

Trilingual effects at the microstructure and macrostructure levels in children's narratives

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Our study examines the narrative productions of trilingual children in Romanian, English and French. The children spoke only Romanian prior to kindergarten and were introduced to English and French during kindergarten and Grade 1 French immersion respectively. The effects of learning two or three languages have been probed at the levels of the lexicon and grammar, especially with bilingual children, or with adults whose third-language acquisition is influenced by their first or second languages (Montrul, 2013; Rothman, 2015). However, while recent studies have mostly examined transfer patterns unidirectionally, our study uncovers patterns of development emerging from mutual interactions among all three languages. Data were elicited through the Frog series (Mayer, 1969) in each language. 39 narratives were elicited from 13 children age 8 to 11 year old. We analyzed both macrostructure and microstructure elements. For macrostructure, we used the narrative structure scheme (NSS, Heilmann et al., 2010). For microstructure, we measured morphosyntactic complexity (a verbal density score), lexical richness (Guiraud's index) and accuracy (rate of error free utterances). In addition, we ran a quantitative/qualitative analysis of the inflectional morphology.

Results for the NSS point to the transferability of 'story grammar' as scores were not significantly different between languages (Figure 1). These findings raise the possibility that telling stories benefits from school-based education and that the macrostructures of storytelling are transferable across languages (Pearson, 2002). Results for microstructure elements show an advantage for the majority language (English). In addition, Romanian (the heritage language) scores on vocabulary richness and accuracy on par with English while it significantly lags behind both French and English on the morphosyntactic score (Table 1). However, inflectional morphology remains problematic in all three languages. The heritage language has been characterized as prone to omission and substitution errors, as well as overall simplification; we found the same in some domains in all the languages of a trilingual child. The areas affected in the three languages are omission and inconsistent marking of definiteness and definiteness agreement, subject-verb agreement morphology and omission/selection of prepositions. We explore possible explanations at the level of processing or mental representation.

	Romanian		French		English	
	Median	Range	Median	Range	Median	Range
Verbal density	1.34	1.19-2.09	1.57	1.36-2.19	1.64	1.47-2.49
Guiraud's index	6.36	4.95-7.29	5.64	4.3-6.85	6.51	6.21-7.78
Error-free utterances	0.7	0.47-0.91	0.52	0.35-0.78	0.82	0.63-0.89

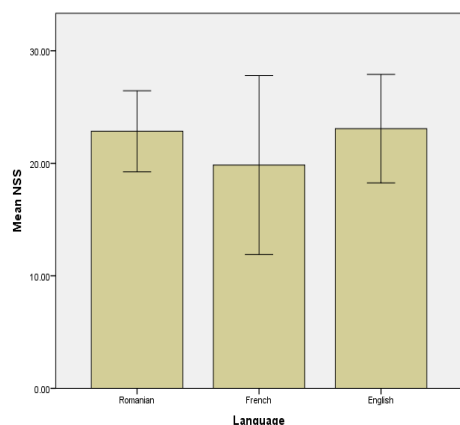


Figure 1. NSS scores average (NSS scores differences across languages are not significant cf. Friedman test ($\chi(2) = .776$, $p=.720$))

Selected references

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Table 1. Language proficiency indexes across the three (Friedman test was significant Verbal density: $\chi(2) = 11.231$, $p=.003$; Guirauds: $\chi(2) = 12.462$, $p=.001$; Error-free utterances: $\chi(2) = 13.500$, $p=.000$)