

Abstract

We introduce the Bilingual and Educational Excellence Project – a study using LENA to learn more about Spanish-speaking preschoolers' bilingual language development ($N = 45$). Samples of each child's naturally-occurring language use in the classroom and that which they hear from teachers and peers are being gathered monthly (September – May). They are transcribed and prepared for analysis using the Transcript Analysis System software (TAS; Gavin, 1987). Changes in preschoolers' English and Spanish verbal proficiency will be examined, including measures of amount, diversity, and complexity of language use. We will also examine how linguistic experiences with teachers and peers in English and Spanish are associated with changes in children's verbal proficiency.

Introduction

- Approximately 15% of students in U.S. schools come from primarily Spanish-speaking homes (NCES, 2010).
- Because in most U.S. schools instruction is conducted only in English, Spanish-speaking students face the dual challenge of acquiring the expected academic skills, such as literacy and math, and learning English as a second language.
- The difficulty of this challenge is evident in that Spanish-speaking children generally lag behind their English-speaking peers in academic performance, and their limited English proficiency is a critical underlying factor (August et al., 2005; NCES, 2005).
- The goal of the Bilingual and Educational Excellence Project is to learn more about Spanish-speaking children's English acquisition *prior* to school entry, such as in preschool, to facilitate their transition into kindergarten.
- Changes in children's English and Spanish proficiency we will be examined throughout preschool, including measures of amount, diversity, and complexity of language use.
- Additionally, we will examine how individual differences in teachers' and classroom peers' English and Spanish use is associated with children's own English and Spanish development.

Methods

Participants

- $N = 45$ children (41.7% boys; M age = 3.93 years) from 3 Head Start classrooms operating half-day programs
- 78.4% Mexican American
- 82.4% of children who live in households earning less than \$30,000 annually

Procedures

- Multiple language samples are gathered on a monthly basis throughout preschool (September – May).
- For each recording session, all participating children wear LENA vests and DLPs from the beginning to the end of the preschool day, with each recording session lasting approximately 3 hours.
- Next, a random sample of 6 nonconsecutive 5-minute segments per child (30 minutes total; about two 5-minute segments per hour of recording) are exported from LENA, transcribed using Transcriber software (Barras et al., 2000), and analyzed with the Transcription Analysis System software (TAS; Gavin, 1987; Gavin, et al., 1993; Gavin & Giles, 1996).

Transcription Analyses System Software

- TAS uses database technologies to analyze transcripts and summarize the linguistic features found in the utterances of each speaker.
- Built within the Access program of Microsoft's Office Suite, to exploit modern day technologies for mining and reporting on large amounts of data.
- The TAS software allows for the use of any linguistic coding system for describing each lexical component of an utterance at several levels; for example, productive lexicons, syntactic structures and semantic organization. Given the entry of descriptive codes by the user, a set of data tables are generated that may be summarized and reported interactively by users.

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English Examples

Verb contractions

's	contracted copula <i>is</i>	He 's the one over there.
'm	contracted copula <i>am</i>	I 'm over here.
're	contracted copula <i>are</i>	They 're thirsty.
'sD	contracted auxiliary <i>does</i>	What 'sD she want?
'sH	contracted auxiliary <i>has</i>	He 'sH gone home.
'dD	contracted auxiliary <i>did</i>	Where 'dD he go?
'dH	contracted auxiliary <i>had</i>	I 'dH gone for the day.
'dW	contracted auxiliary <i>would</i>	He 'dW go if he could.
n't	contracted negative <i>not</i>	He is n't come/ing.

Noun Contractions

'sU	contraction of <i>us</i>	Let 'sU eat!
'em	contraction of <i>them</i>	Watch 'em get on the bus.
/ed2	-ed past participle	I had climb/ed2 to the top.

Verb Inflections

/ed	regular past tense	She stop/ed.
/ed2	-ed past participle	I had climb/ed2 to the top.
/ing	present participle	He 'sB go/ing home.
/3s	regular third person singular	She go/3s every Tuesday.

Spanish Examples

Articles and Nouns: Gender and Number Match

FANs donde está |el libro|?
 CHNs en |la mesa|.
 FANs es tiempo para guardar |los cuadernos|.

Gender and Number Mismatch

CHNs yo quiero jugar con #la muñecas#.
 CXNs ahora me toca jugar con #los muñecas#.

Verbs

CHNs yo comer/como manzanas.
 CXNs si comer/comes manzanas vivir/vivirás /más/ tiempo.
 FANs chico, venir/ven acá, por favor!

Plurals and Possesives

CHNs yo querer/quiero dos manzana/s.
 FANs mira |el dibujo| de/z ella!