

The Effect of Linguistic Experience on a Non-Word Repetition Task: Testing Children with Little Exposure to their Second Language

Jeanie Morry & Maureen Scheidnes | Memorial University of Newfoundland | jmm415@mun.ca | mscheidnes@mun.ca



INTRODUCTION

- Non-word repetition tasks are useful in identifying SLI in monolinguals, but results for bilingual children are mixed (e.g., Thordardottir & Brandeker, 2013; Lee et al., 2003; Kohnert et al., 2006; Windsor et al., 2010).
- The impact of language experience on NWR is unclear, in part because the phonological basis for stimuli construction is inconsistent or unclear (see Chiat, 2015 for review).
- To reduce the effects of language experience, the LITMUS-NWR items were built using phonemes common to many languages (COST Action ISo804)
- But sequential bilinguals with very little L2 input have not yet been reported using the LITMUS-NWR-French task

➔ **What effect does very little exposure to French have on LITMUS-NWR-French performance?**



DP Design



Wincy Dot



Yat Design

BACKGROUND & OBJECTIVE

LITMUS-NWR-FRENCH (Ferré et al., 2015)

{ **Language Independent Items** } { **Language Dependent Items** }

- 20 test items, 10 control
- CV, CCV, CVC#
- Vowels: [a], [i], [u]
- Consonants: [p], [k], [f], [l]
- [klipafu], [fupla], [faku]

- 38 test items, 3 control
- Addition of [s] for complex consonant clusters
- Internal coda [s] and [l]
- [kusp], [skafu], [pafuski], [pilfu]

Ferré et al., (2015)

- TD bilinguals (L1 English, Arabic, Portuguese, Turkish) living in France had high scores $M = 89\%$
- Words with an internal coda were particularly challenging for children with SLI : Bi-SLI mean: 64%, Mo-SLI mean: 53%

➔ **Objective:** To expand on the results of Ferré et al. (2015) by administering this test to typically developing bilinguals (L1 English) with little exposure to French.

➔ **Prediction:** Typically developing English-French bilingual children with varying language experience will nevertheless demonstrate similar performance because of the phonological properties of the items.

METHODOLOGY

Table 1. Participants

	n	Mean age	Location
Bi-IMRS	18	6;11	St. John's, Newfoundland, Canada
Bi-TD	12	6;9	Tours, France

Note: Bilingual children are L1 English, L2 French. Data from France are from Ferré et al., (2015)

Bi-IMRS children began learning French in kindergarten in an immersion school. They were tested towards the end of 1st grade – between 16-20 months of exposure to French



Children must repeat what Zoubilou the alien says

Testing and Data Analysis

- Items were prerecorded by a French speaker and presented through headphones
- Transcribed in Phon 2.0.

Other Tests

- LITMUS-Sentence Repetition-FRENCH
- N-EEL (French) receptive vocab and morphosyntax
- CELF-5 screening test (English)
- Raven's Coloured Progressive Matrices
- Brief parental questionnaire



Figure 1: North America; indicating Newfoundland
Photo from Map Resources

RESULTS

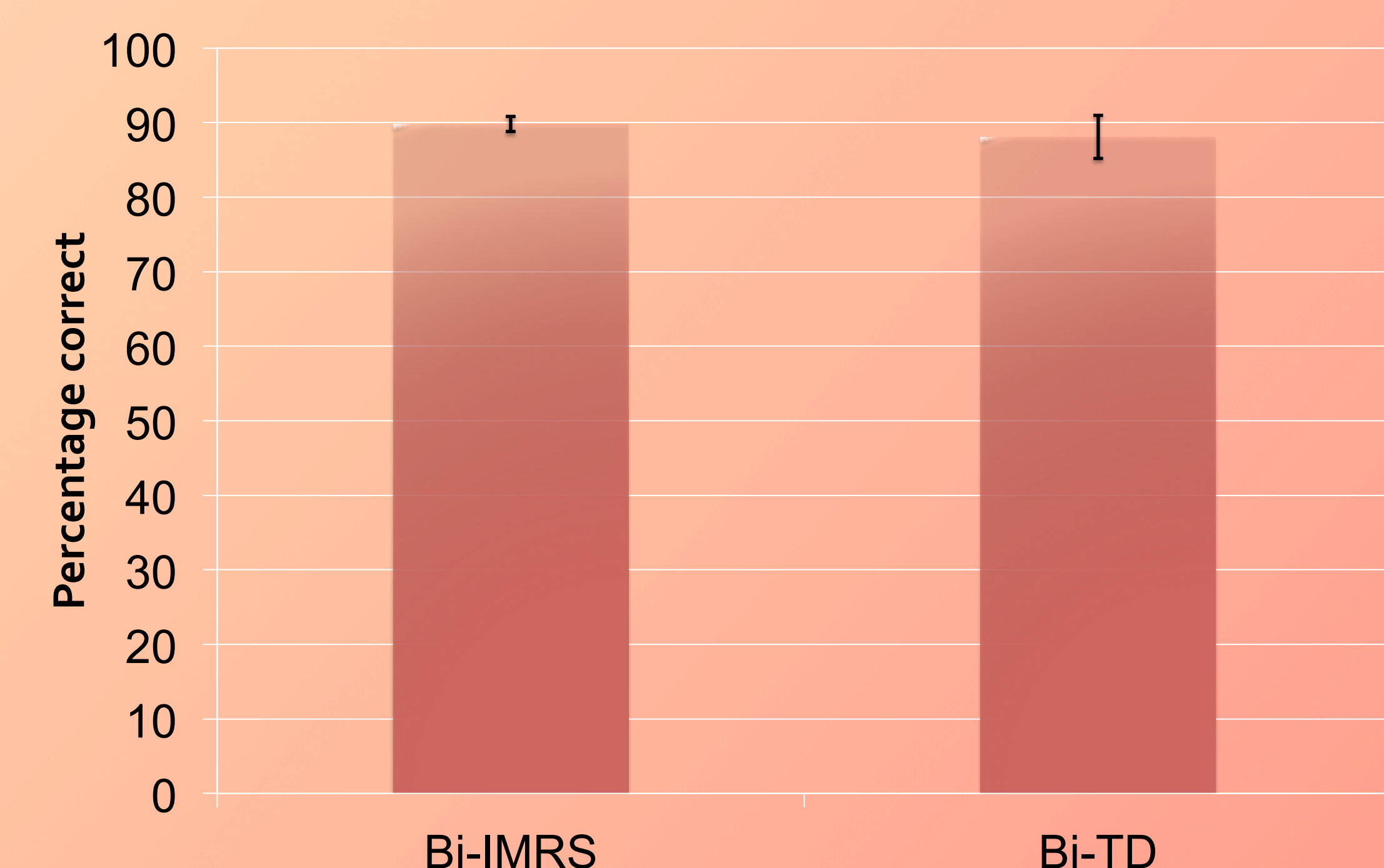
Table 2. BI-IMRS French Standardized Test (N-EEL) Results

	Receptive Vocab		Receptive Morphosyntax	
	Raw Score	Z-Score	Raw Score	Z-Score
M	18.83	-13.56	3.44	-3.13
SD	4.16	3.70	1.58	1.5
Range	12 - 26	-19.7 - -7.8	1 - 7	-5.5 - 0.16

Other Bi-IMRS Test Scores

- Sentence Repetition (French): $M = 33\%$, $SD = 13$
- English (CELF-5): all children were at criterion
- Raven's Matrices: all children had normal non-verbal IQ

NWR Results



Bi-IMRS NWR Range: 86-97%, only 4 children scored <90%

DISCUSSION

Bi-IMRS = Bi-TD for LITMUS-NWR-FR, with little individual variation

TD groups perform very well on this task, even when language exposure differs dramatically.

Recording by French speaker did not have any effect.

FUTURE RESEARCH

What about other language combinations? TD bilinguals with other L1s (Turkish) and less exposure to French should be tested.

Acknowledgments

- Special thanks to Sandrine Ferré and Christophe dos Santos from Inserm U930 Imagerie et Cerveau and the Université François-Rabelais de Tours for sharing their data with us.
- Thanks to parents, teachers, and children from Vanier Elementary, St. John's, NL: Carol Ann Fagan, Tina Maloney and Victoria Kelly
- Student assistants at Memorial University: Alice Brun-Newhook and Camille Hellec
- Thanks to Dr. Yvan Rose for his technical support and suggestions.
- This research was supported by Memorial University of Newfoundland
- This research is supported by the Dean of Arts and Vice President (Research) at Memorial University of Newfoundland under the title *Language Exposure and Syntactic Complexity in Child L2 French*.

Selected Bibliography

- Chiat, S. (2015). The COST Action ISo804 framework for nonword repetition tests. In S. Armon-Lotem, J. de Jong, & meir (Eds.), *Methods for assessing multilingual children: disentangling bilingualism from Language Impairment* (pp. 125–150). Bristol, UK: Multilingual Matters.
- Ferré, S., dos Santos, C. & de Almeida, L., 2014. Potential clinical markers for SLI in bilingual children, *Proceedings of the Boston University Conference on Language Development (BUCLD)*. Boston, 7-9 November 2014.
- Rose, Y. & MacWhinney, B. (2015). Phon (Version 2.0.5) [Software]. <https://www.phon.ca/phonstrac>