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*The role of working memory capacity in L2
speech production and development*

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The role of working memory capacity in L2 speech production and development

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Theoretical motivation

Information Processing Theory (for example McLaughlin & Heredia, 1996)
- controlled x automatic processes

L1 Speech production (Levelt, 1989) and L2 speech production (for example Fortkamp, 2000) - controlled x automatic processing in the formulator

Dual code theories - rule-based x a memory-based system (for example, Skehan, 1998)

The role of working memory capacity in L2 speech production (Finardi & Prebianca, 2006; Fortkamp, 2000) and development (Finardi & Weissheimer, 2009; Prebianca; Finardi & Weissheimer, 2014)

Research question – What is the relationship between working memory capacity and acquisition of syntactic structure in L2 speech?

Rationale - Working memory is assumed to be involved in the execution of controlled processes operating in the rule-base system, which, in turn, are assumed to be at least partially responsible for the retention and acquisition of a syntactic rule in short responses in L2 speech.

Methodology

Sample 97 Brazilian adult learners of English as a foreign language– 50 control and 47 experimental

Target language structure - *So+aux+I* and *Neither+aux+I*

Tests – Retention (focused, immediate test), Acquisition (unfocused, delayed test), working memory capacity (L1 speaking span test and L2 speaking span test)

Method - quasi-experimental and mainly quantitative and correlational

Results

Working memory capacity is related to the acquisition of a syntactic structure in L2 speech (.688**) but given the strength of association between these two variables it is possible to suggest that other variables are involved. Perhaps the linguistic complexity of the target language structure investigated and parameter resetting in L2 are also at play. Overall results suggest that the acquisition of a syntactic structure in L2 speech is mediated by working memory capacity operating on controlled processes in the rule-based system but the study acknowledges that working memory capacity alone cannot account for the retention and acquisition of a syntactic structure in L2 speech and so linguistic accounts of syntactic processing in L2 should also be considered.

References

Finardi, K. & Prebianca, G. (2006). Working memory capacity and speech production in L2: evidence from a picture description task. *Revista de Estudos da Linguagem. Faculdade de Letras da UFMG*, 14(1), 231-260.

Finardi, K. & Weissheimer, J. (2009). On the Relationship between working memory capacity and L2 speech development. *Signótica*, v. 20, p. 365-390.

Fortkamp, M. B. M. (2000). *Working memory capacity and L2 speech production: An exploratory study*. Doctoral Dissertation. Universidade Federal de Santa Catarina, Florianopolis. Brazil.

Levelt, W. (1989). *Speaking: from intention to articulation*. Cambridge, MA: MIT Press.

McLaughlin, B., & Heredia, R. (1996). Information-processing approaches to research on second language acquisition and use. In B. W. Ritchie, T. (Ed.), *Handbook of second language acquisition* (pp. 213-228). San Diego: Academic Press.

Prebianca, G. V.V.; Finardi, K.; Weissheimer, J. (2014). Working memory capacity across L2 speech proficiency levels. *Revista Brasileira de Linguística Aplicada*, v. 14, p. 441-462, 2014.

Skehan, P. (1998). *A cognitive approach to language learning*. Oxford: Oxford University Press.