Longitudinal Changes in Article Production in Spanish-speaking Dual Language Learners

Problem & Purpose

1. Dual language learners (DLLs) are children in the process of acquiring two languages.
2. Spanish-speaking DLLs are one of the fastest growing populations in the U.S. (Hammer et al., 2014).
3. DLLs at risk for misdiagnosis due to lack of (a) reliable assessment tools, and (b) longitudinal data on early dual language development (Dollaghan & Horner, 2011; Hammer et al., 2014).
4. Findings regarding frequency of article pattern productions are conflicting, particularly regarding whether omissions or substitutions occur most frequently (Anderson & Souto 2005; Morgan, Restrepo & Auza, 2013; Restrepo & Gutiérrez-Ciellén, 2001).
5. Purpose: This quantitative, longitudinal study tracked the Spanish article production of DLL preschoolers across 3 years of English immersion academic instruction.
6. Significance: This work can provide guidance for speech-language pathologists and educators who provide direct services to Spanish-speaking DLLs.

Research Questions

1. What kind of article production patterns occur most frequently in the Spanish narrative retells of typically developing Spanish-speaking DLLs?
2. How does the frequency of article production patterns change from the beginning of preschool to the end of kindergarten?

Methodology

Participants

1. 18 preschool Spanish-English DLLs tracked longitudinally across 3 years (mean age at onset = 45.6 months).
2. All children enrolled in an English immersion program.
3. > 90% from households living below the Federal poverty level.

Language Samples

1. Spanish narrative retell samples collected each semester (fall; spring) using wordless picture story books (order counterbalanced) by Mercer Mayer.
3. Unidirectional criterion for article use: obligatory contexts for articles.

Language Measures

- Spanish articles coded at the word level: un, una, unos, unas, el, la, los, las (Restrepo & Gutiérrez-Ciellén, 2001).
- Omissions, incorrect and correct productions coded for articles produced in obligatory contexts.
- A paired samples t-test conducted to calculate a potential difference in article production patterns from beginning of preschool to end of kindergarten.

Research Questions

- What kind of article production patterns occur most frequently in the Spanish narrative retells of typically developing Spanish-speaking DLLs?
- How does the frequency of article production patterns change from the beginning of preschool to the end of kindergarten?

Findings: Research question 1

- On average, correct use of articles was the most frequent article production pattern across every semester.
- Overall, incorrect productions occurred more frequently relative to omisions.

Findings: Research question 2

- Correct article production showed a significant mean increase (M = 3.09, p < .02), with a large effect size (d = 1.03) from beginning of preschool to end of kindergarten.
- Although the other two article patterns demonstrated non-significant increases, the increases nonetheless demonstrated moderate effect sizes:
  - Incorrect (M = 1.10, p = .314, d = .62)
  - Omission (M = 1.021, p = .346, d = .57)

Discussion

- Implications: This systematic analysis of article production adds further insight to the relative lack of evidence on DLLs’ early language development.
- Characterizing DLLs’ early language development is critical in order to provide the most appropriate and evidence-based clinical prevention, assessment, and intervention services.
- Systematically profiling production patterns of Spanish articles in typically developing DLLs is essential in order to develop appropriate expectations for typically developing DLLs in English immersion settings.
- Limitations & Future Directions:
  - The participants were enrolled in an English immersion program.
  - Future studies should include DLLs who are in different programs of language instruction (e.g., dual language).
  - The majority came from low socio-economic status (SES) homes.
  - Future studies should include DLLs who speak a range of Spanish dialects in order to determine potential dialectal differences in article production patterns.
  - Current study focused on general article production patterns rather than at a fine-grained level.
  - Future studies should include analyzing differences in production patterns regarding article gender and number.

References


Acknowledgements: This research was supported in part by a 2017-18 Undergraduate Research Scholar Award (Camacho). 2018 Duane and Linda Buhmeier Undergraduate Research Award (Camacho); 2017 Dissertation Research Award (Gusewski); 2015-16 BBS Faculty Research Initiative Grant (Rojas); and Grant GA 2013-03 – Jerry M. Lewis, M.D., Mental Health Research Foundation (Rojas); and an Anonymous Donor (Rojas). Disclosure statement: Authors #1 (Natalia Camacho), #2 (Svenja Gusewski), and #3 (Raúl Rojas) have no conflicts of interest.