The Impact of Language Experience on a Non-Word Repetition Task: Testing Bilingual Children with Little L2 Exposure

Poor performance on tasks involving the repetition of non-words has been shown to be a clinical marker of specific language impairment (SLI) in children (e.g., Girbau & Schwartz, 2008). As such tasks do not use meaningful language, they can be an effective means of testing phonological processing skills while eliminating vocabulary familiarity (Thordardottir & Brandeker, 2013). Non-word repetition (NWR) tasks can be especially useful in bilingual contexts; standardized tests normed to monolingual populations tend to over-identify typically developing (TD) bilingual children as having SLI because of overlapping language performance (e.g., Bedore & Peña, 2008). However, NWR tasks are not necessarily immune to the effects of linguistic experience.

Gutiérrez-Clellen and Simon-Cereijido (2010) found that the clinical accuracy of a NWR task based on a single language was lower than that of two - one based on each language of bilingual children (Spanish and English in this case). In other words, a NWR task based on the phonotactics of only one of a bilingual's languages was not enough to rule out SLI in TD bilinguals, even if it was their dominant language. Could a single non-word repetition task that includes elements common to the two languages in question be the key to differentiating TD bilingual children from those with SLI?

A task of this nature, the LITMUS-NWR-FRENCH (Language Impairment Testing in Multilingual Settings, COST Action, 2011) could offer insight into this question. This particular test aims to reduce the effect of language-specific knowledge by building non-words from phonological units common to many languages (Ferré & dos Santos, to appear), thus reducing bias against typically developing bilinguals who need more time to master the phonotactics of the language of least exposure. Complexity increases at the syllabic structure level, including clusters that are found in both English and French (Table 1). A previous study using this task found that TD English-French bilingual children living in France (Bi-TD) performed very well - nearly on par with their monolingual French-speaking peers (Table 2). The present study expands on these results by testing 10 children between the ages of 6;8-7;4 with L1 English and are acquiring L2 French in an immersion school in St. John's, Newfoundland (Bi-IMRS). These learners have less exposure than do the children living in France, but it is predicted that they will perform just as well due to the test's composition.

Preliminary analysis of our results show that these children, despite only having 2 years of exposure to French, performed very well - near ceiling, in fact - on this task (Table 3). This could indicate that incorporating common linguistic phonological elements and structures allows children to better display their linguistic competencies across both languages. Further analysis of this data will compare these results to those of bilingual English-French children with SLI to determine whether the task would mistakenly identify them as typically developing.

Table 1: Task Details (modified from Ferré & dos Santos, to appear)

	Number of Items	Syllable Types	Examples
Control Items	13	CCV, sCV, CVC, CV.CV	[kla], [spu], [faku]
Low Complexity	12	Disyllabic with CC clusters, CVC syllables and trisyllabic CV.CV.CV	[paklu], [kifus], [kifapu]
Medium Complexity	36	Addition of CCV and CVC syllables in disyllabic and trisyllabic non-words; CCVC, CVCC and sCCV monosyllabic	[flukif], [klaf], [pifukas], [plal], [kuspa]
High Complexity	10	CCVCs, CCVsC, CV.CVL.CV, sCV.CV.CV, CV.CVs.CV	[pliks], [skapufi], [fikuspa]
Total	**71**		

Table 2: Results of Bi-TD (mean age 6;9, SD 1;1) children in France

Speaker	Percent Word Exact Match	Speaker	Percent Word Exact Match
ALB	95.77	**LEG**	97.18
AND	92.95	**LIC**	76.05
CLR	83.09	**MAH**	88.73
FAS	92.95	**RAM**	71.83
GED	92.95	**SAC**	92.95
KOS	97.18	**SAH**	90.14

Table 3: Results of Bi-IMRS children in NL

Speaker	Percent Word Exact Match	Speaker	Percent Word Exact Match
AHE	87.32	**LAE**	94.36
CRA	91.54	**LOT**	88.73
EES	91.42	**MRE**	90.14
JOS	94.36	**NOR**	91.54
KTP	91.42	**SAL**	92.95

References

Bedore, L. M., & Peña, E. D. (2008). Assessment of bilingual children for identification of language impairment: Current findings and implications for practice. *International Journal of Bilingual Education and Bilingualism, 11*(1), 1-29.

COST Action IS0804. (2001) *COST Action IS0804.* <http://www.bi-sli.org>.

Ferré, S., & dos Santos, C. (to appear). Un test de répétition de non-mots pour évaluer la phonologie des enfants bilingues. *Revue de Linguistique et de Didactique des Langues (Lidil)*, *51*.

Girbau, D., & Schwartz, R. G. (2008). Phonological working memory in Spanish-English bilingual children with and without specific language impairment. *Journal of Communication Disorders, 41,* 124-145.

Gutiérrez-Clellan, V. F., & Simon-Cereijido, G. (2010). Using nonword repetition tasks for the identification of language impairment in Spanish-English-speaking children: Does the language of assessment matter? *Leaning Disabilities Research & Practice, 25*(1), 48-58.

Thordardottir, E., & Brandeker, M. (2013). The effect of bilingual exposure versus language impairment on nonword repetition and sentence imitation scores. *Journal of Communication Disorders, 46,* 1-16.