

# The second language acquisition of French nasal vowels by advanced English learners

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Phonological research (Rose & Wauquier, 2007) reveals little is known about the phonological acquisition of French vowels despite their early acquisition as attested in developmental literature (c.f. i.e. Bernhardt & Stemberger, 1998). This study seeks to provide a first step in addressing this gap by investigating the acquisition of a particular set of vowels characteristic of the French sound system: nasal vowels (FNV). It focuses on their acquisition by advanced English learners.

Universally, FNV are not a widely distributed (or marked) segment and marked or not frequent segments are typically acquired late. FNV are a segment characteristic (or unmarked) of the French language and as such their acquisition by native learners of English (where NV do not occur) provides a fruitful field of phonological acquisition to explore.

Although several studies have focused on FNV in the past, from descriptive (Delattre, 1965; Dell, 1973), theoretical (Wauquier-Gravelines & Braud, 2005; Paradis & Prunet, 2000; Tranel, 1981), to acoustic (Feng & Castelli, 1996; Delvaux, Metens & Soquet, 2002) perspectives, previous work on L2 phonological acquisition of FNV is scarce and lacks robust theoretical approach and methodology (Berri & Pagel, 2003; Cichocki, House & Lister, 1997; Liddiard, 1994).

The present work aims to establish the empirical facts about English learners' production of FNV and sketch patterns and changes of English learners' inter-phonology within Optimality Theory (OT). Eleven advanced English learners of L2 French studying at a UK university were recruited for the investigation of their production of 3 FNV [ɔ̃], [ɑ̃], [ɛ̃]. Production of these vowels was elicited through four tasks: free conversation, oral English-French word matching, story summary, and story reading. The patterns emerging from this investigation were modelled within OT with a series of constraint rankings which captured previous disparate and impressionistic descriptions of the L2 acquisition of FNV. The results revealed three general trends: (a) English learners' production of FNV retains a variable degree of consonant production, (b) [ɔ̃] is the most accurate vowel produced, (c) [ɛ̃] is the least accurate vowel produced and when produced accurately tends to be generalised and substituted to [ɑ̃]. These findings are supported by results obtained in a more recent study (Neveu et al., 2010) on FNV acquisition by Japanese and Spanish learners of French.

Finally, it is argued that by focusing on advanced learners, this study documents only the end of the acquisition process of FNV by English learners and that a more comprehensive study (longitudinal and across the whole acquisition spectrum –L1 and L2) is needed to provide the full account of English learners' development of this characteristic segment of French and L1 normative baselines to guide future L2 French and cross-linguistic phonological research.

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