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Early oral language and later reading development in Spanish-speaking English language learners: Evidence from a nine-year longitudinal study

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ABSTRACT

Using nationally-representative, longitudinal data on a cohort of Spanish-speaking English language learners in the U.S., this study investigated the extent to which early oral language proficiency in Spanish and English predicts later levels and rates of growth in English reading. Latent growth models indicated that both Spanish and English proficiency in kindergarten predicted levels of English reading in third through eighth grade, but that only English proficiency was uniquely predictive. English productive vocabulary was found to be a better predictor of later English reading than more complex measures, i.e., listening comprehension and story retell, contrary to findings for native English speakers. Oral language did not predict later growth rates. Findings suggest the need for educational efforts to develop oral language during early childhood for this underserved population. Findings further suggest that such early efforts may be necessary, but insufficient to accelerate ELLs' reading trajectories as they move into adolescence.

The precursors of successful reading develop long before students begin formal reading instruction (Snow, Burns, & Griffin, 1998). Substantial longitudinal evidence suggests that native English-speaking children who have developed higher levels of oral language proficiency by kindergarten are more successful in learning to read in the primary grades than those who enter school with underdeveloped oral language (e.g., Catts, Adlof, & Weismer, 2006; Dickinson & Tabors, 2001; Senechal & LaFevre, 2002; Storch & Whitehurst, 2002). However, far less is known about these relationships for the growing population of students who come from homes in which a language other than English is primarily spoken, a group known as language minority (LM) learners (August & Shanahan, 2006). In particular, English language learners (ELLs), the subset of this larger population that enters school not yet proficient in English, demonstrate disproportionately low English reading comprehension in the upper elementary and middle school grades (e.g., Kieffer, 2008, 2010; NCES, 2009), yet it is unclear to what extent these reading comprehension difficulties are predicted by ELLs' earlier oral language development.

In the most recent comprehensive review of research on the early predictors of later reading proficiency, the National Early Literacy Panel (NELP) (2008) found evidence for 11 early or precursor literacy skills, measured between birth and kindergarten, that had moderate to strong correlations with later literacy abilities. Among these, oral language, defined as the "ability to produce or comprehend spoken language, including vocabulary and grammar," was classified as one of the five "potentially important variables" (p. viii). These five variables demonstrated moderate relationships with later reading that were weaker than those of the best predictors, which included alphabet knowledge, phonological awareness and memory, rapid automatic naming, and writing. In responding to the report, some researchers have suggested that the finding of only a "potentially important" role for oral language may not apply to ELLs, for whom early oral language development—in both their primary and second languages—could be particularly essential (Gutierrez, Zepeda, & Castro, 2010; Orellana & D'warte, 2010). Leaders of the panel have responded that the relationships found may indeed depend on ELL status, but that the extant evidence does not make it possible to determine whether this is the case (Lonigan & Shanahan, 2010; see also Schnatschneider & Lonigan, 2010).

The present study was designed to extend the current research base on early predictors of later reading development by investigating the role of early oral language in later reading growth among Spanish-speaking ELLs in the U.S., using nine years of longitudinal data on a nationally representative sample of this population. Specifically, this research focused on the subpopulation of Spanish-speaking language minority learners who were U.S.-educated (i.e., born in the U.S. or immigrated before kindergarten) and who entered U.S. kindergarten classrooms with limited English proficiency (i.e., *initial* English language learners at school entry, whether or not they later were redesignated to fluent English proficient). For this population, the roles of Spanish and English oral language in kindergarten in predicting students' later levels and/or rates of growth in English reading between third and eighth grade were examined. This study further investigated whether vocabulary measures or more complex measures of oral language are better predictors of later reading in this population.

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Early oral language and later reading outcomes in native English speakers

In their meta-analytic review, the NELP (2008) found that oral language proficiency measured in kindergarten had a moderate relationship with later decoding across 50 studies as well as a moderate relationship with later reading comprehension across 23 studies. Interestingly, the NELP (2008) found large differences in the predictive relationship as a function of the oral language measure examined, with overall composite measures (i.e., those that combine assessments of vocabulary, syntax, and listening comprehension in the same test) demonstrating much stronger relationships to later decoding and reading comprehension than measures of individual skills. In addition, listening comprehension measures that require students to integrate vocabulary and grammatical knowledge had a notably stronger relationship to later reading comprehension, compared to measures of receptive vocabulary, which were among the weakest predictors in the oral language domain.

While the vast majority of extant studies measured reading outcomes in first or second grade, several studies suggest that the predictive power of early oral language on reading comprehension persists into later grades (e.g., Catts et al., 2006; Cunningham & Stanovich, 1997; Senechal & LaFevre, 2002; Snow, Porche, Tabors, & Harris, 2007; Storch & Whitehurst, 2002). For instance, Snow et al. (2007) found that kindergarten receptive vocabulary had a strong and stable correlation with reading comprehension scores in Grades 4, 7, and 10 for a sample of monolingual children from low-income backgrounds. Although later reading comprehension was also predicted by more complex language measures, including a researcher-created measure of formal definitional skill and a researcher-created measure of narrative production, these measures had weaker correlations than did vocabulary and they declined in predictive power over time. Similarly, Cunningham and Stanovich (1997) found that first-grade receptive vocabulary exhibited a moderate relationship with reading comprehension measured 10 years later. Despite the accumulation of evidence for the importance of early oral language proficiency to first-language reading development through middle school, far less is known about the role of early oral skills for the long-term reading development of ELLs.

Language and reading development in Spanish-speaking ELLs

The rapidly growing population of ELLs in the U.S., more than 70% of whom come from Spanish-speaking homes (Capps et al., 2005), provides new challenges and opportunities to educators who have previously relied on models of first-language reading development. In particular, the disproportionate prevalence of English reading comprehension difficulties among ELLs in the middle grades (e.g., Kieffer, 2010; NCES, 2009) raises the question of whether the precursors to these difficulties can be identified much earlier. With only a few longitudinal studies to date that have followed ELLs beyond fourth grade (e.g., Mancilla-Martinez & Lesaux, 2010; Nakamoto, Lindsey, & Manis, 2007; Reese, Garnier, Gallimore, & Goldenberg, 2000), this question remains largely open.

Although it is likely that the conclusions of the NELP (2008) will largely hold for ELLs, there are some reasons to suspect that early oral language proficiency may play a somewhat different role in the reading development of Spanish-speaking ELLs than it plays in monolinguals' reading development. First and foremost, ELLs' oral language skills are distributed across two languages, so measures of English oral language proficiency alone may not capture the full range of linguistic resources available to these students in the process of learning to read English (e.g., Genesee, Lindholm-Leary, Saunders, & Christian, 2006; Gutierrez et al., 2010). Indeed, evidence from language-of-instruction studies indicates that improving first-language literacy skills supports second-language literacy outcomes (for reviews, see e.g., Francis, Lesaux, & August, 2006; Genesee et al., 2006; Slavin & Cheung, 2005). However, the evidence to date on the importance of first-language oral proficiency, as opposed to first-language literacy, for second-language reading is more limited and equivocal; Geva and Genessee's (2006) review, as well as two recent studies (Gottardo & Mueller, 2009; Nakamoto, Lindsey, & Manis, 2008), found more evidence for within-language effects than cross-language effects. As a result, researchers have been skeptical that first-language oral proficiency will predict second-language reading or compensate for underdeveloped oral proficiency in the second language (e.g., Bialystok, 2002; Verhoeven, 1994).

A second reason to suspect that early oral language may play a unique role for ELLs is the great heterogeneity in basic language proficiency found among these learners. Whereas native English speakers without clinical language impairments can be assumed to have acquired a command of commonly used vocabulary and basic grammar by kindergarten, ELLs may vary substantially in their command of such language (e.g., August, Carlo, Dressler, & Snow, 2005). Consider, for instance, the words that Beck, McKeown, and Kucan (2002) label Tier 1 words, or "mostly basic words—clock, baby, happy—rarely requiring instruction in school" (p. 16); while most native English speakers and many ELLs arrive at school knowing these words, other ELLs do not. The substantial limitations in early oral language in English demonstrated by many ELLs (e.g., Manis, Lindsey, & Bailey, 2004; Swanson, Rosston, Gerber, & Solari, 2008) could seriously constrain their English reading development. At the same time, however, ELLs, as a group defined by limited English proficiency, do not include those who have attained English oral language skills in the upper range of the distribution, so it is also possible that this constrained variation could lead to weaker correlations between English oral language and later reading in this population than in native English speakers.

Third, taking a more ecological view of reading development, ELL status is frequently confounded with low socioeconomic status (Capps et al., 2005; Cosentino de Cohen, Deterding, & Chu Clewell, 2005) as well as limited access to educational resources supporting reading development (Gándara, Rumberger, Maxwell-Jolly, & Callahan, 2003), particularly for Spanish speakers. As a result of this multiplicity of risk factors, Spanish-speaking ELLs may be more vulnerable to the negative effects of lower levels of language skills than their more advantaged counterparts. Although the effects of ELL status, first language background, and SES cannot be easily disentangled, there is a need—at minimum—to include statistical controls for SES when estimating the relationship between early oral language and later reading.

In addition to the possibility that the role of oral language development, in general, differs by language background, it is also conceivable that the subcomponents of English oral language proficiency play differentially important roles for Spanish-speaking ELLs and native English speakers. In particular, vocabulary measures that tap more decontextualized language knowledge may have greater specificity in identifying important English language weaknesses in this population, as compared to global listening comprehension measures that offer more contextual support. This would converge with a growing body of research with older ELLs that highlights limited English vocabulary knowledge as a very common source of difficulties with English reading comprehension (e.g., August et al., 2005; Garcia, 1991; Hutchinson, Whiteley, Smith, & Connors, 2003; Lesaux, Crosson, Kieffer, & Pierce, 2010; Lesaux & Kieffer, 2010), including a few longitudinal studies (Mancilla-Martinez & Lesaux, 2010; Nakamoto et al., 2007). In addition, whereas grammatical knowledge appears to be strongly predictive of later reading for native English speakers (National Early Literacy Panel, 2008), a few studies have demonstrated a weaker relationship between grammatical knowledge and reading for ELLs in the elementary grades (e.g., Jongejan, Verhoeven, & Siegel, 2007; Lipka & Siegel, 2007).