The Effects from the Interaction Between Learner Working Memory Capacity and Instructional Treatment on the Acquisition of Polysemous L2 Spanish Spatial Prepositions

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ABSTRACT

The present study investigated three areas in SLA related to the acquisition of polysemous L2 Spanish spatial prepositions. These three areas were (1) the effect of instructional method on the acquisition of productive knowledge of polysemous L2 Spanish spatial prepositions, (2) the effect of working memory capacity on the acquisition of productive knowledge of polysemous L2 Spanish spatial prepositions, and (3) the effects resulting from the interaction of working memory capacity with instructional method on the acquisition of productive knowledge of polysemous L2 Spanish spatial prepositions. The target learners were adult L1 English speakers 18 years of age or over with no prior knowledge of Spanish or any cognate language (ab initio learners).

These target learners and these three areas of inquiry motivated three research questions and related hypotheses. The first research question and hypothesis examined the effectiveness of two techniques commonly used in the teaching of L2 polysemes. These two instructional methods were (1) Translation-based instruction (TBI), which treats the multiple meanings of polysemes as arbitrary, discreet and unrelated; (2) Cognitive linguistics-based instruction (CLBI), which treats the multiple meanings of polysemes as interrelated and motivated by an association to a common conceptual base via the processes of metaphor and metonymy. Immediate post-test scores
suggest that these two instructional methods are equally effective in developing short-term productive knowledge, but delayed post-test scores suggest that learners under CLBI acquire a greater level of long-term productive knowledge.

The second research question and hypothesis examined the predictive nature of working memory in the acquisition of L2 polysemes. Immediate and delayed post-test results suggest that higher scores in working memory capacity directly correlate to higher scores in productive knowledge of the four target prepositions.

Finally, the third research question and hypothesis examined effects resulting from the interaction of working memory with the two instructional treatments, CLBI and TBI. Immediate and delayed post-test results suggest that learner working memory capacity does interact with the instructional treatment. High working memory learners under TBI outsored their high working memory counterparts under CLBI, but low working memory learners under CLBI outsored their low working memory counterparts under TBI on the same immediate post-test.