



EXTENDED ABSTRACT

**THE EFFECT OF VOICING ON PRE-STOPPED VOWEL DURATION**

S.M.Shahrir

(Universiti Utara Malaysia) Email: syazwinashahrir@yahoo.comdoi: <https://doi.org/10.33329/joell.6S1.3>**ABSTRACT**

Study on the effect of ending consonants on the vowel's length is a great issue to be highlighted as vowel's length can be affected by some segmental influences including tongue height, place of articulation and stop/fricative properties of the following consonants, as well as pitch, stress, and the fact of a syllable is open or closed (Lehiste, 1970). (Chen, 1970; House, 1961; House and Fairbanks, 1953; Klatt, 1973; Lisker, 1978; Ma16cot, 1970; Peterson and Lehiste, 1900) stated that the identification of vowel before voiced consonants are longer than before voiceless consonants. However, in order to establish the vowel length in a language is not always straightforward. Halle (1977) stated that in English, there are possibilities for the existence and non-existence of the vowel length. As an example, "peat" can be analysed as having a long vowel as contrasted to "pit". The present study examined the effect of voicing on pre-stopped vowel duration. In addition, it focused only on stop articulation particularly on /p/, /t/, /k/, /b/, /d/, and /g/. It aimed to discover to what extent do word-final consonant affect the preceding vowel duration. The result extracted from this study was analysed using the quantitative analysis. Vowel duration was measured using Praat analysis as it provides the exact duration one can get. According to (Boersma & Weenink 1992-2013), Praat is capable of creating publication-quality graphics, and also acts as tools for analysing, synthesizing and manipulating speech and other sounds that are bundled into a single integrated computer program. Praat software will provide waveforms indicating vowel duration. The list of words was categorized accordingly based on voiceless and voiced stop articulation; /p/, /t/, /k/, /b/, /d/, and /g/. Table 1 below shows the pre-stopped vowels according to the voiceless and voiced stop articulation.



Sound	Voiceless	Voiced
/p/	pick	pig
	pat	pad
/t/	tack	tag
	tuck	tug
/k/	kit	kid
	cup	cub
/b/	back	bag
	bet	bed
/d/	duck	dug
	dip	dib
/g/	get	ged
	got	god

Table 1: Voiceless and Voiced Articulation

Then, the list of words is jumbled up in order to see the consistency of the participants. Two participants were chosen and a repetition of the process was required in order to evaluate the consistency of vowel duration in pronouncing the words provided. Data collected from Praat analysis were then analysed using the SPSS software in order to find the descriptive statistics. Table 2 shows the jumbled-up words used in this study.



#1	#2	#3	#4	#5	#6
cup	cab	pat	bud	duck	Tag
cap	fad	cab	fat	dug	Back
dap	duck	fad	bag	cub	Fat
but	cub	back	cap	fat	Dap
fat	bag	bud	tack	cap	Cab
pat	back	cap	cub	bag	Fad
back	cap	bag	cab	pat	Pad
duck	dab	fat	dap	fad	Dug
tack	dug	cub	fad	cup	Duck
cub	cup	dug	back	bud	Pat
cab	but	tack	dug	pad	Cup
dab	bud	dap	pat	back	Bud
bud	pat	tag	duck	dab	Cub
fad	tack	but	pad	cab	Cap
pad	tag	cup	dab	but	Bag
bag	fat	dab	cup	tag	Tack
dug	dap	pad	tag	tack	But
tag	pad	duck	but	dap	Dab

Table 2: Jumbled up words

As a conclusion, the author believes that voicing (voiceless and voiced consonants) does affect the pre-stopped vowel duration. In this project, the Praat and SPSS software was used to inspire the reader to actively engage with data.

Keywords: *Pre-Stopped, Vowel Duration, Voiceless, Voices, Consonants, Vowels.*