ABSTRACT

THE ROLE OF SONORITY IN THE DURATION OF EPENTHETIC VOWEL IN DOUBLE ONSET CLUSTERS

Epenthetic vowels are usually inserted by second language (L2) learners when the L2 allows complex clusters and their first language (L1) allows only single consonants, as it is for Arabic L1 speakers learning English as their L2. In the study of epenthesis and consonant clusters, sonority seems relevant. Sonority is one of the widely discussed aspects in the second language (L2) phonology. It is well represented by the sonority sequencing principle (SSP), which requires that the sonority must increase as we move towards the nucleus of the syllable and decrease as we proceed from the nucleus. There are several scales of sonority, however, Hogg and McCully's scale (1987) seems to offer more detailed hierarchy levels and distinctions, and, therefore, it will be adopted in this paper (see table below).

Sound	Sonority value	Sound	Sonority value	Sound	Sonority value
Low Vowels	10	Flaps	7	Voiced fricative	4
Mid Vowels	9	laterals	6	Voiceless fricative	3
High Vowels and glides	8	Nasals	5	Voiced stops	2
				Voiceless stops	1

In the L1 acquisition of the consonant clusters, it is a universal tendency that the segments with higher sonority occur closer to the peak, and segments with less sonority stays further away and not vise versa, this can be seen in the English words [plænt] (Yavas, 2011). According to Greenberg (1965), when two segments are closer to each other in sonority they are regarded more marked (e.g. fn) than others with distant sonority indices (e.g. pl). From this, it can be expected that in the L2 acquisition of the complex clusters, L2 learners will face more difficultly producing more marked complex clusters.

In light of the SSP and the markedness degree of different double onset clusters, this study aims to investigate the duration of the epenthetic vowel found in English double onsets produced by Saudi L2 learners of English. It is hypothesized that the duration of the epenthetic vowel in the English double onsets will vary based on the markedness of the cluster. Epenthetic vowel duration in clusters with closer sonority between C1-C2 (e.g. fl, fr, bl) is expected to be longer than other double onsets with larger difference between C1-C2 (e.g br, pr, bj).

For the current study, data from 8 Saudi L2 learners of English were recorded. Participants were given sentences containing 30 monosyllabic target words, and their recordings were analyzed to measure the duration of the epenthetic vowel. The double onsets were with different sonority indices on the sonority scale, the differences between C1 and C2 ranged from 3-point difference as in (fl) to 6-point difference as in (kr, bj). Results indicate that Saudi L2 learners of English tend to insert "longer" epenthetic vowel in double onsets with sonority difference between C1 and C2 of 3-points or 4-points (.073-070 millisecond) and "shorter" epenthetic vowel in double onsets with sonority difference between C1 and C2 of 5-points and 6-points on the sonority scale (.044-.035 millisecond). The results reflect the relevance and influence of sonority on the epenthetic vowel duration.

Keywords: sonority; epenthesis; clusters; syllable; onsets; L2; phonotactics; markedness

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