A Cognitive Evaluation of Lexical Access in Sequential Spanish-English Trilinguals

Sahar Shirali

Linguistics Department, Shahid Beheshti University, Tehran, Iran

Introduction

This study investigates whether **Spanish-English cognates' cross-language overlap** has any negative effect on **sequential trilinguals' working memory**.

Method

Participants:

36 females whose language were: **Persian (L1)**, **English (L2)**, and **Spanish (L3)** respectively.

Design & Procedure:

A timed picture-naming task with 43 pictures and in two conditions was applied to test the participants' English and Spanish lexical access and their cognitive development regarding resistance to inter-linguistic interferences. The pictures included cognate and non-cognate common nouns of Spanish and English. The number of **correct answers** in each block, and the **response times** were the variables of this research.

Results

The results showed **less accurate responses**, **more inter-linguistic interferences**, and **longer response times** in the mixed condition than in the blocked ones. The scores in the mixed block and especially in cognates were the lowest among all three blocks, i.e., the participants' working memory functioned better in the single blocks. Also, they were more accurate and faster in the English block than in the Spanish one.
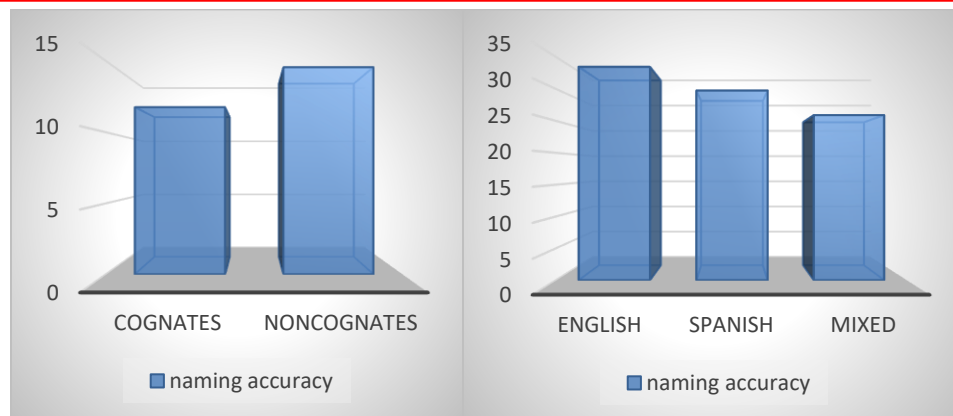

Figure1. comparison of mean scores for cognates and non-cognates   Figure 2. Comparing mean scores in each of the three blocks

Discussion

Based on the **distributed memory representation model**, the representation of cognates is associated with both lexical (form) and conceptual (meaning) levels; whereas, non-cognates relate only to the conceptual level. Thus, access to the exact lexical label for cognates takes longer. Besides, the results can be interpreted in terms of the participants' lower proficiency in L3 (Spanish) relative to their L2 (English). According to **Cummins' Threshold Hypothesis**, having reached the first critical threshold in both languages' proficiency, the learner is then able to overcome the negative effects of bilingualism, and the second threshold to get access to its benefits.