

### **The role of L2 proficiency and proactive control in new grammar learning**

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Bilingualism and previous linguistic experience seem to be advantageous when trying to learn a new language, however evidence of this benefit on new grammar learning is scarce. In this study, we aimed to assess the role of second language (L2) proficiency and cognitive control in an explicit learning context. Thus, 81 Spanish – English bilinguals, varying in proficiency, learned Japañol (Japanese-syntax, Spanish-lexicon) in context with metalinguistic information about the rules was provided and where examples sentences varying in complexity were presented. Differences in L2-English proficiency were measured with the MELICET and differences in proactive control were assessed with the AX-CPT task. Participants learned the rule during five sessions. Immediately and two-weeks after (delayed) the last session, participants performed a Grammatical Judgment Task where they answered if the sentences were grammatically correct in Japañol. Overall, participants had better performance when answering to simple than to complex sentences and in the immediate than the delayed test. Results showed that L2 proficiency significantly modulated performance in both the immediate and delayed tests. Participants with low L2-proficiency had better performance when answering to simple than complex sentences. Additionally, in the immediate test, when answering to complex sentences, higher L2-proficiency was positively associated to the performance. Finally, proactive control was found as a significant modulator in the immediate but not in the delayed test with more proactivity associated with the performance improvement. These results suggest that L2-proficiency and cognitive control, and not just previous experience, are key factors in successful grammar learning under explicit learning conditions.