

Multilingual advantage for adult instructed acquisition of morphosyntax and the effect of processing modality

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Bilingual and multilingual speakers have an empirically-demonstrated advantage when it comes to the task of learning an additional language in lexical (e.g., Kaushanskaya & Marian, 2009), phonological (e.g., Tremblay & Sabourin, 2012), phonetic (e.g., Antoniou et al., 2015), and syntactic (e.g., Klein, 1995) domains. However, the present study is motivated by a notable lack in previous research that examines the effect of multilingualism on acquiring a specific grammatical structure, particularly in the domain of morphosyntax. This study therefore aims to examine how knowledge of an additional language beyond L1 English and L2/L3 Spanish may affect accuracy scores with grammatical gender as a problematic feature for the late acquisition of morphosyntax (e.g., Fernández-García, 1999; McCarthy, 2008; Montrul et al., 2008). Participants consisted of two groups of adult learners ($N = 24$) in the instructed context: 1. those with bilingual experience ($n = 12$) in L1 English and L2 Spanish; and 2. those with multilingual experience ($n = 12$) in L1 English, L2 other language (e.g. French, Arabic, Mandarin, German), and L3 Spanish. The effect of language processing modality was investigated via two task types: 1. a self-paced written task to examine performance during the ‘offline’ modality; and 2. a speeded oral picture description task to examine the ‘online’ modality. These varied task demands were designed to investigate to what extent processing modality may modulate the effect of multilingual experience on grammatical performance. The effect of three linguistic variables inherent to grammatical gender is also investigated by comparing scores across both categories on the following binary variables: gender class (masculine or feminine), domain of agreement (determiner, adjective), and noun morphology (overt or non-overt gender marking). Results demonstrate a positive and significant effect ($F(22) = 4.723, p = .041$) of multilingual experience thus suggesting that even novice-level multilingual exposure beyond the native language and the current target language affords significant advantage in performance with a problematic feature for adult learning of morphosyntax. Moreover, this advantage produces a significant effect only during online/speeded processing ($F(22) = 9.344, p = .006$). No significant difference was detected in Spanish proficiency ($F(22) = 1.640, p = .222$) nor metacognitive awareness scores ($F(22) = 0.634, p = .436$) between bilingual and multilingual participants. Therefore, we argue that the multilingual advantage observed here may be, at least in part, attributable to differentiated processing cues and language representation such that learners with multilingual exposure demonstrate enhanced use of overt noun morphology as a processing cue ($F(22) = 10.128, p = .005$), are less dependent on the masculine class default form as a compensatory strategy as demonstrated in higher accuracy rates with feminine nouns ($F(22) = 6.317, p = .021$), and have potentially more developed procedural/implicit linguistic competence, as reflected in higher accuracy scores with online processing during the speeded oral production task ($F(22) = 9.344, p = .006$). The findings of this study contribute to our understanding of the effect of multilingualism on the late acquisition of morphosyntax and further relate this multilingual effect to specific features of the target structure and language processing modality.

Keywords: multilingual effect; late bilingualism; adult SLA; instructed language learning; grammatical gender; morphosyntax; Spanish; English

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