educational programs means interventionists need to learn how to best meet the unique needs and profiles of these young children and families (Levin & Shohamy, 2012). This is especially true with Spanish-speaking children. In the United States, 71% of school-age DLLs come from homes where Spanish is spoken and young Spanish-speaking children represent a large segment of the population (Center for Publication Education, 2012; U.S. Census Bureau, 2013). There is limited research on early development in DLLs and even less evidence for early intervention strategies to support DLLs; despite this shortcoming, it is clear from available research that participation in early education programs is beneficial for DLLs (Castro, 2014).

Early Intervention

This study will describe early intervention services for DLLs aged 3 years and younger, including DLLs who are at risk and those with early language deficits. We chose this age because DLLs in this age range may qualify for Part C, Early Head Start or other services, in which caregivers are the primary intervention agents. Early intervention services should be based on a family-centered plan that takes into account family concerns, resources, and priorities. This includes

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identifying the supports and services that are appropriate for enhancing the family's ability to meet the developmental needs of their child. The family is a primary agent in the creation and implementation of an individualized family service plan, an individualized plan for families of children under the age of 3 years with a disability. Families are also highly involved in services for preschool-age children with disabilities. Early intervention services for these children should be based upon the family's priorities and preferences and also be grounded in research-based interventions.

Early intervention services are to be provided in the child's natural environments, usually the home for young children, as well as classroom or center-based services for children enrolled in such programs. Intervention services delivered in natural environments provide the optimal context for realistic learning experiences and social interactions for the child while promoting successful communication with the caregiver (American Speech-Language-Hearing Association [ASHA], 2008). It can be said that a major method for improving a young child's communication is through enhancing caregiver–child interactions, which can be achieved by developing caregiver-implemented interventions (Woods, Wilcox, Friedman, & Murch, 2011). Family routines often involve either dyadic or group interactions with the child, and it has been shown that these routines can contribute to the child's communication, social, and preacademic skills (Spagnola & Fiese, 2007). According to ASHA, early intervention services should be family centered and acknowledge the family's concerns and the child's strengths, needs, and learning styles (ASHA, 2008). Family-centered approaches involve providing more opportunities for the families to participate in the planning, implementing, interpreting, and decision making in the services provided to their child (ASHA, 2008). Overall, the role of any early interventionist is to support the caregiver in becoming an effective and confident intervention agent and to promote promote developmental gains in their child (Woods et al., 2011).

Interventions for Early Language Deficits

A number of intervention programs developed for young children with early language deficits and their families have been developed over the years. Some of the most common programs are presented in Table 1. These include Responsivity Education/Prelinguistic Milieu Training, It Takes Two to Talk—The Hanen Program for Parents, Enhanced Milieu Teaching, Focused Stimulation, and Conversational Recast Intervention. These programs were designed for use with toddler age and sometimes older children, and all of these interventions are meant to be implemented by the child's care providers in natural contexts. Specific ingredients included in these interventions are listed in Table 1. These programs were developed upon a European American cultural framework; as a result, these interventions may be culturally inconsistent with the interaction styles and teaching behaviors of families with young DLLs. Early intervention language programs largely based upon European-American

frameworks have been recognized to have problems with cross-cultural validity and cultural relevance (Wing et al., 2007). For early intervention services to be effective, it is important to consider the caregiver's interaction style and developmental priorities in order to be culturally appropriate and responsive.

Cultural Considerations in Early Intervention Programming

Caregiver interaction styles and behaviors are influenced by cultural background and experiences. Two caregiver interaction styles have been described: an interdependent/collectivist style and an independent style (Greenfield, Keller, Fuligni, & Maynard, 2003). The interdependent/collectivist style emphasizes the family and group, whereas the independent style emphasizes independence and individual success. Considering interaction style is important because a caregiver's developmental goals for his or her child will be influenced by his or her interaction style (Vigil & Hwa-Froelich, 2004). A caregiver's interactional style also influences teaching and learning behaviors, will shape how a child approaches a task, and will determine a child's developmental pathway (Greenfield et al., 2003). Ultimately, interaction style has a major influence on how the caregiver interacts with his or her child, as well as the family's daily routines and practices in natural environments. For example, Latino and Spanish-speaking caregivers have been described as having a more interdependent/collectivistic interaction style (Guiberson & Ferris, 2018; Kayser & Guiberson, 2008). Typical behaviors often seen in Latino caregivers with interdependent styles include directing their child's attention, responding only to complete communication, and teaching their children to complete new skills correctly (Garcia Coll, 1990; Greenfield et al., 2006; Guiberson & Ferris, 2018; Kayser & Guiberson, 2008; Vigil & Hwa-Froelich, 2004).

Early intervention approaches are frequently based upon European-American interaction style frameworks, with little consideration of cultural diversity and its impact on caregiver and/or child behaviors. The effectiveness of these interventions has not been examined with culturally and linguistically diverse populations or DLLs. Commonly suggested strategies include following the child's lead, dyadic (i.e., caregiver–child) interactions, and balanced (i.e., equal) turn-taking (Guiberson & Ferris, 2018; van Kleeck, 1994; Wing et al., 2007). These strategies, which are based on an independent interaction style, reflect the values and behaviors typically held by the cultural majority and may be unfamiliar, foreign, and unnatural for caregivers with young DLLs. In order for early language intervention strategies to be effective for young DLLs, they must be appropriate for the cultural context.

On average, DLL children entering kindergarten are academically behind in language and literacy compared to their monolingual peers (U.S. Department of Health and Human Services, 2016). DLLs often present with low levels of academic achievement, possibly as a result of poor or

Table 1. Interventions for early language deficits.

Intervention	RE/PMT	IT2TT	EMT	Focused stimulation	CRI
Age and/or developmental level	9–15 months	Toddlers and preschool-age children	Toddlers and preschool-age children	Toddlers through early school-age children	Toddlers and preschool-age children
Procedures and strategies	1. Follow the child's lead 2. Arrange environment to encourage communication 3. Wait for child response 4. Model child's nonverbal targets 5. Request child to imitate adult 6. Recast child's incorrect productions	1. Follow the child's lead 2. Arrange environment to encourage communication 3. Wait for child response 4. Model child's linguistic targets 5. Recast child's incorrect productions	1. Follow the child's lead 2. Arrange environment to encourage communication of linguistic targets 3. Wait for child response 4. Model child's nonverbal targets 5. Request child to imitate adult 6. Recast child's incorrect productions	1. Follow the child's lead 2. Arrange environment to encourage communication 3. Wait for child response 4. Frequently model child's linguistic targets 5. Recast child's incorrect production of linguistic target 6. Do not request child to imitate adult	1. Follow the child's lead 2. Arrange environment to encourage communication 3. Wait for response 4. Recast child's incorrect production

Note. RE/PMT = Responsivity Education/Prelinguistic Milieu Teaching; IT2TT = It Takes Two to Talk—The Hanen Program for Parents; EMT = Enhanced Milieu Teaching; CRI = Conversational Recast Intervention.

inadequate educational programming and other external factors that influence development (U.S. Department of Health and Human Services, 2016). This achievement gap may lead to DLL school dropout rates being almost twice that of native English speakers (Espinosa, 2013; Guiberson, 2009). The achievement gap may be due to (a) the lack of evidence-based early language intervention strategies that have been shown to be effective with young DLLs and (b) a failure to consider the child's culture and language as important assets for intervention (U.S. Department of Health and Human Services, 2016). Given this information, there is a critical need for a better understanding of early language strategies that may be effective for young DLLs, including those with early language deficits.

Method

The current study applied a systematic scoping review methodology. This type of review is iterative in nature. Potential sources are collected, examined for their relevance to the research question, and mapped according to how they relate to the key concepts underpinning the research question. The purpose of a systematic scoping review is to examine the depth of research on a given topic; summarize research findings for policy makers, practitioners, or consumers; identify gaps in the research; and establish areas for future research. These reviews are flexible and allow for the specific parameters and strategies to emerge during the scoping process as opposed to being identified prospectively, as typically occurs in static systematic reviews. A systematic scoping review can also provide an initial indicator of strength of recommendations and a preliminary map of strategies that may be of potential benefit. A systematic scoping review includes five phases: (a) identifying the research question; (b) identifying relevant studies; (c) selecting studies; (d) charting the data; and (e) collating, summarizing, and reporting the results (Arksey & O'Malley, 2005). These phases were applied in an interactive manner in the current study in the following order: electronic research databases such as PsycINFO, ERIC, and CINAHL; ASHAWire; National Center for Evidence-Based Practice in Communication Disorders evidence maps; and hand search of promising and known sources.

Phase 1: Identifying the Research Question

We posed the following research question: What is the existing research that describes early language interventions for DLLs aged 3 years and younger, and what is the strength of strategy recommendation that can be drawn from this research?

Phase 2: Identifying Relevant Studies

As scoping reviews involve a process that is flexible and iterative, we allowed the specific parameters and strategies to emerge during the scoping process as opposed to being identified prospectively. As a first step, a systematic

search of electronic databases including PsycINFO, ERIC, and CINAHL was conducted by the authors, with 10% of the search terms replicated for reliability purposes (100% reliability was obtained for this step). An initial search was conducted using specific early language intervention terms (e.g., Responsivity Education/Prelinguistic Milieu Training, It Takes Two to Talk—The Hanen Program for Parents, Enhanced Milieu Teaching, Focused Stimulation, Conversational Recast Intervention), terms associated with each early language intervention (e.g., "prelinguistic communication," "milieu teaching," "language modeling," "recasting"), and key terms related to DLL populations (e.g., "Spanish," "Spanish speaker," "bilingual," "Hispanic American"). Additionally, terms relating to early language intervention, strategies used during intervention, and DLL populations (e.g., "language intervention + verbal modeling + Spanish," "language intervention + child-focused + bilingualism") were used in a secondary search in order to generalize the search. For a complete list of the search terms used, please see Appendix A. Also note in Appendix A that the thesaurus tool within database search engines was used, which resulted in search engine–specific or preferred terms being used in the search. PsycINFO produced 5,871 potential sources, ERIC produced 3,315 potential sources, and CINAHL produced 6,209 potential sources. Note that, for a source to be included, the sample needed to include Spanish-speaking DLLs, but in some instances, an individual source may have included DLLs from multiple linguistic backgrounds.

Next, we searched the ASHAWire search engine. ASHAWire is a search tool that provides a fully interconnected network of publications from ASHA. The first author and two graduate assistants conducted this search. The following source types were included in the search: journal articles, the Clinical Research Education repository, and *Perspectives,* the peer-reviewed technical publication of the 19 ASHA Special Interest Groups. For this step, the search terms *early language intervention + bilingual, dual language learner,* and *cultural and linguistic diversity* were used. The initial search yielded a total of 546 potential sources (501 journal articles, 42 *Perspectives* articles, and three sources from the Clinical Research Education).

We then searched the evidence maps developed by the National Center for Evidence-Based Practice in Communication Disorders (N-CEP, 2018) to describe and summarize the available research on specific clinical topics. The first author and two graduate assistants conducted this search. No evidence map existed that specifically described interventions for DLLs, so we then searched for evidence maps for developmental language disorders or a related term, and we discovered the evidence map for the related term *late language emergence.* This evidence map provided a total of 15 potential sources. Finally, in line with typical scoping review procedures (Arksey & O'Malley, 2005), we conducted a hand search of promising sources, including reference lists and known sources (Arksey & O'Malley, 2005). Five sources were identified through the hand search.

Phase 3: Selecting Studies

As a first step, the 15,395 studies found through the systematic search of electronic databases (i.e., PsycINFO, ERIC, and CINAHL) were reviewed for inclusion criteria. Sources were selected for inclusion if the following parameters were met: (a) described DLL (i.e., Spanish-speaking) populations, (b) provided descriptions of language intervention and/or early developmental teaching for children between 9 months to 3 years 11 months of age, and/or (c) described some element of caregiver interaction. After these inclusion criteria were applied, 59 potential sources remained. After duplicate sources were removed, 16 articles remained that met the criteria for inclusion from the systematic search of online research databases. Ten percent of the electronic database sources were reviewed by a second coder for selection criteria; point-by-point interrater reliability between coders was 94.9%.

The 546 sources identified through ASHAWire were inspected and included/excluded based on the criteria listed above. After duplicates, sources identified in the proceeding step were removed; five sources were identified from ASHA-Wire. Two of the five ASHAWire sources were reviewed by a second coder for selection criteria; point-by-point interrater reliability between coders was 100%.

Next, the sources from the N-CEP evidence map for late language emergence were reviewed. We began by searching the 15 sources for studies that described intervention; 11 sources met this criteria. We then applied the selection for inclusion parameters described in the preceding paragraph. One of the sources met the inclusion criteria; a state department of health recommended practice guidelines. Twenty percent of the N-CEP sources were reviewed by a second coder for selection criteria; point-by-point interrater reliability between coders was 100%. Finally, the sources identified through the hand search included (a) an article by the authors describing interventions for caregivers of young DLLs (Guiberson & Ferris, 2018) and (b) four sources on early intervention services with linguistically diverse populations (Moore & Pérez-Méndez, 2006; Peña & Fiestas, 2009; van Kleeck, 1994; Wing et al., 2007). Twenty-seven sources were identified as eligible for inclusion in this systematic scoping review.

Phase 4: Charting the Data

The 27 included sources were charted to examine the types of sources identified (see Table 2). The majority of sources were recommended practices ($n = 12$), followed by descriptive studies ($n = 6$) and intervention studies ($n = 6$). There were also three research review studies (one systematic and two nonsystematic). In terms of the age of populations described, three sources included children under 12 months of age or younger, 23 sources included toddler-age children (i.e., 13–35 months of age), and 24 sources included preschool-age children—for our purposes, this includes young preschoolers (3 years to 3 years 11 months of age). The sources included strategies or procedures for DLLs with different developmental status, including children with early language deficits or language deficits + an additional area of disability (22 sources), as well as at-risk children (11 sources) and/or typically developing children (three sources).

Phase 5: Collating, Summarizing, and Reporting Results

The collating and summarizing of sources included coding the source type, describing strategies identified from the sources, and then describing the strength of strategy recommendation.

Source Type

As a first step in organizing results, studies were collated in order to gain a sense of the type of sources the scoping review identified. Establishing the source type was an important and relevant step in classifying the types of sources available on the topic of interest. Source type was classified as follows: systematic reviews, intervention studies, research reviews, descriptive studies, or recommended practices (see Table 2).

Strength of Strategy Recommendation

Strength of recommendation was coded next. ASHA (2004) classifies levels of evidence in terms of the methodology applied in intervention studies. The highest levels of evidence come from well-designed randomized controlled studies or a meta-analysis of these types of studies (Ib). These are followed by well-designed controlled studies without randomization (IIa) and well-designed quasi-experimental studies (IIb). Finally, the lowest levels of evidence are from well-designed nonexperimental studies (III) and expert recommendations (IV). However, a scoping review is not intended to provide a conclusive synthesis of quality of studies or evidence to support a given intervention. Instead, the purpose of a scoping study is to examine the depth of research on a given topic, provide a preliminary summary of research findings, and identify gaps in the research. Moreover, because a scoping review is designed to include a range of sources (e.g., journal articles, association databases, conference proceedings, evidence maps, books), the description of the source needs to allow for sources that may not be well-designed or highly controlled intervention research.

Although levels of evidence are not an appropriate determination that can be applied to a scoping review, the strength of an individual strategy can be described (Arksey & O'Malley, 2005; Michie, West, Sheals, & Godinho, 2018). The authors established specific criteria for strength of recommendation that was previously applied in a scoping study of interventions for multilingual children with hearing loss (Guiberson & Crowe, 2018). Establishing the strength of strategy recommendation involved complex judgments, combining elements of study quality and the amount of detail and statistical rigor reported, as well as an indication that a strategy had a positive impact. We coded strength of

Table 2. Charting of sources identified through scoping review.

Stage	Citation	Source type	Age	Status
Systematic search of electronic databases	Boyce et al. (2004)	Descriptive study	Toddler–preschool	At risk
	Boyce et al. (2013)	Descriptive study	Toddler–preschool	At risk
	Durán et al. (2016)	Systematic review	Toddler–preschool	At risk, ELD
	Garcíaet al. (2000)	Descriptive study	Toddler–preschool	ELD
	Gillanders & Castro (2011)	Rec. practices	Preschool	Typical
	Ijalba (2015)	Intervention study	Preschool	ELD
	Kohnert et al. (2005)	Research review	Toddler–preschool	ELD
	Kummerer (2010)	Rec. practices	Toddler–preschool	ELD
	Kummerer (2012)	Rec. practices	Toddler	At risk
	Kummerer & Lopez-Reyna (2006)	Descriptive study	Toddler–preschool	ELD
	Kummerer et al. (2007)	Descriptive study	Toddler–preschool	ELD
	Nedler & Sebera (1971)	Intervention study	Preschool	At risk
	Simon-Cereijido (2015)	Intervention study	Preschool	ELD
	Tsybina & Eriks-Brophy (2010)	Intervention study	Toddler–preschool	At risk
	Vigil & Hwa-Froelich (2004)	Rec. practices	Toddler–preschool	At risk, ELD
	Worthington (2011)	Intervention study	Preschool	At risk
ASHAWire	Dunn Davison & Huaqing Qi (2017)	Research review	Preschool	ELD, typical
	Gabas et al. (2017)	Rec. practices	Toddler	ELD
	Jackson et al. (2017)	Rec. practices	Toddler–preschool	At risk, ELD
	Peredo (2016)	Rec. practices	Infants–preschool	ELD
	Peredo et al. (2018)	Intervention study	Toddler–preschool	ELD
N-CEP	New York State Department of Health (1999)	Rec. practices	Infants–preschool	ELD
Hand search	Guiberson & Ferris (2018)	Descriptive study	Toddler	ELD, typical
	Moore & Pérez-Méndez (2006)	Rec. practices	Infants–toddlers	ELD
	Peña & Fiestas (2009)	Rec. practices	Toddler–preschool	ELD
	van Kleeck (1994)	Rec. practices	Infants–preschool	ELD
	Wing et al. (2007)	Rec. practices	Toddler	ELD

Note. Age was coded as follows: infants = 0–12 months, toddler = 13–35 months, and preschool = 3;0–3;11 years;months. Early language deficits (ELD) is inclusive of children with language and other disabilities. Rec. = recommended.

strategy recommendation as either *compelling, promising,* or *lacking. Compelling* was used for strategies that were described in a research article that isolated the strategy variable, included pretest/posttest measures, reported positive outcomes, and reported significance and/or effect size. *Promising* was used for strategies that were described in a research article with suggestive findings or for studies that included limited data related to the strategy and/or that did not report enough detail (e.g., significance or effect size) to be compelling. *Lacking* was used for sources that described strategies but either lacked methodological rigor or details (i.e., data, procedures) or were recommended practices/pedagogical tutorials with no substantive research-based findings reported. It should be noted that many times a "package intervention" that stacked or combined strategies was implemented, without individual strategies being isolated and evaluated alone. In these instances, the strength was assigned without being able to disentangle the strategies and their individual effects. Thus, the strength of recommendation is part of a preliminary step in identifying strategies that may be effective but should be further evaluated in future studies or a full systematic review. In short, the strength of strategy recommendation in this scoping review is not a conclusive determination of evidence-based practice. A checklist with the strength of recommendation characteristics was used when coding each source. The first author coded all 27 of the sources independently. The second author coded six of the sources independently, with 100% point-by-point agreement achieved.

As a final step in creating a preliminary map of strategies, the overall strength was coded by identifying and indicating the highest level of strength observed across resources that applied a given strategy. This was so that the reader could easily identify the highest overall strength of recommendation for each strategy identified in the scoping review.

Strategies Identified

Next, sources were reviewed for types of strategy or procedure applied. Although these were described, variations of names were frequently used, making comparisons difficult. In charting the information from studies, therefore, we applied a thematic framework to categorize the strategies. From our final systematic scoping review, 27 sources described 70 strategies. We then collated the strategies into the categories of general approach ($n = 4$), caregiver based ($n = 10$), interaction based ($n = 11$), language strategies ($n = 27$), and early literacy strategies ($n = 18$). This information is presented in Table 3, a preliminary map in which strategies are organized by category and ordered within categories by the frequency with which they were identified across sources.

Results

General Approach Recommendations

Four strategies were identified as general approaches used in intervention with DLLs. These included supporting

Table 3. Preliminary map of the literature supporting specific strategies and procedures.

Intervention type		Highest strength observed	Boyce et al. (2004)	Boyce et al. (2013)	Dunn Davison & Huaqing Qi (2017)	Durán et al. (2016)	Gabas et al. (2017)	García et al. (2000)	Gillanders & Castro (2011)	Guiberson & Ferris (2018)	Ijalba (2015)	Jackson et al. (2017)	Kohnert et al. (2005)	Kohnert et al. (2005)	Kummerer (2010)	Kummerer & Lopez-Reyna (2006)	Kummerer et al. (2007)	Moore & Pérez-Méndez (2006)	Nedler & Sebera (1971)	New York State Department of Health (1999)	Peña & Fiestas (2009)	Peredo (2016)	Peredo et al. (2018)	Simon-Cereijido (2015)	Tsybina & Eriks-Brophy (2010)	van Kleeck (1994)	Vigil & Hwa-Froelich (2004)	Wing et al. (2007)	Worthington (2011)
General approach	Support L1/bilingual development	♦			□	♦	□	□	□		♦		□	□	□	□	□		♦	□		□	+	♦	♦			□	
	Make cultural modifications to "mainstream programs"	+											□	□									+				□		
	Providers self-reflect on culture, beliefs, and biases	□												□													□		□
	Begin intervention before children are 24 months of age	□		□																									
Caregiver based	Tailor interventions to caregiver's cultural background/interaction style/priorities	□					□		□						□	□			□	□	□	□				□	□	□	
	Build upon familiar activities and routines	♦	+	□					□		♦										□					□			
	Parent education (e.g., bilingualism, early literacy, language development)	♦				♦					♦	□					□	♦											□
	Discuss beliefs about language, disability, and purpose of intervention	□														□					□	□							
	Ethnographic interviewing	□																			□	□					□		
	Teach–model–coach–review	+																					+						
	Simplify intervention procedures	+																					+						
	Discuss strategies, provide guided practice, and monitor implementation	□								□																			
	Parent-to-parent connections	□														□		□											
	Use strategies reminders	□						□																					
Interaction based	Multiparty interaction (siblings, peer, family members)	□											□		□							□				□	□	□	
	Use attentional directives	□								□																	□	□	
	Explicitly teach children new skills	□								□																	□		
	Structured learning tasks	□																									□	□	
	Wait time/time delay	♦																							♦				□
	Responsive child–parent interactions	♦									♦																		
	Facilitate play-based interactions	□															□												
	Match turns	+																					+						
	Joint activities around child's interest	♦																							♦				
	Use of imperatives	□								□																			
	Request response from child	□																											□

(table continues)

Table 3. (*Continued*).

Intervention type	Highest strength observed	Boyce et al. (2004)	Boyce et al. (2013)	Dunn Davison & Huaqing Qi (2017)	Durán et al. (2016)	Gabas et al. (2017)	García et al. (2000)	Gillanders & Castro (2011)	Guiberson & Ferris (2018)	Ijalba (2015)	Jackson et al. (2017)	Kohnert et al. (2005)	Kohnert et al. (2005)	Kummerer (2010)	Kummerer & Lopez-Reyna (2006)	Kummerer et al. (2007)	Moore & Pérez-Méndez (2006)	Nedler & Sebera (1971)	New York State Department of Health (1999)	Peña & Fiestas (2009)	Peredo (2016)	Peredo et al. (2018)	Simon-Cereijido (2015)	Tsybina & Eriks-Brophy (2010)	van Kleeck (1994)	Vigil & Hwa-Froelich (2004)	Wing et al. (2007)	Worthington (2011)
Language strategies — Expand child's comments	◆				◆	□			□						□	□						+	◆	◆				
Teach narratives/storytelling	◆		□		◆				□																		□	
Focused stimulation	◆								□	◆													◆				□	
Cross-linguistic referencing	◆		□														◆						◆					
Enhanced vocabulary instruction	◆		□					□															◆					
Singing/rapping	□										□				□												□	
Elicit repetitions of words	□		□																							□		
Rhyming	□										□																□	
Model language	◆																							◆				□
Ask child questions	◆				◆				□																			
Expand beyond labeling and asking yes/no questions	□						□																					
Request clarification of child	□								□																			
Preacademic language activities	□								□																			
Ask comprehension questions	□								□																			
Talk about what child is playing	□								□																			
Teach using family mini-stories/vignettes	□								□																			
Label objects	□														□													
Consider Spanish language–specific developmental patterns	□																				□							
Use family dialect and specific vocabulary	+																						+					
Language targets should be L1 specific	+																						+					
Teach new words, short phrases with verbs	+																						+					
Teach number and gender suffixes	+																						+					
Teach child to request	+																						+					
Prompt/elicit imitation (e.g., "Say ___")	+																						+					
Recast incorrect productions	◆																						◆					
Encourage conversations	◆																						◆					
Use cloze procedures	□																									□		
Shared storybook experiences	◆								□	◆	□		□		□	□	□						◆					□

(*table continues*)

Table 3. *(Continued).*

Intervention type	Highest strength observed	Boyce et al. (2004)	Boyce et al. (2013)	Dunn Davison & Huaqing Qi (2017)	Durán et al. (2016)	Gabas et al. (2017)	García et al. (2000)	Gillanders & Castro (2011)	Guiberson & Ferris (2018)	Ijalba (2015)	Jackson et al. (2017)	Kohnert et al. (2005)	Kohnert et al. (2005)	Kummerer (2010)	Kummerer & Lopez-Reyna (2006)	Kummerer et al. (2007)	Moore & Pérez-Méndez (2006)	Nedler & Sebera (1971)	New York State Department of Health (1999)	Peña & Fiestas (2009)	Peredo (2016)	Peredo et al. (2018)	Simon-Cereijido (2015)	Tsybina & Eriks-Brophy (2010)	van Kleeck (1994)	Vigil & Hwa-Froelich (2004)	Wing et al. (2007)	Worthington (2011)
Early literacy strategies — Have child retell story	♦				♦	□			□															♦				
Talk about story and solicit questions	♦	+		□					□															♦				
Ask comprehension and recall questions	+	+		□		□			□																			
Ask open-ended questions and solicit predictions	♦			□	♦	□																		♦				
Point out illustrations	+	+				□			□																			
Use bilingual books/reading activities in both languages	□			□	□				□								□											
Repeated reading of the same book	□			□	□				□																			
Exposure to electronic books	□			□	□																							
Culturally relevant topics or themes	□			□					□																			
Use manipulatives, gesture, and expression	□									□	□																	
Consider all sources of literacy and text-based interactions	□														□		□											
Create experience book of personal narratives	♦							□		♦																		
Increase frequency of storybook reading	+	+																										
Relate book to personal experiences and elaborate on child's ideas	□		□																									
Elicit repetitions of words	□									□																		
Focus on core words and repetitive phrases	□									□																		
Story reenactment	□									□																		

Note. The highest strength is the highest recommendation strength seen across studies that included the intervention listed. L1 = first language; ♦ = compelling; + = promising; □ = lacking.

the child's first language (L1)/bilingual development; making cultural modifications to mainstream programs; having providers self-reflect on culture, beliefs, and biases; and beginning intervention before 24 months of age. The most frequent strategy supported across all domains was supporting the child's L1 and bilingual development, which had an overall compelling recommendation strength. Nineteen sources provided this recommendation, including five with compelling strength. Making cultural modifications to mainstream programs was identified as an overall promising recommendation and was suggested by four sources.

Caregiver-Based Recommendations

Ten strategies were identified as caregiver-based recommendations. Tailoring interventions to fit caregivers' cultural background, interaction style, and priorities was recommended by 10 sources with lacking strength. Parent education on bilingualism, early literacy, and/or language development and building upon familiar activities and routines were both determined as having an overall compelling recommendation strength. There were also several sources that recommended discussing beliefs about language, disability, and/or purpose of intervention and ethnographic interviewing. These strategies had an overall lacking recommendation strength. One source, with promising strength, presented the teach–model–coach–review approach and suggested simplifying intervention procedures (Peredo, Zelaya, & Kaiser, 2018).

Interaction-Based Recommendations

Three interaction-based recommendations had an overall compelling recommendation strength, including the use of wait time/time delay, responsive child–parent interactions, and joint activities around a child's interest. Multiparty interactions (i.e., including siblings, peers, and/or family members) were the most frequently recommended; six sources with lacking strength recommended this strategy. Matching turns appeared in one source with promising strength.

Language Strategies

Of the recommended language strategies, nine were compelling, five were promising, and 12 were lacking. Five of the compelling recommendations were supported by three or more articles. These include expanding child's comments ($n = 8$), teaching narratives/storytelling ($n = 5$), focused stimulation ($n = 4$), cross-linguistic referencing ($n = 3$), and enhanced vocabulary instruction ($n = 3$). The following compelling recommendations were suggested in two or less articles: model language ($n = 2$), ask child questions ($n = 2$), recast incorrect productions ($n = 1$), and encourage conversations ($n = 1$). One study with promising strength presented strategies that were based on a Spanish L1 developmental model (Peredo et al., 2018). Recommendations from this study include teaching new words/short phrases with verbs, teaching number and gender suffixes, teaching children to request, and eliciting imitation (e.g.,

"*dile ___*" / "say ___"). All these strategies have an overall promising recommendation strength.

Early Literacy Strategies

Multiple early literacy recommendations had an overall compelling strength; these included engaging in shared storybook experiences, having the child retell the story, talking about the story, using questioning strategies, eliciting predictions, and creating experience books of personal narratives. Engaging in shared storybook experiences was the most frequently recommended strategy ($n = 9$). Overall promising recommendations included asking comprehension and recall questions ($n = 4$), pointing out illustrations ($n = 3$), and increasing the frequency of storybook reading ($n = 1$). There were numerous recommendations with an overall lacking strength, including using bilingual books/reading activities in both languages and repeated reading of the same book.

Discussion

This systematic scoping review provided important insights into research describing language strategies for use with young DLLs, including those with early language deficits. Our search included intervention strategies intended for young DLLs, 3 years of age and younger. In our discussion, we will review strategies that had compelling and promising strength ratings from two or more sources.

Supporting a child's L1 or bilingual development was a recommendation that was ranked as compelling from multiple sources. Approximately 70% of the sources reviewed in this scoping study recommended supporting the L1 or bilingual development in young DLLs. We also saw that three sources recommended explicit cross-linguistic referencing, which leads to cross-linguistic transfer, or using L1 or L2 as a resource to teach in the other language (Hammer et al., 2014). This shows that there is support for viewing a child's DLL status as an asset rather than an obstacle to L2 development. This finding is important because bilingual language development has been shrouded in myths, including that bilingualism has negative consequences for language acquisition and academic achievement (Espinosa, 2013; Genesee, 2015; Guiberson, 2009, 2013). Our finding that most reviewed sources explicitly support L1/bilingual development is relieving and is supported by studies of young DLLs, which describe benefits in many domains of development, including linguistic, literacy, executive functioning, theory of mind, and self-control, among others (Barac, Bialystok, Castro, & Sanchez, 2014; Bialystok, Craik, Green, & Gollan, 2009; Dong & Li, 2015; Halle et al., 2014; Hammer et al., 2014; Jasińska & Petitto, 2018; Kovelman, Baker, & Petitto, 2008).

There were several strategies that had multiple ratings of compelling or promising that are frequently part of mainstream early language intervention packages. Making cultural modifications to mainstream intervention programs and tailoring intervention strategies and procedures to

caregivers' cultural background/interaction style/priorities were described in multiple sources, but we rated it as a lacking recommendation. However, viewing the results altogether, we can see that some of the ingredients of the mainstream programs do have compelling or promising ratings. These strategies included providing parent education on topics of child development, building upon familiar activities and routines, and using specific language stimulation techniques such as expanding on child's comments and focused stimulation. Furthermore, one of the studies reviewed described Enhanced Milieu Teaching en Español (Peredo et al., 2018), a culturally and linguistically adapted intervention program that was designed to better match both the linguistic needs of children and the ability of families to implement intervention strategies and procedures that feel natural to them. The adaptation included using family-specific vocabulary, targeting linguistic features that are appropriate and specific to Spanish (including number and gender suffixes), teaching new words and phrases, teaching requesting, and eliciting imitations. This type of work represents a major advancement in tailoring strategies and procedures to families and their specific linguistic and cultural profiles.

Of the specific language strategies that are sometimes present in these programs, only expanding on child's comments and focused stimulation had appeared in two or more sources with compelling recommendation strength. Other strategies common in these programs (e.g., environmental arrangement, following the child's lead, wait time, modeling language, and recasting) did not have multiple sources indicating compelling or promising strength. Although more research is needed to evaluate culturally enhanced mainstream programs, this approach of adapting existent early language intervention strategies may provide needed insight that will ultimately result in well-designed, culturally consistent language interventions for young DLLs.

There were four early literacy strategies that we found to have compelling or suggestive recommendation strength across two or more sources. These particular strategies ranged from general strategies, such as engaging in shared storybook experiences, to specific language modeling strategies and elicitation strategies. Modeling behaviors included talking about the story and asking open-ended questions. Eliciting strategies included having the child retell the story and soliciting questions or predictions from the child. The finding that there are early literacy strategies that have a compelling or suggestive recommendation strength is not surprising given that there is a corpus of research suggesting that literacy-based strategies are effective with children under the age of 3 years (Mol, Bus, de Jong, & Smeets, 2008), preschoolers (U.S. Department of Education, 2007), preschool-age children with disabilities (U.S. Department of Education, 2010), and young and school-age DLLs (Fitton, McIlraith, & Wood, 2018). Supporting the early literacy skills of DLLs is important, especially given that this population is at a high risk for diminished literacy development compared with their monolingual peers (Baker et al., 2014).

As stated succinctly by Espinosa (2013): "Our educational systems are challenged to capitalize on the linguistic, cognitive, and social talents of young children who are developing capacities in more than one language." Nowhere is this more important than in early intervention, when we have the chance to change and enhance the developmental trajectories of young DLLs. Our systematic scoping review provides a preliminary map of intervention strategies and procedures that are of potential benefit to young DLLs, including those at risk and those with early language deficits (see Table 3). It is our hope that, by identifying the strength of recommendations and identifying the need for more high-quality intervention research for DLLs, we will begin to provide even stronger supports for young DLLs and their families, so that early educational experiences pave the way for long-term educational success.

Limitations

There are several limitations to the current study. The recommendation strength rating system we applied to describe the strength of recommendations has only been used in one other study. Furthermore, individual intervention strategies were frequently not isolated from other strategies applied, which makes it difficult to identify which of the variables may be having a positive effect. Another limitation is that there was very limited intervention research available for this population. The shortage of intervention research with young DLLs is a recognized area of concern; the U.S. Department of Health and Human Services (2016) has made the development of high-quality research-based interventions designed for young DLLs a priority. The development of early interventions for young DLLs and their families is critically important, because although the field generally recognizes the benefits of bilingualism, we still have not addressed early learning needs so that young DLLs do not enter kindergarten with gaps in achievement.

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Appendix A (p. 1 of 5)

Search Terms Used for the Systematic Search of Electronic Databases

Search results.

Terms combined with AND			Number of records returned		
Left	Middle	Right	PsycINFO	ERIC	CINAHL
Responsivity education/prelinguistic milieu teaching	Spanish		145	76	20
Responsivity education/prelinguistic milieu teaching	Spanish speaking		166	79	24
Responsivity education/prelinguistic milieu teaching	Latino		136	76	20
Responsivity education/prelinguistic milieu teaching	Bilingual		140	77	20
Responsivity education/prelinguistic milieu teaching	Latinos/Latinas[a]		180	76	20
Responsivity education/prelinguistic milieu teaching	Spanish Americans		N/A	76	20
Responsivity education/prelinguistic milieu teaching	Bilingualism		184	78	20
Responsivity education/prelinguistic milieu teaching	English as a second language[a]		1	199	21
Prelinguistic milieu teaching	Spanish[a]		50	33	13
Prelinguistic milieu teaching	Bilingualism		44	35	12
Prelinguistic milieu teaching	English as a second language[a]		1	197	13
Prelinguistic milieu teaching	Latinos/Latinas[a]		40	33	13
Prelinguistic communication	Spanish[a]		2	134	72
Prelinguistic communication	Latino/Latinas[a]		400	134	72
Prelinguistic communication	Bilingualism		3	137	71
Prelinguistic communication	English as a second language[a]		19	1	71
Responsivity education	Spanish[a]		3	106	42
Responsivity education	Bilingualism		210	2	50
Responsivity education	English as a second language[a]		4	5	38
Responsivity education	Latinos/Latinas[a]		2	1	43
Responsive interaction	Spanish[a]		16	2	451
Responsive interaction	Bilingualism		13	8	16
Responsive interaction	English as a second language[a]		34	46	648
Responsive interaction	Latinos/Latinas[a]		20	19	4
It takes two to talk[a]	Spanish		5	5	7
It takes two to talk[a]	Spanish speaking		1	1	1
It takes two to talk[a]	Latino		2	2	6
It takes two to talk[a]	Bilingual		4	6	4
It takes two to talk[a]	Latinos/Latinas[a]		1	3	0
It takes two to talk[a]	Spanish speakers[a]		2	15	0
It takes two to talk[a]	Mexican Americans[a]		1	2	0
It takes two to talk[a]	Bilingualism		2	2	2
Hanen program	Spanish		24	7	14
Hanen program	Spanish speaking		25	7	14
Hanen program	Latino		24	7	14
Hanen program	Bilingual		25	7	14
Hanen program	Latinos/Latinas[a]		24	7	14
Hanen program	Spanish speaker[a]		24	12	14
Hanen program	Mexican Americans[a]		25	7	17
Hanen program	Bilingualism		25	7	14
Hanen program	It takes two to talk	Spanish	36	8	17
Hanen program	It takes two to talk	Spanish speaking	37	8	17
Hanen program	It takes two to talk	Latino	36	8	17

Search Terms Used for the Systematic Search of Electronic Databases

Search results.

Terms combined with AND			Number of records returned		
Left	Middle	Right	PsycINFO	ERIC	CINAHL
Hanen program	It takes two to talk	Bilingual	36	8	17
Hanen program	It takes two to talk	Latinos/Latinas[a]	36	8	17
Hanen program	It takes two to talk	Spanish speaker[a]	36	12	17
Hanen program	It takes two to talk	Mexican Americans[a]	36	8	18
Hanen program	It takes two to talk	Bilingualism	36	8	17
Enhanced milieu teaching	Spanish		1	9	194
Enhanced milieu teaching	Spanish speaking		1	4	196
Enhanced milieu teaching	Latino		5	0	193
Enhanced milieu teaching	Bilingual		1	13	124
Enhanced milieu teaching	Latinos/Latinas[a]		3	0	208
Enhanced milieu teaching	Spanish speaker[a]		1	2	199
Enhanced milieu teaching	Mexican Americans[a]		0	1	270
Enhanced milieu teaching	Bilingualism		5	7	19
Milieu teaching	Spanish		8	9	109
Milieu teaching	Spanish speaking		2	4	111
Milieu teaching	Latino		4	0	1
Milieu teaching	Bilingual		7	13	95
Milieu teaching	Latinos/Latinas[a]		3	2	123
Milieu teaching	Spanish speaker[a]		2	46	114
Milieu teaching	Mexican Americans[a]		1	2	1
Milieu teaching	Bilingualism		6	7	10
Milieu teaching	Responsive interaction	Spanish	19	9	205
Milieu teaching	Responsive interaction	Spanish speaking	3	4	207
Milieu teaching	Responsive interaction	Latino	9	0	205
Milieu teaching	Responsive interaction	Bilingual	9	13	191
Milieu teaching	Responsive interaction	Latinos/Latinas[a]	8	0	219
Milieu teaching	Responsive interaction	Spanish speaker[a]	2	1	210
Milieu teaching	Responsive interaction	Mexican Americans[a]	1	2	278
Milieu teaching	Responsive interaction	Bilingualism	6	7	26
Focused stimulation	Spanish		4	0	1
Focused stimulation	Spanish speaking		0	0	0
Focused stimulation	Latino		4	0	0
Focused stimulation	Bilingual		5	1	1
Focused stimulation	Latinos/Latinas[a]		3	0	0
Focused stimulation	Spanish speaker[a]		0	5	0
Focused stimulation	Mexican American[a]		0	0	0
Focused stimulation	Bilingualism		4	0	0
Language modeling[a]	Spanish		191	19	27
Language modeling[a]	Spanish speaking		60	10	14
Language modeling[a]	Latino		78	19	16
Language modeling[a]	Bilingual		144	22	15
Language modeling[a]	Latinos/Latinas[a]		49	5	1
Language modeling[a]	Spanish speaker[a]		31	74	3

Search Terms Used for the Systematic Search of Electronic Databases

Search results.

Terms combined with AND			Number of records returned		
Left	Middle	Right	PsycINFO	ERIC	CINAHL
Language modeling[a]	Mexican Americans[a]		28	46	6
Language modeling[a]	Bilingualism		139	10	2
Language modeling[a]	Recasting	Spanish	79	12	11
Language modeling[a]	Recasting	Spanish speaking	80	15	11
Language modeling[a]	Recasting	Latino	79	10	12
Language modeling[a]	Recasting	Bilingual	78	1	11
Language modeling[a]	Recasting	Latinos/Latinas[a]	79	20	12
Language modeling[a]	Recasting	Spanish speaker[a]	79	2	11
Language modeling[a]	Recasting	Mexican Americans[a]	83	17	18
Language modeling[a]	Recasting	Bilingualism	77	1	11
Conversational recast intervention	Spanish		2	18	14
Conversational recast intervention	Spanish speaking		1	25	17
Conversational recast intervention	Latino		1	14	14
Conversational recast intervention	Bilingual		1	17	15
Conversational recast intervention	Latinos/Latinas[a]		1	27	14
Conversational recast intervention	Spanish speaker[a]		60	3	14
Conversational recast intervention	Mexican Americans[a]		56	24	15
Conversational recast intervention	Bilingualism		52	17	15
Recast language intervention	Spanish		3	4	1
Recast language intervention	Spanish speaking		2	0	1
Recast language intervention	Latino		1	0	23
Recast language intervention	Bilingual		1	3	23
Recast language intervention	Latinos/Latinas[a]		1	0	23
Recast language intervention	Spanish speaker[a]		129	5	23
Recast language intervention	Mexican Americans[a]		133	0	23
Recast language intervention	Bilingualism		127	3	23
Language intervention	Recasting	Spanish	1	2	14
Language intervention	Recasting	Spanish speaking	83	2	14
Language intervention	Recasting	Latino	82	1	N/A
Language intervention	Recasting	Bilingual	1	1	14
Language intervention	Recasting	Latinos/Latinas[a]	82	2	14
Language intervention	Recasting	Spanish speaker[a]	82	5	14
Language intervention	Recasting	Mexican Americans[a]	86	67	21
Language intervention	Recasting	Bilingualism	80	1	14
Early language intervention	Latinos/Latinas[a]		65	92	N/A
Early language intervention	Spanish speaker		26	N/A	8
Early language intervention	Mexican Americans[a]		24	117	8
Early language intervention	Bilingualism		90	60	3
Verbal modeling	Language intervention	Latinos/Latinas[a]	1	0	N/A
Verbal modeling	Language intervention	Spanish speaker	2	N/A	1
Verbal modeling	Language intervention	Mexican Americans[a]	0	0	0
Verbal modeling	Language intervention	Bilingualism	1	1	0

Search Terms Used for the Systematic Search of Electronic Databases

Search results.

Terms combined with AND			Number of records returned		
Left	Middle	Right	PsycINFO	ERIC	CINAHL
Child focused	Language intervention	Latinos/Latinas[a]	15	10	N/A
Child focused	Language intervention	Spanish speaker	5	N/A	0
Child focused	Language intervention	Mexican Americans[a]	9	9	3
Child focused	Language intervention	Bilingualism	14	7	1
Time delay	Language intervention	Latinos/Latinas[a]	3	2	N/A
Time delay	Language intervention	Spanish speaker	1	N/A	0
Time delay	Language intervention	Mexican Americans[a]	0	4	0
Time delay	Language intervention	Bilingualism	2	2	0
Recasting	Language intervention	Latinos/Latinas[a]	0	2	N/A
Recasting	Language intervention	Spanish speaker	0	N/A	0
Recasting	Language intervention	Mexican Americans[a]	0	0	0
Recasting	Language intervention	Bilingualism	0	1	0
Expanding	Language intervention	Latinos/Latinas[a]	3	0	N/A
Expanding	Language intervention	Spanish speaker[a]	2	N/A	0
Expanding	Language intervention	Mexican Americans[a]	1	3	0
Expanding	Language intervention	Bilingualism	2	1	0
Pre–academic teaching	Latinos/Latinas[a]		2	15	N/A
Pre–academic teaching	Spanish speaker		10	N/A	1
Pre–academic teaching	Mexican Americans[a]		25	1	3
Pre–academic teaching	Bilingualism		113	94	1
Early teaching	Language intervention	Latinos/Latinas[a]	10	14	N/A
Early teaching	Language intervention	Spanish speaker[a]	8	N/A	3
Early teaching	Language intervention	Mexican Americans[a]	3	29	0
Early teaching	Language intervention	Bilingualism	21	17	1
Reading	Language intervention	Latinos/Latinas[a]	55	64	N/A
Reading	Language intervention	Spanish speaker	26	N/A	8
Reading	Language intervention	Mexican Americans[a]	8	N/A	3
Reading	Language intervention	Bilingualism	93	47	1
Narratives	Language intervention	Latinos/Latinas[a]	12	6	N/A
Narratives	Language intervention	Spanish speaker	2	N/A	0
Narratives	Language intervention	Mexican Americans[a]	2	6	3
Narratives	Language intervention	Bilingualism	18	8	2
Language delay	Intervention strategies	Latinos/Latinas[a]	1	0	N/A
Language delay	Intervention strategies	Spanish speaker	1	N/A	0
Language delay	Intervention strategies	Mexican Americans[a]	0	2	0
Language delay	Intervention strategies	Bilingualism	6	3	0
Language delay	Intervention strategies	Cultural diversity	1	1	0
Language delay	Intervention therapy	Latinos/Latinas[a]	0	1	N/A
Language delay	Intervention therapy	Spanish speaker	1	N/A	0
Language delay	Intervention therapy	Mexican Americans[a]	1	0	0
Language delay	Intervention therapy	Bilingualism	7	0	2
Language delay	Intervention therapy	Cultural diversity	0	0	0
Language delay	Communication intervention	Latinos/Latinas[a]	5	3	N/A

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Search Terms Used for the Systematic Search of Electronic Databases

Search results.

	Terms combined with AND		Number of records returned		
Left	Middle	Right	PsycINFO	ERIC	CINAHL
Language delay	Communication intervention	Spanish speaker	0	N/A	0
Language delay	Communication intervention	Mexican Americans[a]	3	2	0
Language delay	Communication intervention	Bilingualism	6	2	0
Language delay	Communication intervention	Cultural diversity	2	1	1
Language disorder	Intervention therapy	Latinos/Latinas[a]	11	1	N/A
Language disorder	Intervention therapy	Spanish speaker	6	N/A	1
Language disorder	Intervention therapy	Mexican Americans[a]	7	5	0
Language disorder	Intervention therapy	Bilingualism	43	3	4
Language disorder	Intervention therapy	Cultural diversity	27	0	12
Language disorder	Intervention strategies	Latinos/Latinas[a]	15	3	N/A
Language disorder	Intervention strategies	Spanish speaker	3	N/A	0
Language disorder	Intervention strategies	Mexican Americans[a]	8	8	1
Language disorder	Intervention strategies	Bilingualism	18	5	0
Language disorder	Intervention strategies	Cultural diversity	15	4	4
Language disorder	Communication intervention	Latinos/Latinas[a]	17	6	N/A
Language disorder	Communication intervention	Spanish speaker	15	N/A	0
Language disorder	Communication intervention	Mexican Americans[a]	8	8	2
Language disorder	Communication intervention	Bilingualism	70	19	2
Language disorder	Communication intervention	Cultural diversity	34	7	9
Language delay	Cultural diversity	Late talker	1	139	1

[a]Search term was modified by the use of thesaurus from each database. For example, PsycINFO recommended the search term *Latinos/Latinas*, whereas ERIC and CINAHL recommended the search terms *Hispanic Americans* or *Spanish Americans*. See Appendix B for the modified search terms. N/A = not applicable because the combination of terms was not permissible in the given database.

Appendix B

Modified Search Terms From Database Thesaurus

Original search term	Modified search term
Latinos/Latinas	Hispanic Americans
	Spanish Americans
English as a second language	English (second language)
	Spanish speakers
Spanish	Spanish Americans
Spanish speakers	English (second language)
Mexican Americans	Hispanic Americans
	Latino families
It takes two to talk	It takes two to talk intervention
Language modeling	Modeling intervention
	Modeling