



Current Research Review: Factors That Influence Fast Mapping in Children Exposed to Spanish and English

(Alt, Meyers & Figueroa, 2013)

Background: Recent research into word-learning suggests that children use phonotactic probability (the language-specific probability that one sound could come after another) to aid in fast-mapping new words. Children demonstrate a word-learning advantage when only given a few exposures for those words in which the phoneme sequence is more phonotactically probable compared to those words which are less phonotactically probable.

Hypothesis: The current study asked whether bilingual children would show less advantage in fast-mapping high-probability words as a result of interference from the second language (in this case Spanish) when compared to monolingual (English) children. If bilingual children showed less advantage with high phonotactic probability words, it would support the competition model of language development (Hernandez, Li and MacWhinney, 2005), demonstrating interference between the two languages. If bilingual children performed similarly for high phonotactic probability words as compared to monolingual children, this would support the dual systems model (Genessee, 1989) because it would indicate a lack of interference from the second language.

Methodology and Participants: Two groups of typically developing monolingual and bilingual children were recruited to participate in the study. One group was composed of fifty 4- and 5-year olds while the other group consisted of thirty-four 7- and 8- year olds. Twenty-four “English-like” non-word stimulus items were created for the study. The task consisted of a computer game where children were asked to learn the names of ‘new’ dinosaurs. Children were tested both receptively and expressively for acquisition of the new words, being asked to recognize and recall the name.

Conclusion: Results demonstrated that both the monolingual and bilingual groups performed better on high-probability words without significant differences between groups. Monolingual preschoolers performed better on the expressive task compared to their bilingual peers, however this difference had disappeared by school-age. The authors suggested this was the result of likely increased English exposure by school age. Increased exposure to English and age predicted better performance on the tasks overall.

Relevance to the field: The lack of interference for learning the stimulus words by bilingual preschoolers provides evidence for the dual systems model. The results also support using fast-mapping tasks to identify language-impaired bilingual children. Since monolingual and bilingual, typically developing children performed similarly on the task, an unusual pattern of word-learning could indicate the presence of a language disorder and not just interference from the L1.

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