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Evidence from neurolinguistic methodologies [Recurso electrónico] : can it actually inform linguistic/language acquisition theories and translate to evidence-based applications? / Leah Roberts ... [et al.]

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 137-143

This special issue is a testament to the recent burgeoning interest by theoretical linguists, language acquisitionists and teaching practitioners in the neuroscience of language. It offers a highly valuable, state-of-the-art overview of the neurophysiological methods that are currently being applied to questions in the field of second language (L2) acquisition, teaching and processing. Research in the area of neurolinguistics has developed dramatically in the past 20 years, providing a wealth of exciting findings, many of which are discussed in the articles in this issue of the journal. The goal of this commentary is twofold. The first is to critically assess the current state of neurolinguistic data from the point of view of language acquisition and processing – informed by the articles that comprise this special issue and the literature as a whole – pondering how the neuroscience of language/processing might inform us with respect to linguistic and language acquisition theories. The second goal is to offer some links from implications of exploring the first goal towards informing language teachers and the creation of linguistically and neurolinguistically-informed evidence-based pedagogies for non-native language teaching.

Second language research. -- 2018 (January), v. 34, n. 1, p. 125-143

1. Neurolinguistics 2. Sentence processing 3. Second language acquisition 4. Syntactic knowledge

2

Implications of the declarative/procedural model for improving second language learning [Recurso electrónico] : the role of memory enhancement techniques / Michael T Ullman, Jarrett T Lovelett

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 59-65

The declarative/procedural (DP) model posits that the learning, storage, and use of language critically depend on two learning and memory systems in the brain: declarative memory and procedural memory. Thus, on the basis of independent research on the memory systems, the model can generate specific and often novel predictions for language. Till now most such predictions and ensuing empirical work have been motivated by research on the neurocognition of the two memory systems. However, there is also a large literature on techniques that enhance learning and memory. The DP model provides a theoretical framework for predicting which techniques should extend to language learning, and in what circumstances they should apply. In order to lay the neurocognitive groundwork for these predictions, here we first summarize the neurocognitive fundamentals of the two memory systems and briefly lay out the resulting claims of the DP model for both first and second language. We then provide an overview of learning and memory enhancement techniques before focusing on two techniques – spaced repetition and retrieval practice – that have been linked to the memory systems. Next, we present specific predictions for how these techniques should enhance language learning, and review existing evidence, which suggests that they do indeed improve the learning of both first and second language. Finally, we discuss areas of future research and implications for second language pedagogy.

Second language research. -- 2018 (January), v. 34, n. 1, p. 39-65

1. Declarative memory 2. Declarative/procedural model 3. Memory enhancement 4. Procedural memory 5. Retrieval practice 6. Second language acquisition 7. Spaced repetition 8. Spacing effect 9. Testing effect

3

The interplay of individual differences and context of learning in behavioral and neurocognitive second language development [Recurso electrónico]/ Mandy Faretta-Stutenberg, Kara Morgan-Short

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 92-95

In order to understand variability in second language (L2) acquisition, this study addressed how individual differences in cognitive abilities may contribute to development for learners in different contexts. Specifically, we report the results of two short-term longitudinal studies aimed at examining the role of cognitive abilities in accounting for changes in L2 behavioral performance and neurocognitive processing for learners in 'at-home' and 'study-abroad' settings. Learners completed cognitive assessments of declarative, procedural, and working memory abilities. Linguistic assessments aimed at determining behavioral sensitivity and online processing of L2 Spanish syntax were administered before and after a semester of study in either a traditional university classroom context (Experiment 1) or a study-abroad context (Experiment 2). At-home learners evidenced behavioral gains, with no detected predictive role for individual differences in cognitive abilities. Study-abroad learners evidenced behavioral gains and processing changes that were partially accounted for by procedural learning ability and working memory. Taken together, these results provide preliminary insight into how individual differences in cognitive abilities may contribute to behavioral and neural processing changes over time among learners in different natural contexts.

Second language research. -- 2018 (January), v. 34, n. 1, p. 67-101

1. Declarative memory 2. Event-related potentials 3. Individual differences 4. Procedural memory 5. Second language 6. Study abroad 7. Working memory

4

Neurolinguistics and second language teaching [Recurso electrónico] : a view from the crossroads / Stefano Rastelli

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 120-123

The topic of this article is the link between research on the neurocognition of the teaching– acquisition interface and research on second language teaching. This recent scientific enterprise investigates whether and how different aspects of second language instruction may change both the anatomy and the functioning of an adult learner's brain even in a short period of time. In this article, I analyse how neurolinguists have operationalized three aspects specifically related to second language teaching: (1) learners' proficiency; (2) the between-groups experimental design; (3) the implicit vs. explicit teaching dichotomy. I suggest that the degree of replicability of such neurolinguistics studies can be increased by adopting non-circular operational definitions. Such definitions should not be based on psycholinguistic or neurolinguistic metrics, but on standards that are commonly discussed in the literature on instructed second language acquisition, second language teaching, and assessment. Finally, I suggest that for future research neurolinguists should consider the advantages of welcoming on board more developmental linguists and teachers.

Second language research. -- 2018 (January), v. 34, n. 1, p. 103-123

1. L2 proficiency 2. Neurolinguistics 3. Second language acquisition 4. Second language teaching

5

Prosody–syntax integration in a second language [Recurso electrónico] : contrasting event-related potentials from German and Chinese learners of English using linear mixed effect models / Stefanie Nickels, Karsten Steinhauer

Este artículo se encuentra disponible en su edición electrónica. Su acceso electrónico es a través del enlace de 'Acceso al documento'.

References: p. 30-33

The role of prosodic information in sentence processing is not usually addressed in second language (L2) instruction, and neurocognitive studies on prosody–syntax interactions are rare. Here we compare event-related potentials (ERP) of Chinese and German learners of English L2 to those of native English speakers and show how first language (L1) background and L2 proficiency influence the online processing of prosody-induced garden-path effects. Unlike most previous ERP studies, we use linear mixed effect models to analyse L2 proficiency as a continuous (rather than categorical) variable. Our results show that both L1 background and language proficiency shape the integration of prosodic and syntactic cues, and that, importantly, even English native speakers' ERPs were influenced by their English proficiency level. Lastly, this article also addresses why coverage of prosody in L2 classroom instruction may be beneficial.

Second language research. -- 2018 (January), v. 34, n. 1, p. 9-37

1. Closure Positive Shift (CPS) 2. Event-related potentials (ERPs) 3. Language proficiency 4. Language teaching 5. Language transfer 6. Linear mixed effect models 7. Prosodic boundary 8. Syntax