Investigating the Influences of Long-Term, as Compared to Short-Term, Phonological Memory on the Word Recognition Abilities of Arabic Readers vs. Arabic Native Speakers: A Word-Recognition Study

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Abstract : It is quite common in the Muslim faith for non-Arabic speakers to be able to convert written Arabic, especially Quranic Arabic, into a phonological code without significant semantic or syntactic knowledge. This is due to prior experience learning to read the Quran (a religious text written in Classical Arabic), from a very young age such as via enrolment in Quranic Arabic classes. As compared to native speakers of Arabic, these Arabic readers do not have a comprehensive morpho-syntactic knowledge of the Arabic language, nor can understand, or engage in Arabic conversation. The study seeks to investigate whether mere phonological experience (as indicated by the Arabic readers' experience with Arabic phonology and the sound-system) is sufficient to cause phonological-interference during word recognition of previously-heard words, despite the participants' non-native status. Both native speakers of Arabic and non-native speakers of Arabic, i.e., those individuals that learned to read the Quran from a young age, will be recruited. Each experimental session will include two phases: An exposure phase and a test phase. During the exposure phase, participants will be presented with Arabic words (n=40) on a computer screen. Half of these words will be common words found in the Quran while the other half will be words commonly found in Modern Standard Arabic (MSA) but either non-existent or prevalent at a significantly lower frequency within the Quran. During the test phase, participants will then be presented with both familiar (n = 20; i.e., those words presented during the exposure phase) and novel Arabic words (n = 20; i.e., words not presented during the exposure phase. ½ of these presented words will be common Quranic Arabic words and the other ½ will be common MSA words but not Quranic words. Moreover, ½ the Quranic Arabic and MSA words presented will be comprised of nouns, while ½ the Quranic Arabic and MSA will be comprised of verbs, thereby eliminating word-processing issues affected by lexical category. Participants will then determine if they had seen that word during the exposure phase. This study seeks to investigate whether long-term phonological memory, such as via childhood exposure to Quranic Arabic orthography, has a differential effect on the word-recognition capacities of native Arabic speakers and Arabic readers; we seek to compare the effects of long-term phonological memory in comparison to short-term phonological exposure (as indicated by the presentation of familiar words from the exposure phase). The researcher's hypothesis is that, despite the lack of lexical knowledge, early experience with converting written Quranic Arabic text into a phonological code will help participants recall the familiar Quranic words that appeared during the exposure phase more accurately than those that were not presented during the exposure phase. Moreover, it is anticipated that the non-native Arabic readers will also report more false alarms to the unfamiliar Quranic words, due to early childhood phonological exposure to Quranic Arabic script - thereby causing false phonological facilitatory effects.

Keywords : modern standard arabic, phonological facilitation, phonological memory, Quranic arabic, word recognition

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