

Narrative-Based Language Intervention for Spanish-English Bilingual Children

with Down Syndrome

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Background

Bilingualism in individuals with Down syndrome (DS) is a topic of considerable clinical interest in the field of speech-language pathology. Many families and educators believe that exposing individuals with DS to a second language may hinder their already delayed language development, though evidence does not support this notion (Feltmate & Kay-Raining Bird, 2008; Kay-Raining Bird, 2005, 2016). However, there is limited research that examines the language abilities of bilingual individuals with DS and the degree to which they can learn and transfer from one language to another (Kay-Raining Bird, 2005). The overarching purpose of this research is to deepen our disciplinary knowledge about bilingual language development and cross-linguistic transfer of skills in children with DS.

Purpose

The purpose of this study is to examine to what extent bilingual children with DS improve their narrative abilities in the treated and non-treated language when provided with a narrative-based intervention. The current study will focus on examining story retells and personal narratives

The current research study was designed to address the following questions:

1. Does a narrative-based language intervention in one language lead to narrative language gains in macrostructure and microstructure in the treated language of bilingual children with DS?
2. Do bilingual individuals with DS demonstrate cross-linguistic transfer of narrative language skill in macro and microstructure in the non-treated language?

Methods

Design

A single subject design was implemented for this study.

Participant

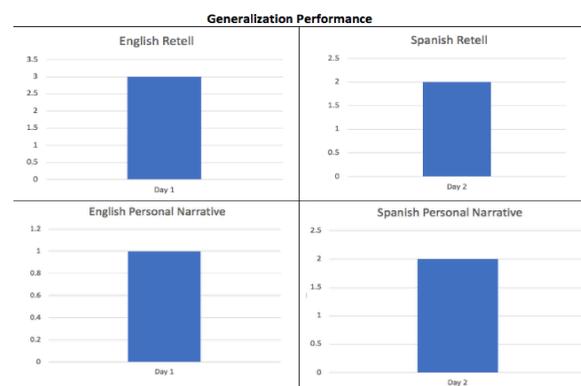
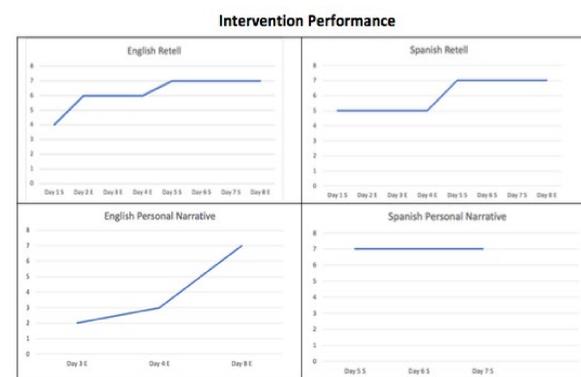
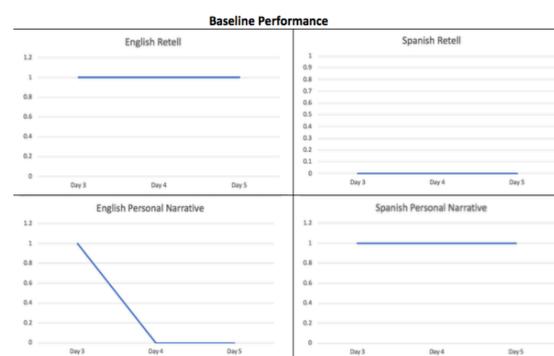
The participant was a 15 year 11-month-old Spanish-English bilingual female with DS.

Procedure

The participant completed six, 45-minute baseline sessions, eight, 45-minute narrative intervention sessions, and two, 45-minute generalization sessions.

Results

Results of the baseline phase are summarized in Figure I, results of the intervention phase are summarized in Figure II, and results of the generalization phase are summarized in Figure III. The x-axis represents the baseline, intervention, and/or generalization day (S = Spanish intervention, E = English intervention) and the y-axis represents the number of story grammar components included in each story type (i.e., English retell, Spanish personal narrative, etc.).



Discussion

The participant demonstrated notable gains in including story grammar components in her story retells and personal narratives during the intervention phase. She also demonstrated an increase in MLU in both languages. It was noted that as her MLU increased, her TTR decreased in both languages. Although she included fewer story grammar components and lower MLU during the generalization phase as compared to intervention, all generalization language measures increased or stayed the same when compared to baseline phase measures, with the exception of TTR, which was inconsistent across all phases. Thus, Story Champs, delivered individually, resulted in meaningful improvements in the macro and micro-structure of a Spanish-English bilingual individual with DS' retells and personal narratives in English and Spanish.

The second purpose of this research study was to investigate if bilingual individuals with DS demonstrate cross-linguistic transfer of narrative language skills in macro and microstructure in the non-treated language. To answer this question, four of the sessions were delivered in English and four in Spanish. At the end of the retell phase, the participant was asked to tell the story in the non-treated language. When the intervention was delivered in Spanish, there was an average of 6.25 story grammar components present in the English story retell. When the intervention was delivered in English, there was an average of 5.5 story grammar components present in the Spanish retell. This data suggests that cross-linguistic transfer increased when the intervention was delivered in Spanish, which was the client's weaker language.

Conclusions

The current study has served to help dispel the myth that children with Down syndrome are not able to learn two languages. On the contrary, children with DS can indeed become bilingual and can utilize their knowledge in one language to support growth in the other. Moreover, in both languages, children with Down syndrome can benefit from intervention designed to enhance their narrative skills. Narrative skills contribute to children's success both socially and academically and are associated with their reading comprehension skills, and these findings may help inform professionals as they develop intervention plans for this population.

References

- Bialystok E. Reshaping the mind: the benefits of bilingualism. *Can J Exp Psychol/Rev Canadienne Psychologie Expérimentale*, 65(4), 229.
- Bialystok E. Bilingualism: the good, the bad, and the indifferent. *Biling Lang Cogn*, 12(1), 3–11.
- Bitetti, D., Scheffner Hammer, C. (2016). The home literacy environment and the English narrative development of Spanish-English bilingual children. *Journal of Speech, Language, and Hearing Research*, 59, 1159-1171. DOI: 10.1044/2016_JSLHR-L-15-0064
- Boulineau, T., Fore, C., Hagan-Burke, S., & Burke, M. D. (2004). Use of story-mapping to increase the story-grammar text comprehension of elementary students with learning disabilities. *Learning Disability Quarterly*, 27(2), 105–121.
- Feltmate, K., & Kay-Raining Bird, E. (2008). Language learning in four bilingual children with Down syndrome: A detailed analysis of vocabulary and morphosyntax. *Canadian Journal of Speech-Language Pathology and Audiology*, 32, 6 – 20.
- Grasso, S. M., Pena, E. D., Bedore, L. M., Hixon, J. G., Griffin, Z. M. (2018). Cross-linguistic cognate production in Spanish-English bilingual children with and without specific language impairment. *Journal of Speech, Language, and Hearing Research*, 61, 619-633.
- Griffin, T., Hemphill, L., Camp, L., & Wolf, D. (2004). Oral discourse in the preschool years and later literacy skills. *First Language*, 24, 123-147.
- Kay-Raining Bird, E. (2005). The language abilities of bilingual children with Down syndrome. *American Journal of Speech-Language Pathology*, 14, 187-199.
- Kay-Raining Bird, E. (2016). The case for bilingualism in children with Down syndrome. (2016). In R. Paul (Ed.), *Language disorders from a developmental perspective* (pp. 249-276). New York, NY: Psychology Press.
- Kay-Raining Bird, E., Chapman, R. S., Schwartz, S. E. (2004). Fast mapping of words and story recall by individuals with Down syndrome. *Journal of Speech, Language, and Hearing Research*, 47, 1286-1300.