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Classroom-based English exposure and English Language Learners' expressive language skills

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ABSTRACT

This study examined the relation between Spanish-speaking English Language Learners' (ELLs; 6.12 years; $n = 101$) expressive language skills in English and their classroom-based English exposure. Using audio-recorded observations of Transitional Bilingual Education classrooms ($n = 21$), measures were obtained of the quantity (number of words) and quality (lexical diversity, structural complexity) of teachers' and students' speech during English Language Development (ELD) instruction (blocked or integrated). Results showed that ELD-blocked instruction positively predicted ELLs' language gains. Moreover, within ELD-blocked classrooms, the structural complexity and lexical diversity of teachers' speech was positively related to ELLs' language gains, as was the lexical diversity of students' speech. Follow-up analyses revealed that a higher ratio of teacher-to-student words was associated with smaller language gains. These findings suggest that exposure to high-quality classroom-based English, together with opportunities for language interactions among teachers and students, promotes ELLs' English development.

The linguistic diversity of U.S. classrooms is increasing as the population of English Language Learners (ELLs)—children for whom English is not the primary language—continues to increase (Fry & Lopez, 2012). Despite the awareness of and urgency about meeting the educational needs of ELLs—as is made evident, for example, by the inclusion of this group in accountability policies (No Child Left Behind [NCLB], 2003)—this is a population who remains largely at risk for (English) language and reading difficulties. According to the National Assessment of Educational Progress (NAEP), only 30% of 8th grade ELLs are at or above the basic level in reading comprehension in English (National Center for Education Statistics [NCES], 2013), in part because many do not have sufficient command of English to make meaning from text. Indeed, emerging research highlights the importance of well-developed oral language skills in preventing reading difficulties in ELLs (August & Shanahan, 2006; Manis, Lindsey, & Bailey, 2004), a relationship consistently observed for their monolingual English speakers (Storch & Whitehurst, 2002; Whitehurst & Lonigan, 1998). With the recent adoption of standards-based practices that call for specific attention to exposure to and use of language in the classroom (National Governors Association Center for Best Practices [NGA Center] & Council of Chief State School Officers [CCSSO], 2010), there is increased urgency to effectively meet the linguistic needs of the fast-growing ELL population.

Historically, research with ELLs has been focused on the language used for instruction, which is relevant to the debate on whether or not instruction should be delivered in only English or the native language (L1) and English (L2) (August & Shanahan, 2006; Lindholm-Leary & Borsato, 2006). Several meta-analyses have been conducted on the effectiveness of bilingual education (Francis, Lesaux, & August, 2006; Greene, 1997; Rolstad, Mahoney, & Glass, 2005; Slavin & Cheung, 2005; Willig, 1985) and while the conclusions drawn from these reviews have been diverse (Rossell & Baker, 1996; Willig, 1987), the empirical evidence suggests that sustained bi-lingual and bi-literate instruction for ELLs—the objective of additive models of bilingual education (Kim, Hutchison, & Winsler, 2013)—promotes later L2 reading development (Goldenberg, 2008) and helps maintain L1 reading skills (Thomas & Collier, 1997; Thomas & Collier, 2000). At the least, learning to read in the L1 does not impede L2 reading achievement. However, these studies focused on global measures of language use (e.g., comparisons between program types) do not specify the features of the classroom language environment that help account for beneficial L2 effects. Developing a better understanding of the optimal language environment for ELLs requires a description of the type of language (i.e., quality) to which they are exposed, in addition

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to the amount of exposure to the language (i.e., quantity). Thus, the objectives of the current study are twofold: to describe the quantity and quality of young ELLs' classroom-based English language exposure, with a focus on the kindergarten year, and examine the relation of this language exposure to their oral language outcomes.

Theoretical and empirical foundations to the study of the quantity and quality of language exposure

The literature on language development supports the common assumption that opportunities for exposure to language are a necessity for language acquisition to occur. This literature base is consistent with the sociocultural approach to development that describes the learning process as a consequence of social interaction (Bruner, 1978; Vygotsky, 1978). That is, optimal learning occurs through children's scaffolded interactions with more knowledgeable persons (adults, peers), who build and expand on what children already know. An interactionist perspective on language development emphasizes the influence of children's social interactions, with particular attention to the language to which they are exposed (i.e., language input; Snow, 1994; Tomasello, 2000). In strong disagreement with the position that language structures are present innately and only triggered by linguistic input (Chomsky, 1981), interactionists emphasize the joint contribution of children's capacities for learning language and their language input, establishing a connection between the inherent features of the input (and the frequency of those instances) and the features in the output.

Indeed, a long line of descriptive and longitudinal research on language development in monolingual English speakers shows evidence of a relation between children's language skills and the quantity of the language provided by their caregivers (Hart & Risley, 1995; Hoff, 2003; Huttenlocher, Haight, Bryk, Seltzer, & Lyons, 1991) as well as the quality of that language. For example, the well-documented wide variability in young children's vocabulary skills is predicted by the variability in caregivers' use of diverse vocabulary (Pan, Rowe, Singer, & Snow, 2005; Rowe, 2012). Also associated with greater gains in vocabulary is the grammatical complexity of caregivers' speech, often measured as the Mean Length of Utterance (MLU; Bornstein, Haynes, & Painter, 1998; Hoff & Naigles, 2002). In a longitudinal study of caregiver–child interactions, Huttenlocher, Waterfall, Vasilyeva, Vevea, and Hedges (2010) found a clear bidirectional relation between caregiver and child vocabulary from 14 to 46 months. That is, they found that the diversity of earlier caregiver vocabulary significantly predicted the diversity in later child vocabulary, while earlier child speech also predicted later caregiver speech. These findings suggest that caregivers and their children are mutually influenced by their word usage, which is in support of the hypothesis that caregivers fine-tune their speech, for example, decreasing the amount of simplification of the language as the child's ability develops (Snow, 1994).

In fact, classroom-based language input studies with EO children—who are past the earliest stages of language development—reveal a positive association between oral language growth and teachers' more grammatically complex and linguistically diverse speech. For example, Huttenlocher, Vasilyeva, Cymerman, and Levine (2002) found a positive relation between teachers' use of multi-clause sentences (a measure of grammatical complexity) and their monolingual students' growth in syntactic comprehension over the school year. In that study, a syntactic comprehension task was administered to young children attending 40 different pre-school classrooms at the start and end of the academic year. In addition, during the middle of the school year, they recorded a sample of each teacher's speech. Findings showed more syntactic growth in the preschoolers exposed to teachers who used a higher proportion of multi-clause sentences compared to children exposed to teachers who used a lower proportion of multi-clause sentences. Recently, Dickinson and Porche (2011) showed the lasting effects of exposure to high-quality preschool language on 4th grade monolinguals' language and literacy skills, with effects mediated by children's kindergarten vocabulary.

L2 development and the quantity and quality of L2 exposure

As noted, few studies have examined the quality of ELLs' language input, instead emphasizing the quantity of exposure as a potential source of influence on language development. The existing literature suggests that early language learning in ELLs will proceed commensurate to the amount of exposure to each language (Hammer et al., 2014). It is worth noting that despite the well-documented evidence of a relation between monolingual development and caregivers' verbosity (Hart & Risley, 1995), few studies have looked at the effects of the absolute frequency with which young children hear two (or more) languages (De Houwer, 2011). Instead, studies on young children's exposure to two languages at home have primarily centered on the relative frequency of use of either language. These studies reveal a link between the proportion of input in each language and children's vocabulary size and grammatical abilities in each language (Hoff et al., 2012; Pearson & Fernandez, 1994; Pearson, Fernandez, Lewedeg, & Oller, 1997; Place & Hoff, 2011).

Research focused on input during the preschool years, and as ELLs enter formal schooling, also suggests that exposure to the L2 at home (from a variety of interlocutors) is positively related to children's L2 language skills (Branum-Martin, Mehta, Carlson, Francis, & Goldenberg, 2014). However, findings from at least one study show that increasing the amount of L2 input at home does not accelerate L2 growth for children also immersed in other L2-speaking contexts such as school (Hammer, Davison, Lawrence, & Miccio, 2009). That study, charting Spanish-speaking preschoolers' language growth through Kindergarten as a function of their home language input, showed increases in children's language abilities and mothers' self-reported usage of English over time. Yet, there was no statistically significant association between mothers' increased use of English over time and their children's English language growth. The authors proposed that mothers' increased use of English did not accelerate children's English growth because their primarily English-speaking classrooms provided sufficient English exposure to support children's English skills.

Hoff and colleagues (Hoff, Rumiche, Burridge, Ribot, & Welsh, 2014) offered another explanation for the lack of a significant relation between English exposure at home and the English language skills of the preschool ELLs in the Hammer et al. (2009) study. They propose that this finding reflects the English language skills of the participating sample of caregivers, which did not include native speakers of only English. Indeed, in a study designed to describe the trajectories of expressive vocabulary development in children exposed to both English and Spanish from 22 to 48 months, Hoff et al. (2014) found that the relative amount of caregiver use of English was a significant and positive predictor of English vocabulary, but only for children with a native English-speaking parent. Thus, the authors argue that for children exposed to two languages, the amount of English input provided at home from native English speakers, but not from non-native English speakers, continues to be associated with English skills through preschool.

It is also possible that the input measure used in the study by Hammer et al. (2009) was not sensitive enough to detect a positive association between increased English exposure at home and children's language growth. That is, the increase in mothers' reported English represented a move toward more English over Spanish language use at home, but this increase may have only been reflective of a change in the proportion of input in each language (i.e.,