sharing child and youth development knowledge
volume 27, number 4
2013

Social Policy Report

Multilingual Children
Beyond Myths* and Toward Best Practices

Allyssa McCabe
University of Massachusetts Lowell

Catherine S. Tamis-LeMonda
New York University

Marc H. Bornstein**
Eunice Kennedy Shriver National Institute of Child Health and Human Development

Carolyn Brockmeyer Cates
New York University Medical Center

Roberta Golinkoff
University of Delaware

Alison Wishard Guerra
University of California San Diego

Kathy Hirsh-Pasek
Temple University

Erika Hoff
Florida Atlantic University

Yana Kuchirko
New York University

Gigliana Melzi
New York University

Alan Mendelsohn
New York University Medical Center

Mariela Páez
Boston College

Lulu Song
Brooklyn College, City University of New York

*Subsequent to submitting the present report, a different report by Espinosa (2013) came to our attention. Her work on addressing myths regarding bilingualism is for practitioners and complements ours. The full report is available at http://fcd-us.org/resources/prek-3rd-challenging-common-myths-about-dual-language-learners-update-seminal-2008-report#node-1367

**All but the two lead authors are alphabetized

The American Academy of Pediatrics has endorsed this report.

Abstract

Multilingualism is an international fact of life and increasing in the United States. Multilingual families are exceedingly diverse, and policies relevant to them should take this into account. The quantity and quality of a child's exposure to responsive conversation spoken by fluent adults predicts both monolingual and multilingual language and literacy achievement. Contexts supporting optimal multilingualism involve early exposure to high quality conversation in each language, along with continued support for speaking both languages. Parents who are not fluent in English should not be told to speak English instead of their native language to their children; children require fluent input, and fluent input in another language will transfer to learning a second or third language. Messages regarding optimal multilingual practices should be made available to families using any and all available methods for delivering such information, including home visitation programs, healthcare settings, center-based early childhood programs, and mass media.

Social Policy Report
Volume 27, Number 4 | 2013
ISSN 1075-7031
www.srcd.org/publications/social-policy-report

Social Policy Report
is published four times a year by the
Society for Research in
Child Development.

From the Editors

We often begin the New Year with resolutions that include losing weight or exercising more. Some people resolve to learn a new skill or language. In many countries, it is customary to be versed in more than one language. However, in the U.S., being multilingual as a child is often linked to poor conditions and outcomes compared to being a monolingual child. In this *Social Policy Report* (SPR), McCabe and colleagues remind us of the strength of being multilingual and its benefit for children's later outcomes and well-being. They present an array of practices, programs and policies that can support families and children to maintain their home language and subsequently their culture.

Four commentaries expand on the issues raised in the McCabe et al. paper. Lisa López emphasizes the heterogeneity, importance of additive rather than subtractive environments, and need for more research regarding multilingualism. Stephanie Curenton expands on the notion of who should be considered multilingual by also considering dialect (e.g., Caribbeans, African Americans), which may also benefit from educational supports. Michael López underscores the importance of examining sociocultural contexts and cultural adaptations when developing programming and policies for children who are multilingual. Finally, Diane August calls for federal funding to identify and evaluate best practices, as well as the strategies to facilitate adoptions of best practices by practitioners to support children who are multilingual.

Considering the complexity of multilingualism nationally and globally, the SPR authors and commentators, together, emphasize the need for more research in this area, as well as the need to view having more than one language (or dialect) as a strength. Furthermore, policies that seek to address the needs of children who are multilingual and their families should be additive rather than subtractive and consider the heterogeneity and sociocultural context of this population. Examining how best to support the development and learning of children who are multilingual is thus quite critical. **Endorsement of this *Social Policy Report* by the American Academy of Pediatrics is both an honor and an important way to reach those caring for the health of children with this important message and the research behind it.**

— Iheoma Iruka (Issue Editor)
Samuel L. Odom (Editor)
Kelly L. Maxwell (Editor)

Multilingual Children
Beyond Myths and Towards Best Practices

Multilingualism is an international fact of life, with roughly 2/3 of the world's population estimated to understand and speak two or more languages (Dörnyei & Csizer, 2002). The United States is less multilingual than this, but is increasingly so; almost 20% of the United States population is multilingual (Grosjean, 2010). The number of children (ages 5–17) who come from non-English-speaking homes was roughly 11.2 million in 2009, a rise from 4.7 million in 1980 (Aud et al., 2011). Although some individuals may be concerned that multilingualism puts children at risk, research does not support this. Further, speaking more than one language is often considered an entry card for the global economy.

Finding terms that adequately capture children on whom we will focus in this report is challenging. Nearly 25% of children in the United States come from immigrant families, and first- and second-generation immigrant children are the fastest growing sectors of the U.S. child population (Hernández, Denton, & Macartney, 2008). Although many of the children and families we discuss are *immigrants*, some are born in the United States. Many of these individuals are referred to as *English Language Learners (ELL)* in the United States, but our report also has implications for children from immigrant families abroad who are in the process of acquiring both the home and societal language. While many ELL children studied by U.S. researchers have Spanish as a native language by no means all do; the National Center for Education Statistics indicates that in 2009, 8,043,000 5- to 17-year-old students spoke Spanish at home, 1,484,000 spoke Indo-European languages other than Spanish (e.g., French), 1,244,000 spoke an Asian or Pacific Islander language, and 433,000 spoke other languages than those. The terms present in the literature that have emerged through the process of writing this report are *heritage language speakers, Spanish-speaking children, dual language learners, English Language Learners,* and *multilinguals* (some children acquire more than two languages).

Speaking two languages in the United States is often confounded with living in poverty. Multilingual Language Learners (MLL) growing up in poverty often start school behind their monolingual peers (Oller & Eilers, 2002) and maintain poorer trajectories of development throughout the school years (Hoff & Place, 2011). We hope to highlight how research might inform practice and policy for those who can most benefit from early interventions. This report represents a collaborative effort by a group of scholars in the field of language development to respond to the urgent need for evidence-based guidance in dealing with increasing numbers of multilingual children and is framed by four questions. (1) What are the broad social and historical contexts of multilingual learners in the United States? (2) What are the demographic characteristics of a multilingual family? (3) Which, if any, basic language developmental processes and effective strategies for promoting monolingual children's language can be applied to multilingual children? (4) What home, education, and community contexts support learning multiple languages? After reviewing the evidence, we close with implications for policy and practice.

What Are the Broad Social and Historical Contexts of Multilingual Learners in the United States?

Acquiring two languages in circumstances where *both* the home language (L1) and the second language (L2) are supported, as in Canada and certain European countries (e.g., Belgium; De Houwer, 1990), produces what some call *additive* multilingualism. Such countries view multilingualism as an asset that enhances the social and economic prowess of the speaker (Snow & Kang, 2006). Unfortunately, multilingual children in the United States are often from immigrant families who are disproportion-

ately low-income, exposed to the risks faced by low-income children in general. These children typically enter school speaking a language other than English (L1), often acquiring English (L2) during the preschool years. Many of these children fail to develop sufficient English skills to keep pace with their peers. For others, L1 competence is neglected and gradually replaced with English. In such instances, English fluency is associated with reduced competence in L1 (Baker & Hornberger, 2001)—*subtractive* mulilingualism.

What Are the Demographic Characteristics of a Multilingual Family?

There is no such thing as a typical multilingual family or situation (See page 5). Multilingual families come from different ethnic groups bringing with them a diverse set of values, practices, and resources. Among immigrant parents of children under 6 years old in the United States, the largest percentage comes from Central and South America, as well as the Caribbean countries (64%), and smaller percentages come from countries in Asia (23%), Europe and Canada (7%), and Africa and the Middle East (6%) (Capps et al., 2005). More than 350 languages are represented within the U.S. multilingual population, but Spanish predominates (72%—eight million people—speak Spanish at home) (Aud et al., 2011). The percentage of multilingual children is larger among the youngest in public education (Capps et al., 2005).

Regardless of origin, immigrant families are often challenged by poverty but also bring many strengths (Castro, Espinosa, & Páez, 2011). Consider the fact that 84% of immigrant families involve two parents (compared to 76% of native-born families; Hernández et al., 2008), providing children with increased access to adult conversation. Immigrant families also often highly value their children's education (Pérez & Zarate, 2006).

Which, if any, Basic Language Developmental Processes and Effective Strategies for Promoting Monolingual Children's Language Can Be Applied to Multilingual Children?

Decades of research with monolingual children and more recent research with multilingual children have established that more language exposure results in more language learning. The quantity of mothers' child-directed speech predicts vocabulary size and speed of language processing in monolingual children (Hart & Risley, 1995). Likewise, studies of multilingual children indicate that the relative and absolute amounts of exposure to each language predict children's levels of vocabulary and grammatical development in each language (Oller & Eilers, 2002; Song, Tamis-LeMonda, Yoshikawa, Kahana-Kalman, & Wu, 2012).

Besides vocabulary and grammar, a comprehensive language approach to early literacy requires that all levels of language be addressed (e.g., phonology, narrative; Dickinson, McCabe, Anastasopoulos, Peisner-Feinberg, & Poe, 2003). We review the research on monolingual development in these areas because most of it is relevant to multilingual development but has not necessarily been studied in that context.

What Kind of Input Supports Monolingual Development?

In addition to quantity, quality of the input matters. Parents' *responsiveness*, defined as prompt, contingent, and appropriate verbal replies to children's verbal initiatives (Bornstein, Tamis-LeMonda, Hahn, & Haynes, 2008) consistently predicts gains in language (Landry, Smith, & Swank, 2006). Particularly for children under 18 months, language input is more likely to result in language learning when it is responsive to the child's behavior, attention, or verbalizations (Tamis-LeMonda, Bornstein, Kahana-Kalman, Baumwell, & Cyphers, 1998). With 2- and 3-year-olds, beneficial language experience takes the form of conversations in which mothers ask their children questions and there are numerous conversational exchanges (Hoff, 2006).

The content of parent talk also influences children's language development and may be considered one aspect of responsiveness. In particular, children learn *words for things and events that interest them*. Younger children readily assume that words map onto objects they find interesting (Hollich, Hirsh-Pasek, & Golinkoff, 2000). When parents talk about what the child is looking at, children have more advanced vocabularies. Parents who redirect children's attention and label objects not of interest have children who learn fewer words (e.g., Hollich et al., 2000; Golinkoff, 1981).

Diversity of parental speech (i.e., the use of different word types and different communicative functions) is associated with children's vocabulary size, rate of vocabulary growth, and communicative diversity (e.g., Hart & Risley, 1995; Hoff, 2003; Tamis-LeMonda, Baumwell, & Cristofaro, 2012), phonological awareness (Sénéchal, Ouellette, & Rodney, 2006), listening comprehension (Sénéchal et al., 2006), and cognitive skills and school

The Specificity Principle (SP) in Multiple Language Learning

By Marc H. Bornstein

The Specificity Principle in multiple language learning asserts that the acquisition of multiple languages is moderated by six key specifics: setting condition, person, language, time, mechanism, and outcome. Our understanding of multiple language learning depends on these specifics, and they have policy implications.

Important setting conditions that moderate learning multiple languages include, for example, whether children live in isolated families or enclaves where the dominant language spoken is their first one (Flores et al., 2002); family socioeconomic status, education level, and literacy skills (Carhill, Suárez-Orozco, & Páez, 2008); parents' desire to pass on their heritage language (Eilers, Pearson, & Cobo-Lewis, 2006); and exposure to each language (Bialystok, 2001; Cote & Bornstein, 2012).

Characteristics of the person learning an additional language are also significant. For example, girls tend to learn language more rapidly than boys (Bornstein & Cote, 2005), and members of a linguistic minority group must possess a favorable attitude toward the dominant language group (Lambert, 1977). Whether a language learner views acquisition of a second language as instrumental to success matters as well (Clement, Gardner, & Smythe, 1977), as does language ability (Cummins, 1979). Although English globally dominates as an international second language, multiple language learning occurs among any languages, and so all combinations and permutations are possible. However, languages vary in typology, and different languages have different inflections, word orders, morphologies, etc., so language learning is moderated by the specific languages involved. In general, too, the greater the similarity of L1 and L2, the better the acquisition of L2 (Barac & Bialystok, 2012). Various construals of time play determinative roles in new language acquisition. One is the age (or developmental status) of the language learner. Generally, children acquire a second language faster and more easily than adults (Chan & Leong, 1994), and when a second language is learned after early childhood it is not learned as well as when it is acquired earlier (Abrahamsson & Hyltenstam, 2009). Thus, immigrant youth are more likely to be multilingual than their parents (Schwartz, Pantin, Sullivan, Prado, & Szapocznik, 2006). Duration of exposure counts too. Studying children who began a multilingual program in Grades K-3 in Arizona, MacSwan and Pray (2005) found that 21% reached L2 proficiency by the end of 2 years, 69% by the end of 4 years, and 92% by the end of 5 years. Historical time is another temporal consideration in multiple language learning. Heritage language maintenance in the U.S. has sometimes been described as following the "three-generation rule." The first generation of immigrants maintains the heritage language and may learn little English, their children born in the U.S. become multilingual, and the third generation is typically monolingual in English. Language learning also depends on the specific mechanism through which new languages are acquired. Spanish-English multilingual children's English vocabulary size is positively correlated with parental estimates of the proportion of English input that the child received, whereas Spanish-language vocabulary size is negatively correlated with estimates of English input (Marchman, Martínez-Sussmann, & Dale, 2004). Other mechanisms involve the reward of desirable language use and discouragement of undesirable language use, as well as observation and modeling by L2 learners (Gass & Mackey, 2007) and direct instruction involving formal tuition, curricula, and school classrooms (White, Muñoz, & Collins, 2007). Finally, multiple language learning is moderated by the language outcome. Language is multidimensional; language learning involves the production and comprehension of phonology, semantics, grammar, and pragmatics, and different indicators of language may change, change at different rates, change only in some language learners, in some languages, and so forth (Lipka & Siegel, 2007). L2 learners score higher in oral proficiency, reading, and writing, but lower in pronunciation (Cenoz, 2002). Additionally, multilinguals typically discuss certain topics mainly or only in one language (Genesee et al., 2004).

In sum, multiple language learning seems not to proceed in a uniform or universal fashion, but is moderated by multiple factors of setting condition, person, language, time, mechanism, and outcome. With the foregoing in mind, we can see too that the SP has implications for language science and for social policy. The SP helps to make sense of disparate results in the corpus of language research, refine investigations of multiple language learning, and identify gaps in language science. The SP also has implications for policy-making, program design, and classroom teaching. Traditionally, majoritarian positions shape policy recommendations; however, program designs concerned with second language learning need to focus on specific setting conditions, peoples, languages, times, mechanisms, and domains. Many children from language minorities participate in intervention programs, but a "one-size-fits-all" strategy may not benefit them equally. Language-learning programs are best fine-tuned based on the characteristics of different multilingual children (see Bornstein, 2013).

performance (Marchman & Fernald, 2008). The number of different words mothers use and the frequency with which those words appear in child-directed speech predict children's vocabulary development (Hoff, 2006).

Lexical and grammatical properties of input to children also matter. The overall grammatical complexity of utterances in child-directed speech, the informativeness of the context, and, for verbs, the range of different syntactic structures in which verbs appear, are all positive predictors of vocabulary development (Hoff, 2003; Hoff & Naigles, 2002). The number of different grammatical structures mothers use predicts children's grammatical development as well (Huttenlocher, Waterfall, Vasilyeva, Vevea, & Hedges, 2010). Mothers' co-construction of narratives with their children is also associated with children's vocabulary (Rowe, 2012).

Parents who talk at length with their children regarding past experiences (i.e., by *elaborately and extensively reminiscing* with their children) have children who excel in narrating (see Fivush, Haden, & Reese, 2006, for a review), and this may in turn influence many other levels of language (e.g., vocabulary). In elaborative reminiscing, parents ask many wh- questions about past events, encouraging children to say who was involved, what objects were involved, where and when something occurred, how one thing led to another, and why people behaved as they did. Low-income mothers who were randomly assigned to a condition in which they were instructed and encouraged to elaborate conversations with their 3- to 4-year-old children about past experiences (e.g., what happened at preschool) had children whose vocabularies and narrative skills exceeded those of their peers assigned to a control condition (Peterson, Jesso, & McCabe, 1999). This finding was extended in another study of 4-year-olds; low-income mothers trained in elaborative reminiscing had children with better narratives and story comprehension than children of mothers trained in dialogic reading (Reese, Leyva, Sparks, & Grolnick, 2010). Adults trained to elaborate on and take dictation of children's oral narratives for a year succeeded in bringing children's vocabularies from significantly below average to average and improved their narratives compared to children in comparable preschools who did not receive such input (McCabe, Boccia, Bennett, Lyman, & Hagen, 2010). The ability to produce an oral narrative upon entrance to kindergarten predicts 4TH, 7TH, and 10TH grade reading comprehension (Snow, Porche, Tabors, & Harris, 2007).

> Parents who talk at length with their children regarding past experiences … have children who excel in narrating …, and this may in turn influence many other levels of language …

Positive tone is also important. When maternal speech is marked by negatively toned commands and other forms of directives, language development is insufficiently supported (Hart & Risley, 1995; Hoff-Ginsberg, 1986). Mother's referential (but not regulatory) language contains more nouns and adjectives, whereas regulatory language is characterized by fewer specific words and more pronouns (Tamis-LeMonda, Song, Leavell, Kahana-Kalman, & Yoshikawa, 2012). An overreliance on commands and directives may cut short the rich vocabulary that emerges when parents ask questions. For example, "Where would you like to go?" invites a conversational response whereas "Let's go" does not.

Teaching vocabulary in *integrated and meaningful contexts* also enriches and deepens children's background knowledge and hence their lexicons (Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009). An adult who talks about hammers, hard hats, screwdrivers, and tool belts while building something with a child or reading a book about building provides an optimal context for acquiring extensive, connected vocabulary and concepts.

Beyond providing children with the words of their language, parents facilitate matching words to their referents through *nonverbal behaviors such as gesturing*. Gestures make parents' intentions salient and "narrow the search space" (Zukow-Goldring, 2006). Moreover, synchronizing gestures and words create a unitary experience for infants who perceive such stimuli as "belonging together" (Rader & Zukow-Goldring, 2010). Research supports the benefits of gestures for child word learning (e.g., Rowe & Goldin-Meadow, 2009; Tamis-LeMonda, Song, Leavell, Kahana-Kalman, & Yoshikawa, 2012). Some cultures use gestures to a greater extent than others. Children from these cultural groups (e.g., Mexican children) may display more gesture use

and higher skills at sequencing and imitating actions and following commands that incorporate gestures despite lower expressive language (Tamis-LeMonda, Song et al., 2012).

Book sharing also supports oral language and emergent literacy. Emergent literacy skills—developmental precursors to literacy—include growth of receptive vocabulary and narrative skills, concepts and knowledge, articulation, phonological awareness, print concepts and awareness, and early forms of writing such as scribbles and drawings (Whitehurst & Lonigan, 1998). These too emerge in the context of rich language conversations between parent and child especially when these conversations occur around books. Interactive reading mirrors structural features of classroom lessons and therefore equips children with interactive strategies for classroom participation (Sinclair & Coulthard, 1975). The language parents direct to children during bookreading is more diverse than that used in many other situations, which may explain the benefits of bookreading interactions for early language development (Hoff-Ginsberg, 1991; Song et al., 2012).

Children growing up in schooled societies are expected to develop literacy skills (Tamis-LeMonda & Song, 2013). A recent report from the National Early Literacy Panel (2008) presents a meta-analysis of research and recommendations for early childhood educators on promoting foundational literacy skills. The report identifies the skills that predict later reading, writing or spelling outcomes, and the types of early literacy intervention that promote children's early literacy skills. Their findings support the importance of alphabet knowledge, phonological awareness, rapid auto-naming of letters or digits, rapid auto-naming of objects or colors, writing one's name, and phonological memory as predictive skills for literacy development. An additional five early literacy skills were also identified as potentially important variables, including concepts of print, print knowledge, reading readiness (e.g., alphabet knowledge), oral language skills, and visual processing.

Engagement in literacy activities such as book reading promotes all these emergent literacy skills (Duursma et al., 2007; Raikes et al., 2006; Rodriguez & Tamis-LeMonda, 2011; Sénéchal & LeFevre, 2002). In turn, emergent literacy skills relate to later measures of cognitive development, positive attitudes toward literacy, school readiness, and later reading achievement (Raikes et al., 2006; Sénéchal, LeFevre, Hudson, & Lawson, 1996).

However, not all parents (immigrant or native-born, monolingual or multilingual) are confident or comfortable reading to their children. Furthermore, immigrant families in the United States often have less access to books in their native language and engage in lower rates of book reading compared to monolingual families (Raikes et al., 2006). Despite these challenges, studies of programs seeking to promote reading aloud (e.g., *Reach Out and Read*; see below) suggest that even parents with limited language skills in English can be receptive to messages regarding reading aloud (e.g., Silverstein, Iverson, & Lozano, 2002). Wordless picture books may be a way to engage parents in sharing books with children without arousing anxiety about their own literacy skills.

In short, most of the lessons learned regarding optimal linguistic input to monolingual children apply to multilingual children: Children need to hear substantial amounts of responsive, positive, diverse, complex talk about objects and past events of interest to them. Because such input is likely to be best provided by native speakers of a given language, parents should be encouraged to speak the language(s) with which they feel most comfortable. Parents who are less skilled in English will feel most comfortable, and in turn offer richer language input, when speaking their native tongue. In contrast, parents who are fluent multilinguals offer children rich language experiences in multiple languages, and in turn promote fluent multilingualism in their children.

What Home, Education, and Community Contexts Support Learning Multiple Languages?

In the United States, many policy discussions regarding multilingualism have focused on the potential for multilingual children to experience lags in measured L1 and L2 relative to monolingual children (Bialystok & Feng, 2011; Gathercole & Thomas, 2009; Hoff, 2013; Oller & Eilers, 2002; Páez, Tabors, & López, 2007). These apparent lags are in part the consequence of study design challenges regarding confounding family characteristics (i.e., poverty). Discussions should be reframed to identify and strengthen contexts that best support language development in multilingual children. We focus here on two factors: (1) *early exposure* to quality input in L1 and L2 languages; and (2) *continued support* of both L1 and L2 development.

1) Early Exposure to Quality L1 and L2 Language Input. Existing research supports the idea that early, *high quality* exposure to multiple languages results in enhanced child language outcomes across each of the

languages. Children who are exposed to *high quality* input in two languages before the age of 3 years (and continue to be exposed to both over time) outperform others who are first exposed after age 3 in reading, phonological awareness, and competence in both languages (Kovelman, Baker, & Petitto, 2008). Children who hear two languages from infancy start to learn both languages simultaneously, and the course of development in each language looks very much like the trajectory followed by monolingual children. The kinds of words children learn and the relations between their vocabulary and grammatical development in each language show the same patterns as are seen in monolingual development (Conboy & Thal, 2006; Parra, Hoff, & Core, 2011). Despite concerns about apparent lags experienced by multilingual children in L1 and L2 relative to monolingual peers, when the total language of multilingual children is considered inclusive of L1 and L2, an assessment practice that is optimal, the overall rate of growth is at least equal to the rate of language growth in monolingual children (Hoff et al., 2012). Thus, if opportunities to learn more than one language from fluent speakers exist early on, children learning multiple languages will not be hindered in their development. Rather, the likelihood of them becoming proficient in both languages is greater than the likelihood for children without such opportunities.

As is the case for monolingual development, the rate of language development in multilingual children depends on the amount of language exposure in each language (De Houwer, 2009; Hoff et al., 2012; Place & Hoff, 2011; Song et al., 2012). For example, positive relations were found between the percentages of words children were reported to produce on Spanish and English MacArthur Communicative Development Inventories (a parental survey of a child's language development) and estimates of input in each language (Hoff et al., 2012; Place & Hoff, 2011). Hearing substantial language input from multiple speakers of any given language is more supportive of language development than hearing it from fewer speakers (Jia, Aaronson, & Wu, 2002; Place & Hoff, 2011).

The proficiency of the speakers who talk to children also matters. Among adults who were immigrants as children or teenagers, L2 skills are related to differences in their parents' levels of language (Jia et al., 2002), with more fluent parents engendering greater fluency in their children. In young simultaneous multilinguals, differences in L2 skills are related to the proportion of their input that is provided by native speakers of that language over and above the effects of the amount of language exposure (Place & Hoff, 2011), a practice that has implications for staff to child ratios in schools.

2) Need for Continued Support of Both L1 and L2. In the United States, it is a common pattern for MLL toddlers to become increasingly English-dominant in their language skills during the preschool years, while growth in L1 decelerates, reflecting increases in their exposure to English both inside and outside the home (Bridges & Hoff, in press). However, studies have documented that this need not be the case when L1 and L2 receive continual support. For example, studies of children in environments that actively support multilingualism (e.g., children in two-way bilingual schools[1] in the United States and Canada and Welsh-English multilinguals in Wales) indicate that if dual language input is maintained, multilingual children can perform on par with monolingual children in both languages by the age of 10 years (Gathercole & Thomas, 2009). In fact, there is strong evidence to suggest that when children are reared in a high-quality language environment where both L1 and L2 are valued and used in an ongoing way, learning multiple languages has cognitive, social, and potentially economic benefits (e.g., Barac & Bialystok, 2012; Bialystok & Feng, 2011; Mechelli et al., 2004).

Considerable research on the language and literacy development of preschool children indicates that multilingual programs and approaches that support and develop students' L1 skills have other important advantages (Barnett, Yarosz, Thomas, Jung, & Blanco, 2007; Páez et al., 2007; Tabors, Páez, & López, 2003). Access to multilingual programming can assist children in their language and literacy development (August & Shanahan, 2006) by facilitating the integration of component skills (e.g., sound-symbol awareness, grammatical knowledge, vocabulary knowledge, etc.; Castro, Páez, Dickinson, & Frede, 2011). The development of language and literacy skills in one language can support the development of parallel skills in a second or third language (Brisk & Harrington, 2007). For example, Spanish-language skills and growth in Spanish contribute to the development of reading skills in English (Rinaldi & Páez, 2008). Importantly, rates of word growth in *either* language are associated with a variety of school readiness skills (Tamis-LeMonda, Song, Luo, Kuchirko, Kahana-Kalman, Yoshikawa & Raufman, forthcoming). Phonological awareness also shows such transfer from one language to the other;

[1]Two-way multilingual schools usually involve a student body half of which is fluent in one language, half in another, and instruction in each language for a certain portion of each day. Such schools support language-majority and language-minority students.

phonological awareness in low-income preschool Spanish-English MLL children at the end of the school year was strongly related to development of phonological awareness in the other language (Dickinson, McCabe, Clark-Chiarelli, & Wolf, 2004).

A full review of the evidence supporting multilingual and first-language education is beyond the scope of this report, but existing evidence strongly supports the approach that language programs for multilingual children should provide the opportunity for maintaining and developing L1 language and literacy skills whenever possible. Despite accumulating evidence that multilingual and first-language education are at least as effective as English immersion, such approaches remain politically controversial in the United States (Barnett et al., 2007).

Frequently Asked Questions about Multiple Language Learning: Should Immigrant Parents Be Told to "Speak English" to Their Children?

Children acquire language best when parents speak with them in a language in which parents are proficient. If a parent is most comfortable in English, then early exposure to such proficient English is beneficial (Kovelman et al., 2008). If one parent is proficient in Dutch and another in French, for example, infants will show fluent acquisition of both Dutch and French.

However, given the historical issues in the United States, parents, teachers, and other professionals sometimes are concerned that children who are exposed to L1 at home may not have sufficient English language exposure to prepare them for school. Unfortunately, when parents with limited English proficiency follow the frequent advice to speak primarily English to their children, they may be sacrificing a great deal in overall language development and getting less than expected in return in English development. For young immigrants, use of L2 in the home is a positive predictor of development of that language only if the parents have achieved a threshold level of proficiency in the second language (Paradis, Genesee, & Crago, 2011). When mothers in predominantly L1 homes increase their use of L2, they do not necessarily improve their children's skills in that language, but they do decrease their children's skill in L1 (Hammer, Davison, Lawrence, & Miccio, 2009).

Parents' language use does more than provide a model for language learning. Language is also a primary vehicle through which adults socialize children, foster children's cognitive development, communicate information, and transmit the beliefs and values of their culture. Parents may also limit their ability to convey content when they communicate with their children in a language they do not know well. In fact, children who speak their parents' heritage language enjoy better relationships with their families (Oh & Fuligni, 2010) and are less likely to be alienated from them (Tabors, 1997). Finally, when parents do not use L1 in conversation with their children, they deny their children the opportunity to become multilingual.

Does Learning More Than One Language Put Children at a Disadvantage?

As noted above, in many countries around the world it is common for children to be exposed to multiple languages from birth, and such children are not at greater risk for language impairment (Paradis et al., 2011). Likewise, there is no evidence that giving up a heritage language will result in improved language outcomes in L2. Multilingual children's acquisition strategies and developmental patterns are remarkably similar to those of monolingual children (De Houwer, 2009). Multilingual children develop separate, but related, linguistic systems, allowing them to learn a new language without interfering with the development of the first (Genesee, Paradis, & Crago, 2004). In fact, learning a heritage language facilitates acquisition of the second (Bialystok, 2001). In addition, a strong basis in L1 promotes school achievement in L2.

Similarly, multilingual children are *not* at a cognitive disadvantage; to the contrary, there is a large body of work that suggests that being multilingual fosters children's ability to think about language per se, leading to increased metacognitive and metalinguistic skills (Bialystok, 2007). Recent brain research indicates that multilinguals have greater brain tissue density in the areas of the brain related to language, memory, and attention, with the highest levels of tissue density among those who were exposed to a second language prior to age 5 (Mechelli et al., 2004).

Multilingual children have been found to outperform monolingual children on measures of executive control (Barac & Bialystok, 2012; Bialystok, 2007) as early as age two (Poulin-Dubois, Blaye, Coutya, & Bialystok, 2011). Furthermore, multilingual children display flexibility in learning novel words or additional labels for previously known objects or actions, whereas monolingual children often have more difficulty learning a new label for an object that already has a name (Yoshida, 2008; but see Mervis, Golinkoff, & Bertrand, 1994). These differences are likely due to children adopting adaptive strategies for learning the words of their specific language contexts.

Fluent multilingualism—for example, where youth are proficient in English and their heritage language—is associated with high academic achievement and positive personality adjustment (Portes & Rumbaut, 2001).

That is, principles of "mutual exclusivity" (that referents have only one label) may be an effective way to build vocabulary in a monolingual context, yet less effective in situations where children are learning more than one language and this principle is frequently violated.

Knowledge of two languages also appears to increase children's early literacy skills including phonemic awareness, decoding, and use of words with similar roots (Yoshida, 2008). Code-switching, or switching back-and-forth between languages within an utterance or in the course of a conversation, is not a sign of confusion, but indicative of children's increased linguistic and cognitive control (Bhatt & Bolonyai, 2011).

Fluent multilingualism—for example, where youth are proficient in English and their heritage language—is associated with high academic achievement and positive personality adjustment (Portes & Rumbaut, 2001). Many authors (e.g., García, 1983; Rogler, Cortes, & Malgady, 1991) have speculated that individuals who have the ability to switch between two or more languages also exhibit higher cognitive functioning and mental health status than English Language Learners who abandon one of their languages.

Vocabulary Size: A Possible Exception?

Successful acquisition of multiple languages is desirable and possible given optimal support, but we would be remiss to ignore the fact that many children grow up in less than optimal language learning environments and that this circumstance results in some documented difficulties. Vocabulary skills are a domain of particular weakness for such dual language learners (Carlo et al., 2004). For example, a longitudinal study with young low socioeconomic status (SES) Spanish-speaking children found that these children are at risk for delays in early literacy development due to poor oral language abilities, in particular their low levels of vocabulary in both English and Spanish (Páez et al., 2007; Tabors et al., 2003). Children in this sample displayed limited English vocabulary skills when they were first assessed as 4-year-olds, and the gap between monolingual norms and the sample persisted through first grade. These findings are corroborated by other research with Spanish-speaking children (Lindsey, Manis, & Bailey, 2003), including research with Spanish-speaking children from high SES backgrounds (Umbel, Pearson, Fernandez, & Oller, 1992). Moreover, a review of vocabulary and second language acquisition concluded that Spanish-English dual language learners lag behind their monolingual English-speaking peers in both depth and breadth of vocabulary knowledge (August, Carlo, Dressler, & Snow, 2005). Comparative research with various multilingual populations has also found such a shortfall with Hebrew-English, Spanish-English, and Chinese-English multilingual students in first grade (Bialystok, Luk, & Kwan, 2005).

There are two important points to note regarding these research findings on vocabulary development. First, uneven vocabulary knowledge is common for young dual language learners. Second, there is a lack of data disaggregated by SES status, as the majority of studies have focused on multilingual children from low SES backgrounds.

Why Do Many Multilingual Learners Display A Vocabulary Gap?

The vocabulary gap experienced by many MLLs could be explained in part by demographic factors such as living in poverty (Hart & Risley, 1995). One in three immigrant families (34.1%) is considered poor when cost of housing, food, transportation for work, clothing, utilities, etc., are taken into account (Hernández et al., 2008), a rate that considerably exceeds that of native-born peers (18.1%) in the United States. Also, compared to native-born parents, a larger percentage of immigrant parents have less than a high school education (Capps et al., 2005). Poverty contributes to linguistic challenges faced by multilingual children because of what we know about what might be called the "Language of Poverty." That is, monolingual children who are reared in poverty receive substantially less input, less varied input, and less positive input than their peers in higher SES environments (Hart & Risley,

1995; Hoff, 2006). Too often they hear reprimands and other types of language less optimal for language acquisition than the kind of optimal input mentioned above. The result is that their language processing is slower by 18 months of age and that their trajectory for language acquisition is much worse than their middle-class peers (Hurtado, Marchman & Fernald, 2008).

In addition to the impact of poverty, there is a *Matthew effect* in language acquisition: Children who receive rich linguistic input get better and better in both comprehension and production, whereas children who are not so fortunate learn fewer words and understand fewer sentences (Fernald, 2006). That is, the gap between children of different SES backgrounds widens with age (Hart & Risley, 1995). However, the limited research with dual language learners from high SES backgrounds indicates that children *can* catch up to monolingual norms during the elementary grades (Umbel et al., 1992).

Practice and Policy Implications

What Are Optimal Conditions For Promoting Multilingualism?

What then, can caregivers and teachers do to ensure that children develop strong multilingual skills? The research reviewed in this report recommends several key strategies:

1. Ensure that children in multilingual contexts have long-term and enriched exposure to, and opportunity to use, **both languages** in a variety of contexts (Paradis et al., 2011).
2. Create an environment in which each language the child is learning to speak is supported; support the minority language (L1) in the child care environment.
3. Support L1 as much as possible by, for example, visits to areas where L1 is the dominant language spoken, as children may begin to prefer the majority language.
4. Speak to children in the language that comes most naturally to the caregiver, resulting in a richer and more diverse language environment.
5. Develop and/or identify programs that expose children to high-quality input in L2 at early ages.
6. Do not ascribe perceived language delays to multilingualism.

How Do We Get Accurate Information about Multilingualism Out to Parents of Multilingual Children: Promising Strategies

Messages about best practices regarding multilingual children frequently do not reach parents, leading to concerns and confusion about how best to foster language development. How can we bring messages from research to parents, particularly those who are low-income and ethnically and linguistically diverse, especially in the early years of a child's life (Dishion, Shaw, Connell, Gardner, Weaver, & Wilson, 2008)?

Delivery of parenting messages and interventions to multilingual homes may be complicated by a number of unique challenges. For instance, barriers to providing messages to parents through intervention in different settings may include the availability of program materials in L1 (Dumas, Arriaga, Begle, & Longoria, 2011), the availability of specialists/program staff who speak the same language(s) as the target family (Flores, 2005), and a cultural mismatch between families and intervention messages affecting participation and engagement (Dumas, Arriaga, Begle, & Longoria, 2010). Additional complications for multilingual families who may also be immigrants to the United States and have limited resources include the lack of knowledge about the availability of programs as well as fear of participation due to the potential to be found undocumented. Despite these challenges, there are four primary routes through which messages about language may successfully be delivered to parents of multilingual children:

1. home visitation,
2. healthcare,
3. center-based early childhood programs, and
4. mass media.

Home Visitation

The home visiting model, in which professionals visit the home of a target family to provide direct guidance, training, education, and social support, is one of the most widely used forms of services aimed to enhance early parent-child interactions in the United States. The U.S. Department of Health and Human Services (DHHS) has identified 22 home visiting models, of which "evidence of effectiveness" has been shown for nine (Paulsell, Avellar, Sama Martin, & Del Grosso, 2011). Parenting issues

are addressed in these programs through strategies such as counseling, modeling behaviors, videotaping interactions with feedback, provision of learning materials such as toys and books, and motivational interviewing; examples are programs such as the Parent-Child Home Program (PCHP; Madden, O'Hara, & Levenstein, 1984) and Playing and Learning Strategies (PALS; Landry et al., 2011). Taken together, the overall effect of home visitation programs on child outcomes has been modest but consistent, with the strongest effects related to programs that focus on parenting practices and reinforce guidance with modeling and props such as books (Dickinson & Caswell, 2007). Impacts often extend to key psychosocial factors ("toxic stressors" such as maternal depression, Shonkoff et al., 2012). However, the relatively high cost of these programs—in the range of $2,000 to $6,000 per year—is a barrier to population level implementation (US Department of Health and Human Services, 2011). Home visitation programs have been effectively implemented with multilingual families, with PALS representing one example (Landry et al., 2011).

Health Care

Pediatric primary health care represents an innovative and underutilized platform that provides two distinct advantages for engaging parents. Thirteen to 15 preventive visits from birth through the age of 5 years are recommended by the American Academy of Pediatrics (AAP) (Hagan, Shaw, & Duncan, 2008) and provide an opportunity for "delivery of dose" (i.e., sufficient reinforcement of key information) that is comparable to that of some home visitation models. Health care successfully accesses otherwise difficult-to-reach populations, including low income, multilingual families, because of expansions of insurance (Kaiser Commission on Medicaid and the Uninsured, 2010) together with vaccination requirements for school entry. Furthermore, a recent initiative called the "Patient Centered Medical Home" (PCMH) further enhances the opportunity provided by pediatric primary care to effectively work with parents through a multidisciplinary emphasis on family and psychosocial factors (American Academy of Pediatrics, 2002). In the context of the present discussion, pediatric primary care delivered by PCMH models is likely to have a strong foundation for implementation of programs engaging at-risk or hard-to-reach parents (e.g., low-SES multilingual parents). Three interrelated models of programs working with such populations and using strategies similar to those used by home visitation programs have been well-studied, including *Reach Out and Read* (ROR; Klass, Dreyer, & Mendelsohn, 2009; Zuckerman, 2009), the Video Interaction Project (VIP; Mendelsohn, Dreyer, Brockmeyer, Berkule, & Morrow, 2011; Mendelsohn, Dreyer, Flynn, Tomopoulos, Rovira, et al., 2005), which takes place during well child visits (birth to age three), and Healthy Steps (HS; Minkovitz et al., 2003). Program costs in this setting are reduced relative to other settings as a result of leveraging existing infrastructure and limiting need for added caregiver/provider travel time. Costs in the pediatric platform can be as little as $10–15/child/year for ROR, enhancing potential for population-wide dissemination. ROR is particularly illustrative of this potential, with an established network of more than 4,700 sites across the United States serving approximately 4,000,000 young children each year, nearly three-quarters of whom live in at-risk, low-income and/or ethnically and linguistically diverse homes. As such, ROR reaches almost 25% of all low-income 0- to 5-year-old children in the United States today. Studies of both ROR and VIP have documented effective engagement of multilingual families (Mendelsohn et al., 2005; (Mendelsohn, Dreyer, Brockmeyer, Berkule-Silberman, & Morrow, 2011; Mendelsohn, Huberman, et al., 2011; Needlman, Toker, Dreyer, Klass, & Mendelsohn, 2005; Silverstein et al., 2002).

Center-Based Early Childhood Education Programs (ECE)

Center-based programs provide an opportunity to engage with caregivers from at-risk families, especially with increasing trends of parenting relying on center-based programs for early child care (e.g., NICHD ECCRN, 2001); however, professional development for ECE staff to provide curricula sensitive to multilingual children would be essential. This has been particularly well-demonstrated through programs set during the preschool period such as Head Start and programs that have utilized Head Start settings such as Preschool PATHS-REDI and the Incredible Years (Bierman et al., 2008; Reid, Webster-Stratton, & Beauchaine, 2001). During the birth to 3-year period, Early Head Start (EHS) works with parents, many of whom speak languages other than English, on site or through home visitation, building on parent goals and strengths to facilitate parent-child interactions. In a large randomized controlled trial, EHS was associated with improvements in the overall home environment as well as increased reading, enhanced play, and reduced harsh discipline (Love et al., 2005). Despite documented impacts of ECE on par-

enting, capacity represents a barrier to population-level utilization of ECE for messaging, with EHS presently serving approximately 3% of low income children (DiLauro, 2009; Isaacs & Roessel, 2008).

Mass Media

Mass media have been implicated as having a host of negative effects on children; watching television in the first several years of life is associated with increased risk of attention problems (Christakis, Zimmerman, DiGiuseppe, & McCarty, 2004), aggression (Anderson & Bushman, 2001) and obesity (Crespo et al., 2001). Having said that, it is worth considering whether mass media could be used to convey information about multilingualism to *parents*.

Both traditional media such as print, radio and television, as well as newer platforms such as the Internet, social media, and mobile electronic devices have potential for impacts on behaviors, and therefore require careful consideration in seeking to engage multilingual, ethnically diverse, and at-risk parents. Media have some clear strengths with regard to the transmission of public health messages to parents, notably the sheer percentage of the population reached, as well as the low per capita cost for broadcasting such messages. Unfortunately, the potential power of media may be most clearly demonstrated outside of public health campaigns, in terms of *undesirable* behaviors modeled in the context of programming intended for entertainment, misinformation about health issues disseminated on the Internet, and messages of unsupported promises embedded in advertisements from commercial entities. Evidence is mixed regarding public health campaigns directed at changing behavior.

Policy Action Plan

The scientific research regarding the language and literacy development of multilingual children is bountiful and must be considered by any educational or policy organization interested in evidence-based best practices. This work will have more impact if made available to a wide range of stakeholders (parents, pediatricians, educators, child professionals, and policy makers) through a well-designed dissemination and implementation plan. We recommend the following steps to achieve these goals:

Step 1

Collaborations regarding multilingual children should be developed across disciplines of early childhood professionals, including scientist and non-scientist educators, psychologists, speech and language pathologists, and medical healthcare providers, together with public policy leaders.

These collaborations should be bidirectional, seeking to share research findings with, but also to discuss problems faced by, practitioners on the ground. Collaborations should include: (1) alliances across professional organizations (e.g., the Society for Research in Child Development and the American Academy of Pediatrics); (2) communication between basic and clinical scientists (e.g., meetings of researchers and clinicians at American Speech-Language-Hearing Association); (3) communication between scientists and other child professionals/policymakers (e.g., this report).

Step 2

Child professionals and policymakers should strategize to deliver clear and accessible messages from developmental research regarding best practices for supporting language and literacy development for multilingual children.

The delivery of such messages should: (1) Utilize multiple platforms, including those with potential for universal access (i.e., mass media, health care) and those with potential for targeted access (i.e., home visitation, early childhood education); (2) Include careful consideration of cultural factors including language and parenting beliefs (e.g., encouraging families to identify appropriate and feasible contexts in which to promote talk; (3) Be mindful of messages that will support learning in and out of school.

Step 3

The federal government should support research that: (a) further advances an understanding of basic developmental processes in multilingual children; (b) identifies and evaluates best practices regarding support of language and literacy development for multilingual children; and (c) optimizes delivery of messages regarding these best practices, with specific attention to: (1) implementation and cost-effectiveness across platforms; (2) potential for synergy in message delivery through cross-platform integration; and (3) children at high risk due to poverty.

Step 4

Strategies should be developed to address practical issues related to adoption of recommendations by child professionals, with attention to: (1) integration into existing professional development/continuing education and re-

quirements; (2) professional society policies and recommendations; (3) potential avenues for reimbursement.

Conclusions

This report debunks the myth that multilingualism is harmful to children, and offers guidance to parents (e.g., to speak language or languages in which they are comfortable), teachers (e.g., not to discourage parents from speaking L1), researchers, and policy makers on ways to promote positive language development in children from multilingual families. Children can become fluent in two languages and reap the benefits of dual-language skills under supportive contexts. Research on language development in monolingual children offers useful lessons for multilingual contexts: children's language is most supported when adults engage children in responsive, positive, varied, and complex talk about objects of interest to those children, past personal experiences, and books they are reading with them. Moreover, in order to provide children with such optimally supportive language environments, parents should speak with their children using the language(s) with which they are proficient. Finally, it is important that messages regarding the importance of early language experiences and development reach multiple audiences, most notably the parents who will be raising the next generation. We recommend that the delivery of findings from developmental research should use multiple platforms, including those with potential for universal access (i.e., mass media, health care) and those with potential for targeted access (i.e., home visitation, early childhood education). We hope that the conclusions from this report will be carefully and widely implemented using all these means. In short, language learning need not be a zero-sum game.

References

Abrahamsson, N., & Hyltenstam, K. (2009). Age of onset and nativelikeness in a second language: Listener perception versus linguistic scrutiny. *Language Learning, 59,* 249-306. doi: 10.1111/j.1467-9922.2009.00507.x

American Academy of Pediatrics. (2002). The medical home. *Pediatrics, 110*(1 Pt 1), 184-186.

Anderson, C. A., & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological Science, 12*(5), 353-359. doi: 10.1111/1467-9280.00366

Aud, D., Hussar, W., Kena, G., Bianco, K., Frohlich, L., Kemp, J., & Tahan, K. (2011). *The condition of education 2011.* National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC: U.S. Government Printing Office.

August, D., Carlo, M., Dressler, C., & Snow, C. E. (2005). The critical role of vocabulary development for English language learners. *Learning Disabilities Research and Practice, 20*(1), 50-57. doi:10.1111/j.1540-5826.2005.00120.x

August, D., & Shanahan, T. (2006). *Developing literacy in second-language learners: Report of the national literacy panel on language-minority children and youth.* Mahaw, N.J.: Erlbaum.

Baker, C., & Hornberger, N. H. (Eds). (2001). *An introductory reader to the writings of Jim Cummins.* Bristol, UK: Multilingual Matters.

Barac, R., & Bialystok, E. (2012). Multilingual effects on cognitive and linguistic development: Role of language, cultural background, and education. *Child Development, 83,* 413-422. doi:10.1111/j.1467-8624.2011.01707.x

Barnett, S. W., Yarosz, D. J., Thomas, J., Jung, K., & Blanco, D. (2007). Two-way and monolingual English immersion in preschool education: An experimental comparison. *Early Childhood Research Quarterly, 22,* 277-293. doi:10.1016/j.ecresq.2007.03.003

Bhatt, R. M., & Bolonyai, A. (2011). Code-switching and the optimal grammar of bilingual language use. *Bilingualism: Language and Cognition, 14*(4), 522-546.

Bialystok, E. (2001). *Multilingualism in development: Language, literacy, and cognition.* Cambridge, UK: Cambridge University Press.

Bialystok, E. (2007). Acquisition of literacy in multilingual children: A framework for research. *Language Learning, 57*(1), 45-77. doi: 10.1111/j.1467-9922.2007.00412.x

Bialystok, E., & Feng, X. (2011). Language proficiency and its implications for monolingual and bilingual children. In A. Durgunoglu & C. Goldenberg (Eds.), *Language and literacy development in multilingual settings* (pp. 121-138). New York, NY: Guilford Press.

Bialystok, E., Luk, G., & Kwan, E. (2005). Multilingualism, biliteracy, and learning to read: Interactions among languages and writing systems. *Scientific Studies of Reading, 9,* 43–61. doi: 10.1207/s1532799xssr0901_4

Bierman, K. L., Domitrovich, C. E., Nix, R. L., Gest, S. D., Welsh, J. A., Greenberg, M. T., … Gill, S. (2008). Promoting academic and social-emotional school readiness: The Head Start REDI program. *Child Development, 79*(6), 1802-1817. doi: 10.1111/j.1467-8624.2008.01227.x

Bornstein, M. H. (2013). *The specificity principle in multiple language acquisition.* Unpublished manuscript, Eunice Kennedy Shriver National Institute of Child Health and Human Development.

Bornstein, M. H., & Cote, L. R. (2005). Expressive vocabulary in language learners from two ecological settings in three language communities. *Infancy, 7,* 299-316. doi:10.1207/s15327078in0703_5

Bornstein, M. H., Tamis-LeMonda, C., Hahn, C., & Haynes, O. M. (2008). Maternal responsiveness to young children at three ages: Longitudinal analysis of a multidimensional, modular, and specific parenting construct. *Developmental Psychology, 44*(3), 867-874. doi: 10.1037/0012-1649.44.3.867

Bridges, K., & Hoff, E. (in press). Older sibling influences on the language environment and language development of toddlers in multilingual environments. *Applied Psycholinguistics.*

Brisk, M. E., & Harrington, M. M. (2007). *Literacy and multilingualism: A handbook for all teachers* (2nd ed.). Mahwah, NJ: Erlbaum.

Capps, R., Fix, M., Murray, J., Ost, J., Passel, J. S., & Herwantoro, S. (2005). *The new demography of America's schools: Immigration and The No Child Left Behind Act.* Washington, DC: Urban Institute.

Carhill, A., Suárez-Orozco, C., & Páez, M. (2008). Explaining English language proficiency among adolescent immigrant students. *American Educational Research Journal, 45*(4), 1155-1179. doi: 10.3102/0002831208321443

Carlo, M. S., August, D., McLaughlin, B., Snow, C. E., Dressler, C., Lippman, D., … White, C. E. (2004). Closing the gap: Addressing the vocabulary needs for English language learners in multilingual and mainstream classrooms. *Reading Research Quarterly, 39,* 188-215. doi: 10.1598/RRQ.39.2.3

Castro, D. C., Páez, M. M., Dickinson, D. K., & Frede, E. (2011). Promoting language and literacy in young dual language learners: Research, practice and policy. *Child Development Perspectives, 5*(1), 15-21. doi: 10.1111/j.1750-8602.2010.00142.x

Castro, D. C., Espinosa, L., & Páez, M. (2011). Defining and measuring quality early childhood practices that promote dual language learners' development and learning. In M. Zaslow, I. Martinez-Beck, K. Tout, & T. Halle (Eds.), *Quality measurement in early childhood settings* (pp. 257-280). Baltimore, MD: Brookes.

Cenoz, J. (2002). Age differences in foreign language learning. *International Review of Applied Linguistics, 46*(3), 197-220. doi: 10.1515/IRAL.2008.009

Chan, S., & Leong, C. W. (1994). Chinese families in transition: Cultural conflicts and adjustment problems. *Journal of Social Distress and the Homeless, 3,* 263-281. doi: 10.1007/BF02087760

Christakis, D. A., Zimmerman, F. J., DiGiuseppe, D. L., & McCarty, C. A. (2004). Early television exposure and subsequent attentional problems in children. *Pediatrics, 113*(4), 708-713.

Clement, R., Gardner, R. C., Smythe, P. C. (1977). Motivational variables in second language acquisition: A study of Francophones learning English. *Canadian Journal of Behavioral Science, 9*(2), 123-133. doi: 10.1037/h0081614

Conboy, B. T., & Thal, D. J. (2006). Ties between the lexicon and grammar: Cross-sectional and longitudinal studies of multilingual toddlers. *Child Development, 77*(3), 712-735. doi: 10.1111/j.1467-8624.2006.00899.x

Cote, L. R., & Bornstein, M. H. (2012). *Vocabulary size among three groups of American immigrant children: Prediction and comparison.* Unpublished Manuscript.

Crespo, C. J., Smit, E., Troiano, R. P., Bartlett, S. J., Macera, C. A., & Andersen, R. E. (2001). Television watching, energy intake, and obesity in US children: Results from the Third National Health and Nutrition Examination Survey, 1988-1994. *Archives of Pediatric Adolescent Medicine, 155*(3): 360-365. doi: 10.1001/archpedi.155.3.360.

Cummins, J. (1979). Linguistic interdependence and the educational development of multilingual children. *Review of Educational Research, 4,* 222-251. doi: 10.3102/00346543049002222

De Houwer, A. (1990). *The acquisition of two languages from birth: A case study.* Cambridge, UK: Cambridge University Press.

De Houwer, A. (2009). *Multilingual first language acquisition.* Bristol, UK: Multilingual Matters.

Dickinson, D. K., & Caswell, L. C. (2007). Building support for language and early literacy in preschool classrooms through in-service professional development: Effects of the Literacy Environment Enrichment Program (LEEP). *Early Childhood Research Quarterly, 22,* 243-260. doi: 10.1016/j/ecresq.2007.03.001

Dickinson, D. K., McCabe, A., Anastasopoulos, L., Peisner-Feinberg, E., & Poe, M. D. (2003). The comprehensive language approach to early literacy: The interrelationships among vocabulary, phonological sensitivity, and print knowledge among preschool-aged children. *Journal of Educational Psychology, 95,* 465-481. doi: 10.1037/0022-0663.95.3.465

Dickinson, D. K., McCabe, A., Clark-Chiarelli, & Wolf, A. (2004). Cross-language transfer of phonological awareness in low-income Spanish and English bilingual preschool children. *Applied Psycholinguistics, 25,* 323-347. doi: 10.1017/S0142716404001158

DiLauro, E. (2009). Learning, thriving, and ready to succeed. *ZERO TO THREE Policy Network.* Retrieved April 5, 2012, from http://www.zerotothree.org/public-policy/policy-toolkit/ehssinglesmar5.pdf

Dishion, T. J., Shaw, D., Connell, A., Gardner, F., Weaver, C., & Wilson, M. (2008). The Family Check-Up with high-risk indigent families: Preventing problem behavior by increasing parents' positive behavior support in early childhood. *Child Development, 79*(5), 1395-1414. doi: 10.1111/j.1467-8624.2008.01195.x

Dörnyei, Z., & Csizér, K. (2002). Some dynamics of language attitudes and motivation: Results of a longitudinal nationwide survey. *Applied Linguistics, 23*(4), 421-462. doi: 10.1093/applin/23.4.421

Dumas, J. E., Arriaga, X., Begle, A. M., & Longoria, Z. (2010). When will your program be available in Spanish? Adapting an early parenting intervention for Latino families. *Cognitive and Behavioral Practice, 17*(2), 176-187. doi: 10.1016/j.cbpra.2010.01.004

Dumas, J. E., Arriaga, X. B., Begle, A. M., & Longoria, Z. N. (2011). Child and parental outcomes of a group parenting intervention for Latino families: A pilot study of the CANNE program. *Cultural Diversity and Ethnic Minority Psychology, 17*(1),107-115. doi: 10.1037/a0021972

Duursma, E., Romero-Contreras, S., Szuber, A., Proctor, P., Snow, C., August, D., … Calderon, M. (2007). The role of home literacy and language environment on bilinguals' English and Spanish vocabulary development. *Applied Psycholinguistics, 28*(1), 171-190. doi: 10.1017/S0142716406070093

Eilers, R. E., Pearson, B. Z., & Cobo-Lewis, A. B. (2006). Social factors in multilingual development: The Miami experience. In P. McCardle & E. Hoff (Eds.*), Childhood multilingualism* (pp. 68-90). Buffalo, NY: Multilingual Matters.

Espinosa, L. M. (2013). *Challenging common myths about teaching young English Language Learners: An update to the seminal 2008 report*. New York, NY: Foundation for Child Development.

Fernald, A. (2006). When infants hear two languages: Interpreting research on early speech perception by multilingual children. In P. McCardle & E. Hoff (Eds.), *Childhood bilingualism: Research on infancy through school age* (pp. 19-29). Clevedon, UK: Multilingual Matters Press.

Fivush, R., Haden, C. A., & Reese, E. (2006). Elaborating on elaborations: Role of maternal reminiscing style in cognitive and socioemotional development. *Child Development, 77*(6), 1568-1588. doi: 10.1111/j.1467-8624.2006.00960.x

Flores, G. (2005). The impact of medical interpreter services on the quality of health care: A systematic review. *Medical Care Research and Review, 62*(3), 255-299. doi: 10.1177/1077558705275416

Flores, G., Fuentes-Afflick, E., Barbot, O., Carter-Pokras, O., Claudio, L., Lara, M., … Weitzman, M. (2002). The health of Latino children: Urgent priorities, unanswered questions, and a research agenda. *Journal of the American Medical Association, 288*(1), 82-90. doi:10.1001/jama.288.1.82

García, E. (1983). *Early child bilingualism, with special reference to the Mexican-American child*. Albuquerque: University of New Mexico Press.

Gass, S., & Mackey, A. (2007). Input, interaction and output in second language acquisition. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition: An introduction* (pp. 175-199). Mahwah, NJ: Erlbaum.

Gathercole, V. C. M., & Thomas, E. M. (2009). Bilingual first-language development: Dominant language takeover, threatened minority language take-up. *Bilingualism: Language & Cognition, 12*(2), 213-237. doi: 10.1017/S1366728909004015

Genesee, F., Paradis, J., & Crago, M.B. (2004). *Dual language development and disorders: A handbook on bilingualism and seeond language learning*. Baltimore, MD: Brookes.

Golinkoff, R. M. (1981). The case for semantic relations: Evidence from the verbal and nonverbal domains. *Journal of Child Language, 8*(2), 413-437. doi: 10.1017/S0305000900003275

Grosjean, F. (2010). *Bilingual: Life and reality*. Cambridge, MA: Harvard University Press.

Hagan, J. F., Shaw, J. S., & Duncan, P. M. (2008). *Bright futures: Guidelines for health supervision of infants, children, and adolescents* (3RD ed.). Elk Grove Village, IL: American Academy of Pediatrics.

Hammer, C. S., Davison, M. D., Lawrence, F. R., & Miccio, A. W. (2009). The effect of maternal language on bilingual children's vocabulary and emergent literacy development during Head Start and kindergarten. *Scientific Studies of Reading, 13,* 99-121. doi: 10.1080/10888430902769541

Hart, B., & Risley, T. R. (1995). Meaningful differences in the everyday experience of young American children. Baltimore, MD: Brookes.

Hernandez, D. J., Denton, N. A., & Macartney, S. E. (2008). Children in immigrant families: Looking to America's future. *Social Policy Report, 22*(3), 16-17.

Hirsh-Pasek, K., Golinkoff, R. M., Berk, L. E., & Singer, D. G. (2009). *A mandate for playful learning in preschool: Presenting the evidence*. New York, NY: Oxford University Press.

Hoff-Ginsberg, E. (1991). Mother-child conversation in different social classes and communicative settings. *Child Development, 62*, 782-796. doi:10.1111/1467-8624.ep9109162253

Hoff-Ginsberg, E. (1986). Function and structure in maternal speech: Their relation to the child's development of syntax. *Developmental Psychology, 22*(2), 1-17. doi: 10.1037/0012-1649.22.2.155

Hoff, E. (2003). The specificity of environmental influence: Socioeconomic status affects early vocabulary development via maternal speech. *Child Development, 74,* 1368-1378. doi: 10.1111/1467-8624.00612

Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review, 26,* 55-88. doi: 10.1016/j.dr.2005.11.002

Hoff, E. (2013). Interpreting the early language trajectories of children from low-SES and language minority homes: Implications for closing achievement gaps. *Developmental Psychology, 49*, 4-14. doi: 10.1037/a0027238

Hoff, E., Core, C., Place, S., Rumiche, R., Señor, M., & Parra, M. (2012). Dual language exposure and early bilingual development, *Journal of Child Language, 39*, 1-27. doi:10.1017/S0305000910000759

Hoff, E., & Naigles, L. (2002). How children use input to acquire a lexicon. *Child Development, 73*(2), 418-433. doi: 10.1111/1467-8624.00415

Hoff, E., & Place, S. (2011). Bilingual language learners. In S. L. Odom, E. Pungello, & N. Gardner-Neblett (Eds.), *Infants, toddlers, and families in poverty: Research implications for early child care* (pp. 101-123). New York, NY: Guilford Press.

Hollich, G., Hirsh-Pasek, K., & Golinkoff, R. (2000). Breaking the language barrier: An emergentist coalition model for the origins of word learning. *Monographs for the Society for Research in Child Development, 65*(3), 91-135.

Hurtado, N., Marchman, V. A., & Fernald, A. (2008). Does input influence uptake? Links between maternal talk, processing speed and vocabulary size in Spanish-learning children. *Developmental Science, 11*(6), 31-39. doi: 10.1111/j.1467-7687.2008.00768.x

Huttenlocher, J., Waterfall, H., Vasilyeva, M., Vevea, J., & Hedges, L. V. (2010). Sources of variability in children's language growth. *Cognitive Psychology, 61*(4), 343-365. doi: 10.1016/j.cogpsych.2010.08.002

Isaacs, J., & Roessel, E. (2008). *Early Head Start (Research Brief #3)*. Washington, DC: The Brookings Institution.

Jia, G., Aaronson, D., & Wu, Y. (2002). Long-term language attainment of bilingual immigrants: Predictive variables and language group differences. *Applied Psycholinguistics, 23*(4), 599-621. doi: 10.1017/S0142716402004058

Kaiser Commission on Medicaid and the Uninsured. (2010). *Health coverage of children: The role of Medicaid and CHIP*. Retrieved from http://www.kff.org/uninsured/upload/7698-04.pdf

Klass, P., Dreyer, B. P., & Mendelsohn, A. L. (2009). Reach out and read: Literacy promotion in pediatric primary care. *Advances in Pediatrics, 56*, 11-27. doi: 10.1016/j.yapd.2009.08.009

Kovelman, I., Baker, S. A., & Petitto, L. (2008). Age of first bilingual language exposure as a new window into bilingual reading development. *Bilingualism: Language and Cognition, 11*(2), 203-223. doi: 10.1017/S1366728908003386

Lambert, W. E. (1977). The effects of bilingualism on the individual: Cognitive and socio- cultural consequences. In P. A. Hornby (Ed.), *Bilingualism: Psychological, social and educational implications*. New York, NY: Academic.

Landry, S. H., Smith, K. E., & Swank, P. R. (2006). Responsive parenting: Establishing early foundations for social, communication, and independent problem-solving skills. *Developmental Psychology, 42*(4), 627-642. doi: 10.1037/0012-1649.42.4.627

Landry, S. H., Smith, K. E., Swank, P. R., Zucker, T., Crawford, A. D., & Solari, E. F. (2011). The effects of a responsive parenting intervention on parent-child interactions during shared book reading. *Developmental Psychology, 48*(4), 969-986. doi: 10.1037/a0026400

Lindsey, K. A., Manis, F. R., & Bailey, C. E. (2003). Prediction of first-grade reading in Spanish-speaking English language learners. *Journal of Educational Psychology, 95*(3), 482-494. doi: 10.1037/0022-0663.95.3.482

Lipka, O., & Siegel, L. S. (2007). The development of reading skills in children with English as a second language. *Scientific Studies of Reading, 11,* 105-131. doi: 10.1080/10888430701343597

Love, J. M., Kisker, E. E., Ross, C., Raikes, H., Constantine, J., Boller, K., . . . Vogel, C. (2005). The effectiveness of Early Head Start for 3-year-old children and their parents: Lessons for policy and programs. *Developmental Psychology, 41*(6), 885-901. doi: 10.1037/0012-1649.41.6.88

MacSwan, J., & Pray, L. (2005). Learning English bilingually: Age of onset of exposure and rate of acquisition among English language learners in a bilingual education program. *Bilingual Research Journal, 29,* 653-678. doi: 10.1080/15235882.2005.10162857

Madden, J., O'Hara, J., & Levenstein, P. (1984). Home again: Effects of the Mother-Child Home Program on mother and child. *Child Development, 55*(2), 636-647.

Marchman, V. A., & Fernald, A. (2008). Speed of word recognition and vocabulary knowledge in infancy predict cognitive and language outcomes in later childhood. *Developmental Science, 11*(3), 9-16. doi: 10.1111/j.1467-7687.2008.00671.x

Marchman, V. A., Martínez-Sussmann, C., & Dale, P. S. (2004). The language-specific nature of grammatical development: Evidence from bilingual language learners. *Developmental Science, 7*(2), 212-224. doi: 10.1111/j.1467-7687.2004.00340.x

McCabe, A., Boccia, J., Bennett, M., Lyman, N., & Hagen, R. (2010). Improving oral language skills in preschool children from disadvantaged backgrounds: Remembering, writing, reading (RWR). *Imagination, Cognition & Personality*, *29*(4), 363-391. doi: 10.2190/IC.29.4.f

Mechelli, A., Crinion, J. T., Noppeney, U., O'Doherty, J., Ashburner, J., Frackowiak, R., & Price, C. J. (2004). Neurolinguistics: Structural plasticity in the bilingual brain. *Nature, 431*, 757. doi: 10.1038/431757a

Mendelsohn, A. L., Dreyer, B. P., Brockmeyer, C. A., Berkule-Silberman, S. B., & Morrow, L. M. (2011). Fostering early development and school readiness in pediatric settings. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research, Vol. 3* (pp. 279-294). New York, NY: Guilford Press.

Mendelsohn, A. L., Dreyer, B. P., Flynn, V., Tomopoulos, S., Rovira, I., Tineo, W., . . . Nixon, A. F. (2005). A randomized, controlled trial. *Journal of Developmental and Behavioral Pediatrics, 26*(1), 34-41. doi: 10.1097/DBP.0b013e3180324d87

Mendelsohn, A. L., Huberman, H. S., Berkule, S. B., Brockmeyer, C. A., Morrow, L. M., & Dreyer, B. P. (2011). Primary care strategies for promoting parent-child interactions and school readiness in at-risk families: The Bellevue Project for Early Language, Literacy, and Education Success. *Archives of Pediatric and Adolescent Medicine, 165*(1), 33-41. doi: 10.1001/archpediatrics.2010.254

Mervis, C. B., Golinkoff, R. M., & Bertrand, J. (1994). Two-year-olds readily learn multiple labels for the same basic level category. *Child Development, 65*, 971-991. doi:10.1111/j.1467-8624.1994.tb00810.x

Minkovitz, C. S., Hughart, N., Strobino, D., Scharfstein, D., Grason, H., Hou, W., . . . Guyer, B. (2003). A practice-based intervention to enhance quality of care in the first 3 years of life: The Healthy Steps for Young Children Program. *Journal of the American Medical Association, 290*(23), 3081-3091. doi: 10.1001/jama.290.23.3081

National Early Literacy Panel (U.S.), & National Center for Family Literacy. (2008). *Developing early literacy: Report of the National Early Literacy Panel.* Washington, DC: National Institute for Literacy.

Needlman, R., Toker, K. H., Dreyer, B. P., Klass, P., & Mendelsohn, A. L. (2005). Effectiveness of a primary care intervention to support reading aloud: A multicenter evaluation. *Ambulatory Pediatrics, 5*(4), 209-215. doi: 10.1367/A04-110R.1

NICHD ECCRN. (2001). Nonmaternal care and family factors in early development: An overview of the NICHD Study of Early Child Care. *Applied Developmental Psychology, 39*, 133-164.

Oh, J. S., & Fuligni, A. J. (2010). The role of heritage language development in the ethnic identity and family relationships of adolescents from immigrant backgrounds. *Social Development, 19,* 202-220. doi: 10.1111/j.1467-9507.2008.00530.x

Oller, D. K., & Eilers, R. E. (2002). *Language and literacy in bilingual children. Child Language and child development.* Tonawanda, NY: Multilingual Matters LTD.

Páez, M. M., Tabors, P. O., & López, L. M. (2007). Dual language and literacy development of Spanish-speaking preschool children. *Journal of Applied Developmental Psychology, 28*(2), 85-102. doi: 10.1016/j.appdev.2006.12.007

Paradis, J., Genesee, F., & Crago, M. B. (2011). *Dual language development and disorders: A handbook on bilingualism and second language learning* (2nd ed.). Baltimore, MD: Brookes.

Parra, M., Hoff, E., & Core, C. (2011). Relations among language exposure, phonological memory, and language development in Spanish-English bilingually developing 2-year-olds. *Journal of Experimental Child Psychology, 108(1), 113-125. doi: 10.1016/j.jecp.2010.07.011*

Paulsell, D., Avellar, S., Sama Martin, E., & Del Grosso, P. (2011). *Home visiting evidence of effectiveness review: Executive summary.* Retrieved from http://homvee.acf.hhs.gov/HomVEE_Executive_Summary.pdf

Pérez, P., & Zarate, M. E. (2006). *Latino public opinion survey of pre-kindergarten programs: Knowledge, preferences, and public support*. Los Angeles: University of Southern California, Tomás Rivera Public Policy Institute.

Peterson, C., Jesso, B., & McCabe, A. (1999). Encouraging narratives in preschoolers: An intervention study. *Journal of Child Language, 26*(1), 49-67. doi: 10.1017/S0305000998003651

Place, S., & Hoff, E. (2011). Properties of dual language exposure that influence 2-year-olds' bilingual proficiency. *Child Development, 82*(6), 1834-1849. doi: 10.1111/j.1467-8624.2011.01660.x

Portes, A., & Rumbaut, R. G. (2001). *Legacies: The story of the immigrant second generation*. Berkeley: University of California Press.

Poulin-Dubois, D., Blaye, A., Coutya, J., & Bialystok, E. (2011). The effects of bilingualism on toddlers' executive functioning. *Journal of Experimental Child Psychology, 108,* 567–579. doi: 10.1016/j.jecp.2010.10.009

Rader, N., & Zukow-Goldring, P. (2010). How the hands control attention during early word learning. *Gesture, 10*(2-3), 202-221. doi: 10.1075/gest.10.2-3.05rad

Raikes, H., Luze, G., Brooks-Gunn, J., Raikes, H. A., Pan, B. A., Tamis-LeMonda, C. S., … Rodriguez, E. T. (2006). Mother-child bookreading in low-income families: Correlates and outcomes during the first three years of life. *Child Development, 77*(4), 924-953. doi: 10.1111/j.1467-8624.2006.00911.x

Reese, E., Leyva, D., Sparks, A., & Grolnick, W. (2010). Maternal elaborative reminiscing increases low-income children's narrative skills relative to dialogic reading. *Early Education & Development, 21*(3), 318-342. doi: 10.1080/10409289.2010.481552

Reid, M. J., Webster-Stratton, C., & Beauchaine, T. P. (2001). Parent training in Head Start: A comparison of program response among African American, Asian American, Caucasian, and Hispanic mothers. *Prevention Science, 2*(4), 209-227. doi: 10.1023/A:1013618309070

Rinaldi, C., & Páez, M. (2008). Preschool matters: Predicting reading difficulties for Spanish-speaking students in first grade. *Learning disabilities: A contemporary journal, 6*(1), 71-84.

Rodriguez, E. T., & Tamis-LeMonda, C. (2011). Trajectories of the home learning environment across the first 5 years: Associations with children's vocabulary and literacy skills at prekindergarten. *Child Development, 82*(4), 1058-1075. doi: 10.1111/j.1467-8624.2011.01614.x

Rogler, L. H., Cortes, R. S., & Malgady, R. G. (1991). Acculturation and mental health status among Hispanics. *American Psychologist, 46,* 585-597. doi: 10.1037/0003-066X.46.6.585

Rowe, M. L. (2012). A longtitudinal investigation of the role of quantity and quality of child-directed speech in vocabulary development. *Child Development, 83,* 1762-1774. doi: 10.1111/j.1467-8624.2012.01805.x

Rowe, M. L., & Goldin-Meadow, S. (2009). Early gesture selectively predicts later language learning. *Developmental Science, 12*(1), 182-187. doi: 10.1111/j.1467-7687.2008.00764.x

Schwartz, S. J., Pantin, H., Sullivan, S., Prado, G., & Szapocznik, J. (2006). Nativity and years in the receiving culture as markers of acculturation in ethnic enclaves. *Journal of Cross-Cultural Psychology, 37,* 345–353. doi:10.1177/0022022106286928

Sénéchal, M., & LeFevre, J. (2002). Parental involvement in the development of children's reading skill: A five-year longitudinal study. *Child Development, 73*(2), 445-460.

Sénéchal, M., LeFevre, J. A., Hudson, E., & Lawson, E. P. (1996). Knowledge of storybooks as a predictor of young children's vocabulary. *Journal of Educational Psychology, 88*(3), 520-536. doi:10.1037/0022-0663.88.3.520

Sénéchal, M., Ouellette, G., & Rodney, D. (2006). The misunderstood giant: On the predictive role of early vocabulary to future reading. In D. Dickenson & S. Leuman (Eds.), *Handbook of early literacy research* (pp. 173-182). New York, NY: Guilford Press.

Shonkoff, J. P., Garner, A. S. & The Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and Section on Developmental Behavioral Pediatrics. (2012). The lifelong effects of early childhood adversity and toxic stress *Pediatrics, 129*, 232-246. doi: 10.1542/peds.2011-2663

Silverstein, M., Iverson, L., & Lozano, P. (2002). An English-language clinic-based literacy program is effective for a multilingual population. *Pediatrics, 109*(5), 76. doi: 10.1542/peds.109.5.e76

Sinclair, J. M., & Coulthard, M. (1975). *Towards an analysis of discourse: The English used by teachers and pupils*. London, UK: Oxford University Press.

Snow, C. E., & Kang, J. Y. (2006). Becoming multilingual, biliterate, and bicultural. In K. A. Renninger, I. E. Sigel, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology* (pp. 75-102). Hoboken, NJ: Wiley.

Snow, C. E., Porche, M. V., Tabors, P. O., & Harris, S. R. (2007). *Is literacy enough? Pathways to academic success for adolescents*. Baltimore, MD: Brookes.

Song, L., Tamis-LeMonda, C., Yoshikawa, H., Kahana-Kalman, R., & Wu, I. (2012). Language experiences and vocabulary development in Dominican and Mexican infants across the first 2 years. *Developmental Psychology, 48*(4), 1106-1123. doi: 10.1037/a0026401

Tabors, P. O. (1997). *One child, two languages: A guide for preschool educators of children learning English as a second language*. Baltimore, MD: Brookes.

Tabors, P., Páez, M., & López, L. (2003). Dual language abilities of bilingual four-year olds: Initial findings from the Early Childhood Study of Language and Literacy Development of Spanish-speaking Children. *NABE Journal of Research and Practice,* Winter, 70–91. Retrieved from, http://www.uc.edu/njrp

Tamis-LeMonda, C., Baumwell, L., & Cristofaro, T. (2012). Parent–child conversations during play. *First Language, 32*(4), 413-438. doi: 10.1177/0142723711419321

Tamis-LeMonda, C., Bornstein, M. H., Kahana-Kalman, R. Baumwell, L., & Cyphers, L. (1998). Predicting variation in the timing of language milestones in the second year: An events history approach. *Journal of Child Language, 25*(3), 675-700. doi: 10.1017/S0305000998003572

Tamis-LeMonda, C. S., & Song, L. (2013). Parent-infant communicative interactions in cultural context. In R. M. Lerner, E. Easterbrooks, & J. Mistry (Eds.), *Handbook of psychology,* (2ND ed., Vol. 6, pp. 143-170). Hoboken, NJ: Wiley.

Tamis-LeMonda, C. S., Song, L., Leavell, A. S., Kahana-Kalman, R., & Yoshikawa, H. (2012). Ethnic differences in mother–infant language and gestural communications are associated with specific skills in infants, *Developmental Science*, *15*(3), 384-397. doi: 10.1111/j.1467-7687.2012.01136.x

Tamis-LeMonda, C. S., Song, L., Luo, R., Kuchirko, Y., Kahana-Kalman, R., Yoshikawa, H., & Raufman, J. (forthcoming). Children's language growth in Spanish and English across early development: Association to school readiness. *Developmental Neuropsychology*.

Umbel, V. M., Pearson, B. Z., Fernandez, M. C., & Oller, D. K. (1992). Measuring bilingual children's receptive vocabularies, *Child Development, 63,* 1012-1020. doi: 10.1111/j.1467-8624.1992.tb01678.x

US Department of Health and Human Services. (2011). *Home visiting evidence of effectiveness: Implementing Parent-Child Home Program*. Retrieved April 1, 2012, from http://homvee.acf.hhs.gov/document.aspx?rid=3&sid=15&mid=5

White, J., Muñoz, C., & Collins, L. (2007). The his/her challenge: Making progress in a "regular" L2 programme. *Language Awareness, 16,* 278-299. doi: 10.2167/la419.0

Whitehurst, G. J., & Lonigan, C. J. (1998). Child development and emergent literacy. *Child Development, 69*(3), 848. doi: 10.1111/j.1467-8624.1998.tb06247.x

Yoshida, H. (2008). The cognitive benefits of early multilingualism. *Zero to Three*, Vol. 2, 26-30.

Zuckerman, B. (2009). Promoting early literacy in pediatric practice: Twenty years of reach out and read. *Pediatrics, 124*(6), 1660-1665. doi: 10.1542/peds.2009-1207

Zukow-Goldring, P. (2006). Assisted imitation: Affordances, effectivities, and the mirror sy tem in early language development. In M. A. Arbib (Ed.), *From action to language* (pp. 469-500). Cambridge, UK: Cambridge University Press.

Commentary

Promoting Positive Development Among Young Multilingual Learners

Lisa M. López
University of South Florida

The multilingual child, as described by McCabe et al. is slowly becoming the new norm both in the United States and throughout the world. As the world becomes more global it is both beneficial and necessary to understand the development of and promote positive growth within the multilingual population. McCabe and colleagues seek to provide a social and historical context for multilingual learners, provide a glimpse into the demographics of this varied population, seek answers within the language development literature of monolingual speakers, and critique home, educational, and community contexts positioned to support the development of multilingualism within the United States. This review of best practices is timely in that a quarter of children entering U.S. schools this year come from multilingual homes, and yet the educational system continues to struggle with meeting the needs of these children.

The review of social and historical contexts identifies the differences between additive and subtractive environments for multilingual children. While additive environments, as found in Canada and Europe, promote the development of multiple languages, the subtractive environment often experienced in the U.S. results in the development of emerging bilinguals, children who have the potential to become bilingual with the proper support system but often lack full development of language skills in any language. The lack of support for language in emerging bilinguals may be attributed to various factors, including poverty, reduced home language environments, and limited support for the home language within the school and community (López, 2013). Without support and full development of the home language, these children are put at risk for not fully developing English language skills. As discussed by McCabe et al., research on dual language learners clearly points to the importance of the first language in the child's development of English.

The heterogeneity of the multilingual population in the U.S. is another important factor that warrants more attention when discussing best practices, yet is briefly discussed by McCabe et al. As mentioned in this report, over 350 languages are represented within the U.S. population, with 70% of the multilingual population speaking Spanish. Multilingualism is most common within first and second generation immigrants, while the third generation often speak only English. Poverty is a factor which ties together this immigrant population and often serves as a confounding variable in the interpretation of standardized data among this population. There are a large number of differing factors that are also prevalent. These factors may influence the development of multilingualism within subsequent generations. Such factors include level of education, access to resources, community support for language, English language proficiency within the home, generational status, immigration experience, transnationalism, and cultural idiosyncrasies. For example, research has shown that exposure and usage of the home language plays an important role in the maintenance and development of the home language. Children who are exposed to and are required to speak in their home language at home are at a greater benefit of becoming multilingual. In addition, those children who participate in a schooling environment in which the home language is promoted, such as two-way dual language immersion programs, develop advanced skills in both languages, serving as a protective factor for poverty (López & Tápanes, 2011).

There is an extensive amount of research available on the development of language processes in monolingual children. The authors of this report are prominent researchers within this field and should be commended for their review of the research within the context pre-

sented. The interpretation of the research conducted within a monolingual population is only now beginning to be explored within a multilingual context, and the research literature is still evolving with regard to the similarities and differences between these two related fields (i.e., development of language processes within monolingual and multilingual children). Language input, for example, has been shown to play an important role in the development of language of all children regardless of whether they are learning one or multiple languages. The authors summarize what should be considered optimal linguistic input for all children.

Other variables important in the acquisition of language and literacy skills, such as phonological awareness, have pointed to a cross-language relationship in which abilities in one language inform the development of such skills in a second language. In fact, although skills relating to phonological awareness may start off as more language specific early on as children are still developing their languages, the "capacity for understanding the mechanics of language assist bilingual children in transferring their skills from one language to another, helping them to view skills with less focus on a specific language and more focus on the skill itself" (López, 2012, p. 375). This metalinguistic awareness of language skills should help multilingual children excel in their development of language and literacy abilities. Therefore, as McCabe et al. allude to in their paper, understanding the processes underlying language learning in monolingual children may help inform the research on language processing in multilingual children.

The practical and policy implications afforded through this paper are many. Although the research regarding multilingual children and the benefits of multilingualism are increasing in prevalence, more needs to be done to build awareness. Providing children with proper instruction and support to become multilingual is essential for economic and social growth within a global economy. Early exposure to high quality language environments and continued support of multiple languages at home, school, and within the community are essential for the development of multilingualism. Teachers need to be better trained to work with and enhance language and literacy among dual language learners. Early childhood teachers who have received training on working with dual language learners and can identify best practices for working with these children (i.e., supporting their home language) yield students who are better prepared for kindergarten (Ramirez, López, & Ferron, 2013).

In working with Latino families I have seen first-hand the positive impact programs such as Reach out and Read, Head Start, and Univision's "Es el Momento" campaign can have on the school readiness development of young Latino children. When conducting inventories in Latino homes, oftentimes the only Spanish language children's books the families own have been provided to them through the Reach out and Read program at their local clinic. Families have also shared with me the important role Head Start teachers have played in supporting their family and culture (López & Tápanes, 2011). This support has given the families momentum to maintain the home language and develop high achieving multilingual children (López, 2013). Additionally, after an appearance on "Es el Momento" programming, I received a phone call from an immigrant parent thanking me for the information provided throughout the program which is helping her support her young children's development. It is essential to continue providing resources and training that inform educators, pediatricians, and the mass media, among others, on the benefits of maintaining and supporting a child's first language. Finally, I agree with the authors in that it is also essential to continue to fund research which takes a developmental approach to understanding the benefits of multilingualism, debunking the myths that multilingualism is harmful.

References

López, L. M. (2013, May). *Profiles of language development for Dual Language Learners in early childhood programs*. Invited roundtable presentation at the Inaugural Bilingual Research Conference, Houston, TX.

López, L. M. (2012). Assessing the phonological skills of bilingual children from preschool through kindergarten: Developmental progression and cross language transfer. *Journal of Research in Childhood Education, 26*(4), 371-391. doi: 10.1080/02568543.2012.711800

López, L. M., & Tápanes, V. (2011). Latino children attending a two-way immersion program in the United States: A comparative case analysis. *Bilingual Research Journal, 34*(2), 142-160. doi:10.1080/15235882.2011.598087

Ramirez, R., López, L. M., & Ferron, J. (2013). *Teacher characteristics that play a role in the language, literacy, and math development of Dual Language Learners*. Poster presented at the 2013 Society for Research in Child Development Biennial Conference, Seattle, WA.

Commentary

"Pickney Talk Sweet, eh?"[1]
Unpacking Myths and Best Practices for Black Children Who Speak Creoles or Dialects

Stephanie M. Cureton
Rutgers, The State University of New Jersey

This multi-disciplined team of researchers did a wonderful job of highlighting the issues surrounding multilingual children, defined as children learning at least two, but perhaps more, languages. Understanding the needs of multilingual children is an important topic given that the United States is becoming increasingly diverse. Presently, at least 20 percent of the United States' population speaks a language other than English at home (Johnson, Os, Drewery, Ennis, & Kim, 2010), and if those families who speak a creole or dialect were included then the percentage would be even greater. Although many African and Caribbean immigrants speak English fluently, these immigrant populations are also multilingual (Capps, McCabe, & Fix, 2011; Thomas, 2012), and many of which, especially those who have lower-education levels, speak a dialect or creole. Similarly, both middle- and low-income African American children speak English as well as African American English (Craig, Zhang, Hensel, & Quinn, 2009; Terry & Connor, 2012).

Creoles or dialects often are not included during national surveys assessing language diversity because there is controversy among linguists as to whether or not they should be considered unique, legitimate languages. Language can be defined as a shared system of communication that comprises five components: (1) phonology, (2) morphology, (3) syntax, (4) semantics, and (5) pragmatics. Often creoles or dialects are not considered languages because they might not possess all five components, but instead share many components with their parent languages. For example, creoles are communication systems based on two or more languages that evolved from pidgin languages. Examples of common creoles spoken within the United States are Haitian Creole, Jamaican Patois, and even some African creoles like Cameroonian Pidgin English.[2] A *dialect*, on the other hand, is a shared language system that is considered to be a variation of one particular language, and it is usually spoken within a specific geographic region or social group.

The reason why it is important to consider creoles and dialects as part of the multilingual issues is because children who speak these may often have similar communication difficulties as other multilinguals, such as more frequent diagnosis of language impairment resulting in more referrals for special education (Ford, 2012; Artiles, Harry, Reschly, & Chinn, 2002). In addition, because creoles and dialects are often stigmatized as substandard forms of language, children and families may experience linguistic chauvinism, as evidenced by teachers viewing dialect speakers as less intelligent (Champion, Cobb-Roberts, & Bland-Stewart, 2012). This linguist chauvinism is compounded by racial stereotyping and discrimination given that the vast majority of creole or dialect

[1] Jamaican patois phrase that means "the child speaks well."
[2] The names of these communication systems, do not necessarily reflect how they might be characterized linguistically, but instead, are an indication of how the language communities refer them.

speakers in our country consist of Black children who are either from African-descent, Caribbean-descent, or African Americans.

In terms of best practices for educators, teachers must be provided with professional development opportunities that educate them about the language diversity found among Black children. Like other multilingual children, Black children can benefit from modified language and literacy instruction to accommodate their communication differences (Boutte & Johnson, 2013). For example, teachers might read stories in which the characters use dialect, and then have a conversation about how people speak differently depending on the situation they are in and the person to whom they are talking. Teachers might also have children copy the lyrics to music sung using a dialect (e.g., reggae or hip hop), and talk about the features of language the performers use. In order for teachers to make such instructional accommodations, however, they must be trained in the complexities of language use in general and be aware of the language diversity exemplified by Black children more specifically (Pearson, Conner, & Jackson, 2013). Such training needs to educate them not only about the syntactical, phonological, or morphological features of these creoles and dialects, but also about the pragmatic features of language, such as language socialization practices (Hammer & Weiss, 1999; Vernon-Feagans et al., 2008), and assessment issues (see Bland-Stewart, Elie, & Townsend, 2013).

References

Artiles A., Harry B., Reschly D. J., & Chinn, P. C. (2002). Over-identification of students of color in special education: A critical overview. *Multicultural Perspectives, 4*(10), 3-10.

Bland-Stewart, L., Elie, M., & Townsend, A. (2013). Using the DELV to determine language difference vs. a language disorder in dialect speakers. *Online Journal of Education Research, 2,* 1–10.

Boutte, G. S., & Johnson, G. L. (2013). Do educators see and honor biliteracy and bidialectism in African American language speakers? Apprehensions and reflections of two grandparents/professional educators. *Early Childhood Education Journal, 41,* 133–141. doi: 10.1007/s10643-012-0538-5

Capps, R., McCabe, K., & Fix, M. (2011). *New streams: Black African migration to the United States.* Washington, DC: Migration Policy Institute.

Champion, T. B., Cobb-Roberts, D., & Bland-Stewart, L. (2012). Future educators' perceptions of African American Vernacular English (AAVE). *Online Journal of Education Research, 1*(5), 80-89.

Craig, H. K., Zhang, L., Hensel, S. L., & Quinn, E. J. (2009). African American English-speaking students: An examination of the relationship between dialect shifting and reading outcomes. *Journal of Speech, Language and Hearing Research, 52*(4), 839-855. doi:10.1044/1092-4388(2009/08-0056)

Craig, H. K., & Grogger, J. T. (2012). Influences of social and style variables on adult usage of African American English features. *Journal of Speech, Language and Hearing Research, 55*(5), 1274-1288. doi:10.1044/1092-4388(2012/11-0055)

Ford, D. Y. (2012). Culturally different students in special education: Looking backward to move forward. *Exceptional Children, 78*(4), 391-405.

Hammer, C. S., & Weiss, A. L. (1999). Guiding language development: How African American mothers and their infants structure play interactions. *Journal of Speech, Language and Hearing Research, 42*(5), 1219-1233.

Johnson, T. D., Os, M., Drewery, M. R., Ennis, S. R., & Kim, M. O. (2010). *People who spoke a language other than English at home by Hispanic origin and race: 2009.* American Community Survey Briefs. Washington, DC: U.S. Census Bureau.

Pearson, B. Z., Conner, T., & Jackson, J. E. (2013). Removing obstacles for African American English-speaking children through greater understanding of language difference. *Developmental Psychology, 49*(1), 31-44.

Terry, N. P., & Connor, C. M. (2012). Changing nonmainstream American English use and early reading achievement from kindergarten to first grade. American *Journal of Speech-Language Pathology, 21,* 78-86. doi:10.1044/1058-0360(2011/10-0093)

Thomas, K. (2012). *A demographic profile of Black Caribbean immigrants in the United States*. Washington, DC: Migration Policy Institute.

Vernon-Feagans, L., Pancsofar, N., Willoughby, M., Odom, E., Quade, A., & Cox, M. (2008). Predictors of maternal language to infants during a picture book task in the home: Family SES, child characteristics and the parenting environment. *Journal of Applied Developmental Psychology, 29*(3), 213-226. doi: http://dx.doi.org/10.1016/j.appdev.2008.02.007

Commentary

Peering Through the Looking Glass With A Multicultural Lens

The Challenge Of Translational Research

Michael L. López
Abt Associates

The article by McCabe, et al. highlights multiple ways in which the extant corpus of research on developmental processes and effective strategies for supporting monolingual children's language development provides a foundation of evidence-based guidance to support the learning needs of the growing population of multilingual children and families. In their review, the authors also highlight some of the unique contextual factors within and across the home, community and educational settings that may be critical factors to address with efforts designed to support children's multilingual language development. For example, there is some discussion of the importance of dispelling commonly held myths that may create concern and/or confusion on the part of parents, as well as providers, with respect to language development and/or multilingualism. Similarly, they identify a number of potential challenges often encountered in delivering messages and interventions to multilingual families, such as the availability of materials in the home language, program staff who speak the families' home language, and a cultural mismatch between staff and the families served.

While the authors should be commended for this timely effort, what is less clear is how to best

bridge the gap between this body of research on basic developmental processes and effective strategies for promoting monolingual children's language development and the subsequent translation of these strategies for use with multilingual children and their families. In other words, one might argue that an even stronger emphasis should be placed on at least two related areas (one of which was briefly touched upon in the paper) including: (1) the importance of taking into consideration the sociocultural context of culturally and linguistically diverse families when developing new programs and policies; and (2) the need for researchers to engage in theoretically driven approaches to the cultural adaptation of existing research-based strategies to meet the needs of diverse populations.

(1) The sociocultural context of culturally and linguistically diverse families

In considering ways in which existing research can best inform approaches to support the learning needs of the multilingual children and their families, the authors briefly touch upon the importance of understanding the unique sociocultural contexts and needs of such diverse families. However, given the central role that such sociocultural influences may play in determining the effectiveness of strategies employed to support learning experiences of diverse families, it could be argued that such issues should be more prominently highlighted. Various cross-cultural theories of human development (Bronfenbrenner, 1979; Super & Harkness, 1999) have articulated the role that contextual influences play in shaping the development of children from diverse backgrounds. For example, García Coll and Pachter (2002) posit a conceptual model for ethnic and minority parenting that reflects both universal ways of achieving parental goals, but also emphasizes the resilience and adaptiveness of families, and takes into account the unique structural (e.g., poverty, racism, etc.) and culturally-based contextual factors that shape their parenting experiences. As such, recommendations about the application of research-based strategies should stress the importance of developing a more informed understanding of sociocultural context of culturally and linguistically diverse families that explores the extent to which issues such as acculturation, generational status, language barriers, recency of immigration, country of origin, socioeconomic status and culturally-based beliefs and practices may influence the desired, targeted parenting practices, as well as the subsequent development of their children.

As an illustrative example, one of the hallmarks of early care and education programs has been the encouragement of parents to be their children's first educators (Bornstein, 1995; Zigler & Styfco, 2006). Numerous approaches have been developed to support parents' involvement with their children's learning experiences, both at home and within school settings (Jeynes, 2005; Mapp, 2003). A growing body of research has demonstrated that while there are some similarities in the nature of parental involvement across different cultural and ethnic groups, there also are important differences, some which have implications for the present discussion of supporting multilingual children's learning (Durand, 2011; Goldenberg, Gallimore, Reese, & Garnier, 2001; McWayne, Campos, & Owsianik, 2008). In addition to a range of challenges faced by diverse families (e.g., language barriers, work schedules, among other factors), there often are differences in the types of parental involvement in home versus school activities which may be in part influenced by cultural differences in factors such as parents' role construction regarding their children's educational experiences. For example, Goldenberg and colleagues (2001) found that Latino parents believe that it is the school's responsibility to educate their children versus their role as parents for which a greater emphasis is placed on the socialization of their children. Given such culturally-based differences, efforts to support children's learning by increasing parental involvement may need to be approached in multiple ways to account for such variability in culturally-based beliefs and practices. By engaging in concerted efforts to fully understand the unique sociocultural context of diverse families being served, practitioners can better ensure more active engagement and the resulting uptake of the targeted research-based strategies.

(2) Theoretically driven approaches to the adaptation and implementation of existing research-based strategies.

There also is a concomitant need for researchers and program developers to proactively and empirically examine the conceptual and theoretical underpinnings of these research-based intervention strategies. To date, much of the developmental and intervention research has been conducted with samples more reflective of the dominant culture, despite a growing body of work focused on culturally and linguistically

diverse populations (Bernal, 2006; Dumas, Arriaga, Begle, & Longoria, 2010; García Coll & Pachter, 2002). Although this does not necessarily negate the importance of findings from such studies, it does raise the question about the generalizability of these evidence-based strategies to other population groups.

Increasingly, researchers have developed a number of cultural adaptation models that articulate systematic, theoretically driven approaches to the adaptation and implementation of existing research-based strategies to best meet the needs of culturally and linguistically diverse populations (e.g., Bernal, 2006; Castro, Barrera, & Holleran Steiker, 2010; Domenech Rodríguez, Baumann & Schwartz, 2011; Dumas et al., 2010). Admittedly, there is not general consensus on how to achieve the optimal balance between making culturally-based adaptations and maintaining fidelity to the original underpinnings of the existing intervention (Bernal, 2006). Nevertheless, these cultural adaptation models provide useful guidance to researchers interested in critically examining the theoretical congruence of their research-based strategies and identifying factors that either may facilitate or may be incongruent with the sociocultural context of diverse families. Most of the current cultural adaptation models employ an iterative, transactional, multi-stage process that typically involves in-depth consultation with both technical research experts and key stakeholders or members of the targeted population to identify the cultural congruence of the conceptual components and potential changes in the intervention, among other steps (see Castro et al., 2010, for a review). With the growing diversity of the population, these kinds of cultural adaptation approaches may prove to be indispensable in the application of research-based language development strategies in ways that are more responsive to the unique sociocultural contexts and experiences of the targeted populations. In sum, I applaud the authors' concise summary of the relevant literature and their related recommendations for programmatic and policy actions, but also would encourage the expansion of such an important discussion to more overtly include the additional recommendations described above.

References

Bernal, G. (2006). Intervention development and cultural adaptation research with diverse families. *Family Process*, *45*(2), 143-151. doi: 10.1111/j.1545-5300.2006.00087.x

Bornstein, M. H. (1995) *Handbook of parenting, Vol. 1: Children and parenting*. Hillsdale, NJ: Erlbaum.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Castro, F. G., Barrera, M., Jr., & Holleran Steiker, L. K. (2010). Issues and challenges in the design of culturally adapted evidence-based interventions. *Annual Review of Clinical Psychology*, *6*, 213-239. doi: 10.1146/annurev-clinpsy-033109-132032

Domenech Rodríguez, M. M., Baumann, A. A., & Schwartz, A. L. (2011). Cultural adaptation of an evidence based intervention: From theory to practice in a Latino/a community context. *American Journal of Community Psychology*, *47*(1-2), 170-186. doi: 0.1007/s10464-010-9371-4

Dumas, J. E., Arriaga, X., Begle, A. M., & Longoria, Z. (2010). "When will your program be available in Spanish?" Adapting an early parenting intervention for Latino families. *Cognitive and Behavioral Practice*, *17*(2), 176-187. doi: 10.1016/j.cbpra.2010.01.004

Durand, T. M. (2011). Latino parental involvement in kindergarten: Findings from the Early Childhood Longitudinal Study. *Hispanic Journal of Behavioral Sciences*, *33*(4), 469-489. doi: 10.1177/0739986311423077

García Coll, C., & Pachter, L. M. (2002). Ethnic and minority parenting. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 4. Social conditions and applied parenting* (pp. 1– 20). Mahwah, NJ: Erlbaum.

Goldenberg, C., Gallimore, R., Reese, L., & Garnier, H. (2001). Cause or effect? A longitudinal study of immigrant Latino parents' aspirations and expectations, and their children's school performance. *American Educational Research Journal*, *38*(3), 547-582. doi: 10.3102/00028312038003547

Jeynes, W. H. (2005). A meta-

analysis of the relation of parental involvement to urban elementary school student academic achievement. *Urban Education, 40*(3), 237-269. doi: 10.1177/0042085905274540

Mapp, K. L. (2003). Having their say: Parents describe why and how they are engaged in their children's learning. *School Community Journal*, *13*(1), 35-64.

McWayne, C., Campos, R., & Owsianik, M. (2008). A multidimensional, multilevel examination of mother and father involvement among culturally diverse Head Start families. *Journal of School Psychology*, *46*(5), 551-573. doi: 10.1016/j.jsp.2008.06.001

Super, C.M., & Harkness, S. (1999). The environment as culture in developmental research. In S. L. Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 279–326). Washington, DC: American Psychological Association.

Zigler, E., & Styfco, S. J. (2006). *Head Start and beyond: A national plan for extended childhood intervention.* New Haven, CT: Yale University Press.

Commentary

Multilingual Children

Developing and Disseminating Knowledge to Support Successful Language Development

Diane August
American Institutes for Research

In this *Social Policy Report*, McCabe, Tamis-LeMonda, Bornstein, Cates, Golinkoff, Hirsh-Pasek, Hoff, Kuchirko, Melzi, Mendelsohn, Paez, Song, and Guerra review the research evidence related to language and early literacy development in multilingual learners with the goal of informing policy and practice for this group of young learners. The review examines the broad social and historical contexts of multilingual learners in the United States; the demographic characteristics of the multilingual family; the basic language developmental processes and effective strategies for promoting monolingual children's language that can be applied to multilingual children; and the home, education, and community contexts that support learning multiple languages. Their report makes a significant contribution as it succinctly describes the knowledge base in four areas relevant to multilingual language and literacy development and provides recommendations that if enacted, will help support enhanced outcomes for a large and growing population of United States children who are at risk because they are predominately from low-income families.

My commentary focuses on two of the four policy goals in the authors' action plan. The first is that the federal government support re-

search that advances an understanding of the developmental processes in multilingual children, identifies and evaluates best practices for supporting language and literacy development, and optimizes dissemination of best practices.

This goal is important. While there is a rich literature related to the L2 language and literacy development, including socio-cultural influences on this development, there is a dearth of intervention studies focused on promoting multilingual language and literacy development in young learners who are not yet proficient in English (August & Shanahan, 2008). A recent review of intervention studies on this topic published in peer-reviewed journals uncovered very few studies (August, 2012). Between 1980 and 2011 there were only seven intervention studies that focused on oral language development, five studies that focused on phonological awareness (PA) or code-related skills, and four studies that focused more broadly on a combination of skills in prekindergarten or kindergarten multilingual English-language learners. There were no experimental studies focused on a particularly important topic—helping parents and teachers engage in high-quality interactions with children (Dickinson, Darrow, & Tinubu, 2008; Hamre, La-Casale-Couch, & Pianta, 2008).

It should be noted that the developmental and socio-cultural research and the limited number of intervention studies (e.g. Farver, Lonigan, & Eppe, 2009; Barnett, Yarosz, Thomas, & Blanco, 2007; Roberts, 2008) support the strategies the authors of this report present for promoting multilingual skills.

The limited intervention research on multilingual learners compares with 191 intervention studies (that passed at least four tiers of screening) located by the National Early Literacy Panel that examined the development of early literacy skills in young children (National Early Literacy Panel, 2008). The panel did not report on differences between multilingual learners and students whose home language is English but called for future studies to examine the "possible varied impact or early interventions particularly on the largest and growing groups of children who struggle with literacy (such as second-language learners and children raised in poverty) (National Early Literacy Panel, 2008, p. xi). The panel recommended that even if studies are not designed to answer such questions they should report on data for children from different demographic categories.

The report's authors propose a second policy recommendation that calls for strategies to be developed that address practical issues related to adoption of their recommendations by child professionals. To accomplish this, the authors propose integrating research-based recommendations into existing professional development, continuing education and requirements, and professional society policies and recommendations. This is an excellent recommendation and I wish the authors had more opportunity in this policy report to discuss the obstacles to adoption of their recommendations at the national, state, and local levels and provide suggestions and action steps for overcoming these obstacles. Perhaps a follow-up issue of the *Social Policy Report* might be dedicated to this topic.

One obstacle related to integrating the recommendations into existing professional development/continuing education requirements is that our understanding of how best to develop language and early literacy skills in multilingual children is hindered by the thin research base described above. The paucity of research prevents us from fully understanding how language acquisition is moderated by the six key variables specified by Bornstein (see Box 1: The Specificity Principle (SP) in Multiple Language Learning in this report) that include for example, individual characteristics, setting characteristics, and mechanisms through which languages are acquired.

References

August, D., & Shanahan, T. (Eds.). (2008). *Developing reading and writing in second-language learners.* New York, NY: Routledge.

August, D. (2012). *Review of the research on young dual language learners.* Unpublished report. Washington, DC: American Institutes for Research.

Barnett, W. S., Yarosz, D. J., Thomas, J., & Blanco, D. (2007). Two-way and monolingual English immersion in preschool education: An experimental comparison. *Early Childhood Research Quarterly*, *22*, 277-293.

Dickinson, D. K., Darrow, C. L., & Tinubu, T. A. (2008). Patterns of teacher-child conversations in Head Start classrooms: Implications for an empirically grounded approach to professional development. *Early Education and Development*, *19*(3), 396-429.

Farver, J. M., Lonigan, C. J., Eppe, S. (2009). Effective early literacy skill development for young Spanish-speaking English Language Learners: An experimental study of two methods. *Child Development, 80,* 703-719.

Hamre, B. K., LoCasale-Crouch, J., & Pianta, R. C. (2008). Formative assessment of classrooms: Using classroom observations to improve implementation quality. In L. M. Justice, & C. Vukelich (Eds.), *Achieving excellence in preschool literacy instruction* (pp. 102-119). New York: Guilford Press.

National Early Literacy Panel. (2008). *Developing early literacy: Report of the National Early Literacy Panel*. Washington, DC: National Institute for Literacy.

Roberts, T. (2008). Home storybook reading in primary or second language with preschool children: Evidence of equal effectiveness for second-language vocabulary acquisition. *Reading Research Quarterly, 43(2), 103-130.*

About the Authors

Allyssa Mccabe is professor of psychology at the University of Massachusetts Lowell. She has written scholarly books and articles on children's narrative development in such journals as *Journal of Educational Psychology* and *Developmental Psychology.* Her most recent book is called *Chinese Language Narration: Culture, Cognition, and Emotion*. She has also written a trade book for parents called *Language Games to Play with your Child*. Among other projects, she has conducted interventions with both parents and teachers to improve children's ability to narrate.

Catherine S. Tamis-Lemonda is Professor of Developmental Psychology at New York University's Steinhardt School of Culture, Education, and Human Development. Her research focuses on the socio-cultural contexts of early development, with an emphasis on language development and communicative experiences in infancy, and how emerging skills in different developmental domains influence one another. She studies mothers' and fathers' beliefs and practices in relation to children's developmental trajectories in cultural communities in the U.S. and internationally. She has over 100 publications in peer-reviewed journals and edited volumes, and is co-editor of *Child Psychology: A Handbook of Contemporary Issues,* (1ST and 2ND Editions), *Handbook of Father Involvement: Multidisciplinary Perspectives,* (1ST and 2ND Editions), and *The Development of Social Cognition and Communication*.

Marc H. Bornstein is Senior Investigator and Head of Child and Family Research at the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development. Bornstein has published in experimental, methodological, comparative, developmental, and cultural science as well as neuroscience, pediatrics, and aesthetics. Visit www.cfr.nichd.nih.gov and www.tandfonline.com/HPAR.

Carolyn Brockmeyer Cates is a developmental psychologist and Assistant Professor of Pediatrics at New York University School of Medicine, as well as the Director of the Bellevue Project for Language, Literacy, and Education Success. Dr. Cates is the recipient of a Young Investigator Award granted by the Commonwealth Fund in conjunction with the Academic Pediatric Association. Her research has focused on how early experiences with language and play, both in parent-child and in peer interactions, impact the development of language and social-cognition. She has significant experience with using narrative and play based interventions in preschool and primary-care settings to promote school readiness for low-income children.

Roberta Michnick Golinkoff, the Unidel H. Rodney Sharp Professor of Education, Psychology, and Linguistics and Cognitive Science at the University of Delaware, has held the John Simon Guggenheim Fellowship and the James McKeen Cattell prize for her research on language development. She also won the America Psychological Association's Distinguished Service Award and the Urie Bronbenbrenner Award for Lifetime Contribution to Developmental Psychology in the Service of Science and Society. She is also the 2011 recipient of the Frances Alison award from the University of Delaware, the highest honor bestowed upon a faculty member. Dr. Golinkoff lectures all over the world about language development, play and playful learning, and developmental psychology. Her research is funded by the National Science Foundation, the National Institutes of Health, and the Institute of Education Sciences. In addition to her many journal publications, she has authored 12 books for academic presses —as well as books for parents and practitioners—including *How Babies Talk: The Magic and Mystery of Language Development in the First Three Years of Life* (Penguin), and *Action Meets Word: How Children Learn Verbs*. To reveal the benefits of playful learning, she wrote the award-winning *Einstein Never Used Flash Cards: How Our Children Really Learn and Why They Need to Play More and Memorize Less* (Rodale). The new *Mandate for Playful Learning in Preschool: Presenting the Evidence* (Oxford) describes the research on the importance of play and playful learning in early education.

Kathryn Hirsh-Pasek is the Stanley and Debra Lefkowitz Distinguished Faculty Fellow in the Department of Psychology at Temple University, where she serves as Director of the Temple Infant and Child Laboratory. Kathy received her bachelor's degree from the University of Pittsburgh and her PhD at University of Pennsylvania. Her research in the areas of early language development, literacy and infant cognition has been funded by the National Science Foundation and the National Institutes of Health and Human Development and the Department of Education (IES) resulting in 11 books and over 150 publications. With her long time collaborator, Roberta Golinkoff, she is a recipient of The APA Bronfenbrenner Award for lifetime contribution to the science of developmental psychology in the service of science and society and the APA Award for Distinguished Service to Psychological Science. She also received Temple University's Great Teacher Award and Paul Eberman Research Award. She is a Fellow of the American Psychological Association and the American Psychological Society, served as the Associate Editor of *Child Development* and treasurer of the International Association for Infant Studies. She serves on the editorial board of *Infancy*. Her book, *Einstein Never Used Flashcards: How Children Really Learn and Why They Need to Play More and Memorize Less*, (Rodale Books) won the prestigious Books for Better Life Award as the best psychology book in 2003.

Erika Hoff (University of Michigan) is Professor of Psychology at Florida Atlantic University. She is the author of numerous articles on the relation of environmental factors to early monolingual and bilingual development, and she is author or editor of several books, including the undergraduate text, *Language Development*.

Yana Kuchirko is a doctoral student in Development Psychology in the Department of Applied Psychology at New York University's Steinhardt School of Culture, Education and Human Development. Her research focuses on language development in early childhood, examining the role that cultural and contextual factors play in shaping infants' language experiences. She received her BS from New York University in Applied Psychology in 2007.

Gigliana Melzi, an Associate Professor of Applied Psychology and an Affiliated Faculty at the Center for Latin American and Caribbean Studies at New York University, is a native Spanish speaker and Latino scholar. Dr. Melzi earned her doctorate in Developmental Psychology from Boston University in 1998. Her work has focused on the early literacy and language development of Spanish-speaking Latino children living in the United States and in their countries of origin. Using qualitative methodologies, Dr. Melzi has investigated the daily literacy activities of immigrant parents and their impact on children's school performance. She has also conducted studies on various discourse and linguistic features of Spanish-speaking mother-child dyads from immigrant and non-immigrant Latin American families across various socio-economic groups. In a more recent line of work, Dr. Melzi has examined the unique ways Latino parents support their preschoolers learning, developing a culturally-relevant multidimensional measure of family engagement for Spanish- and English-speaking Latino families. Dr. Melzi's latest work has been funded by the National Institute of Health, The U.S. Department of Health and Human Services, Administration for Children and Families, and the Brady Educational Foundation.

Alan Mendelsohn is a developmental-behavioral pediatrician who is Associate Professor of Pediatrics and Population Health at New York University School of Medicine and Bellevue Hospital Center. Dr. Mendelsohn is Director of Research for the Divisions of General and Developmental-Behavioral Pediatrics and Co-Director of Biostatistical Analysis Coursework for the NYU Clinical and Translational Science Institute—Masters of Science Program in Clinical Investigation. He is a member of the American Academy of Pediatrics Council on Early Childhood and the Academic Pediatric Association Child Poverty Task Force. He has received national recognition for his work as a Zero to Three Leaders for the 21ST Century Harris Fellow. Dr. Mendelsohn's research has focused on poverty-related disparities in critical child outcomes including child development, obesity and chronic disease. He has investigated the role of environmental factors, both biologic (lead) and psychosocial (parent-child interactions, electronic media exposure, maternal depression, maternal literacy/health literacy, feeding practices), in relation to these outcomes. Dr. Mendelsohn's studies have demonstrated the potential role for the pediatric primary care setting as a universal platform for promotion of school readiness through enhanced parenting, through interventions such as Reach out and Read and the Video

Interaction Project. Dr. Mendelsohn is also a co-author of an instrument (StimQ) that can be used to assess the cognitive home environment in low income households.

Mariela Páez is an Associate Professor at the Lynch School of Education, Boston College. She has a doctorate in Human Development and Psychology from the Harvard Graduate School of Education. Her primary research interests include bilingualism, literacy development, children's early language and literacy learning, and early childhood education. Dr. Páez's research with young bilingual children has been funded by the National Institute of Child Health and Human Development (NICHD) and the Office for Educational Research and Improvement, Department of Education. She is currently Principal Investigator for the Early Childhood Intervention Study: Improving the Language and Literacy Skills of Spanish-English Bilingual Kindergartners, which is a longitudinal intervention study designed to improve the language and literacy development of young bilingual students. Her research has implications for practitioners, researchers, and policy-makers. She is author of numerous articles and has published in leading journals including *Journal of Applied Developmental Psychology, American Educational Research Journal, Topics in Language Disorders,* and *Equity & Excellence in Education*. She is also co-editor of *Latinos: Remaking America* (with Marcelo Suárez-Orozco, 2002, 2008). Dr. Páez was invited to be a member of the National English Language Learners Literacy Research Committee (2007), the Roundtable on Supporting Positive Language and Literacy Outcomes for Young Language Minority Children (2008), and the Center for Early Care Education Research: Dual Language Learners (2010–present). She is also a member of the Society for the Scientific Study of Reading, Society for Research in Child Development, and the American Educational Research Association.

Lulu Song is an Assistant Professor of Early Childhood Education/Art Education at Brooklyn College of the City University of New York (CUNY). She earned her PhD in education from the University of Delaware, with an undergraduate degree from Tsinghua University, China. Before taking her position at Brooklyn College, she had worked as a postdoctoral fellow at the NSF-funded Center for Research on Culture, Development, and Education at New York University. Her research examines the roles of context and culture in the early language development of children from diverse ethnic and socioeconomic backgrounds, the relation between early language development and later language, cognitive, and school readiness skills, bilingualism in early childhood, infants' cognitive foundations for language learning and development, and adult second language learning. Her work has been supported by research grants from the Society of Research in Child Development (SRCD) and CUNY, and a number of awards from SRCD, CUNY, the International Society on Infant Studies (ISIS), and the University of Delaware. Her work has appeared in a variety of peer-reviewed journals, including *Child Development, Developmental Neuropsychology, Developmental Psychology, Developmental Science, Journal of Child Language,* and *Perspectives on Psychological Science*.

Alison Wishard Guerra is an Assistant Professor in the Department of Education Studies at the University of California, San Diego. She received her PhD in Applied Human Development from the UCLA Graduate School of Education and Information Sciences. Dr. Wishard Guerra's research focuses on culture and development in early childhood, with particular focus on Latino children from low-income families. Her current work investigates social pretend play, oral language development, story telling, and school readiness among Mexican heritage children. Dr. Wishard Guerra is a member of the National Early Head Start Research Consortium. Dr. Wishard Guerra was a member of the expanded research consortia that developed the California Preschool Learning Foundations on English-Language Development, and has served as an expert reviewer of English Language Development and Cultural Diversity in the development of Volumes 2 and 3 of the California Preschool Learning Foundations and the California Preschool Curriculum Framework.

Lisa López is Associate Professor of Educational Psychology at the University of South Florida. Prior to her position at USF, she was an NSF postdoctoral fellow in education at the Harvard Graduate School of Education. Her research agenda involves furthering our understanding of, and improving upon, the educational and environmental opportunities of Latino children in the United States. In particular her research goals include: 1) Identifying the developmental trajectory of school readiness skills for Latino Dual Language Learner (DLL) children beginning with their attendance in Head Start; 2) Applying an ecological perspective (i.e. home and classroom factors) to better understand the developmental trajectory of school readiness skills in DLL children; and 3) Identifying and developing curricula and assessments that better serve the needs of these young DLL Latino children. In meeting these goals Dr. López served as Principal Investigator of a Head Start University Partnership Grant: Dual Language Learners, and has served as co-investigator on several federally funded research initiatives focused around curriculum and assessment of Dual Language Learners. Dr. López also serves as a core research advisor for the Center for Early Care and Education Research: Dual Language Learners and has authored and co-authored numerous journal articles and book chapters focused on the development of school readiness skills of Latino Dual Language Learners and the home and classroom factors relating to this development.

Stephanie M. Curenton studies the social, cognitive, and language development of low-income and minority children within various ecological contexts, such as parent-child interactions, early childhood education programs, the early childhood workforce, and related state and federal policies. She serves as the associate editor for *Early Childhood Research Quarterly,* and past associate and guest editor of *Early Education and Development*. Her research has been funded by the U.S. Department of Health and Human Services, the Office of Program Research and Evaluation, the National Academy of Science, Ford Predoctoral Fellowship, American Education Research Association, and the Foundation for Child Development. She worked as a policy fellow in the Administration for Children and Families, Office of Child Care through a Society for Research on Child Development/ American Association for the Advancement of Science Policy Fellowship. She has also served on the governing board of the National Association for the Education of Young Children (NAEYC). She earned her PhD in Developmental and Community Psychology from the University of Virginia.

Michael L. López, a Principal Associate at Abt Associates, is a national expert with over 20 years of experience conducting applied early childhood research, with a particular emphasis on low-income or culturally and linguistically diverse populations. He currently is the Co-PI for a newly funded national Center for Research on Hispanic Children and Families. Prior to joining Abt, he was Executive Director of the National Center for Latino Child & Family Research, where his efforts included: 1) co-author of a review of the psychometric properties of language and literacy measures used with Spanish-speaking, DLL preschoolers; 2) co-author on a study examining the psychometric characteristics of the Classroom Assessment Scoring System (CLASS) used to assess teacher–child interactions within preschool classrooms serving dual language learners; 3) consultant for a web-based parenting intervention for Spanish-speaking mothers of infants at risk for maltreatment; 4) co-Investigator for a measurement development study: "Extending the Cultural and Linguistic Validity of the Adjustment Scales for Preschool Intervention (ASPI) for Low-Income, Latino Children; and 5) co-Principal Investigator for the National Migrant and Seasonal Head Start Survey Design Project, among others. Before that, Dr. López directed the Child Outcomes Research and Evaluation team in the Administration for Children and Families, where he developed and directed large-scale, national, research studies, including the Head Start Family and Child Experiences Survey (HS FACES), the Head Start Mental Health Research Consortium, and the National Head Start Impact Study (HSIS), a nationally-representative, randomized study examining the impact of Head Start on children's school readiness, among others. Dr. López's publication record reflects a commitment to the implementation and dissemination of high quality, applied policy research relevant to at-risk, low-income culturally and linguistically diverse children and families.

Diane August is a managing director affiliated with AIR located in Washington, DC. At AIR, she is responsible for directing the English language learner (ELL) work for the Education Program. She is also an independent consultant and principal at D. August and Associates. Prior to her position at AIR, she was a senior research scientist at the Center for Applied Linguistics, where she was the principal investigator for a 10-year NICHD Program Project that investigated the development of literacy in ELLs and coprincipal investigator at the IES-funded National Research and Development Center on English language Learners. Additionally, she was co-PI on two IES-funded studies; the first focused on developing a comprehension assessment for ELLs and the second on implementing and evaluating bilingual and English-as-a-second-language programs for ELLs. She has also served as staff director for the National Literacy Panel on Language Minority Children and Youth. She has been a senior program officer at the National Academy of Sciences, where she was study director for the Committee on Developing a Research Agenda on the Education of Limited English Proficient and Bilingual Students. Dr. August has worked as a teacher, school administrator, legislative assistant, grants officer for the Carnegie Corporation, and director of education for the Children's Defense Fund. In 1981, she received her PhD in education from Stanford University and in 1982 completed a postdoctoral fellowship in psychology, also at Stanford. She has published widely in journals and books.

Social Policy Report is a quarterly publication of the Society for Research in Child Development. The *Report* provides a forum for scholarly reviews and discussions of developmental research and its implications for the policies affecting children. Copyright of the articles published in the *SPR* is maintained by SRCD. Statements appearing in the *SPR* are the views of the author(s) and do not imply endorsement by the Editors or by SRCD.

Purpose

Social Policy Report (ISSN 1075-7031) is published four times a year by the Society for Research in Child Development. Its purpose is twofold: (1) to provide policymakers with objective reviews of research findings on topics of current national interest, and (2) to inform the SRCD membership about current policy issues relating to children and about the state of relevant research.

Content

The *Report* provides a forum for scholarly reviews and discussions of developmental research and its implications for policies affecting children. The Society recognizes that few policy issues are noncontroversial, that authors may well have a "point of view," but the *Report* is not intended to be a vehicle for authors to advocate particular positions on issues. Presentations should be balanced, accurate, and inclusive. The publication nonetheless includes the disclaimer that the views expressed do not necessarily reflect those of the Society or the editors.

Procedures for Submission and Manuscript Preparation

Articles originate from a variety of sources. Some are solicited, but authors interested in submitting a manuscript are urged to propose timely topics to the lead editor (slodom@unc.edu). Manuscripts vary in length ranging from 20 to 30 pages of double-spaced text (approximately 8,000 to 14,000 words) plus references. Authors are asked to submit manuscripts electronically, if possible, but hard copy may be submitted with disk. Manuscripts should adhere to APA style and include text, references, and a brief biographical statement limited to the author's current position and special activities related to the topic.

Reviews are typically obtained from academic or policy specialists with relevant expertise and different perspectives. Authors then make revisions based on these reviews and the editors' queries, working closely with the editors to arrive at the final form for publication.

The Committee on Policy & Communications, which founded the *Social Policy Report*, serves as an advisory body to all activities related to its publication.