

Summary of the Project Work

Perceptual Cues of Stop Consonants in Kannada

Staff on the Project

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The aim of this project is to extract the perceptual cues of stop consonants in Kannada. The stop consonants were considered due to their special nature.

The phonetic environment of the 12 stops (k, kh, g, gh, t, th, d, dh, p, ph, b, bh) and 4 affricates (c, ch, j, jh) were determined on the basis of results of a pilot study. 553 meaningful words with these stops were considered under 3 conditions namely preceding vowel and following vowel and consonant condition. All these words embedded in the sentence "WORD" anta he:liti:ni" formed the stimuli. The stimuli were visually presented to two Kannada speaking young adult males who served as model speakers. The model utterances were audiopresented to two Kannada speaking young male adults who imitated the models. Both the model and imitated utterances were recorded on highfidelity magnetic spools. The rationale behind the study was that both model and imitated utterances should be identical in terms of perceptual feature when measured objectively.

Only the words containing the target

stops were considered for the analysis. Wide band bar type and average amplitude spectrograms were taken for each word. Spectral analysis was performed using PC AT/386. The temporal parameters extracted include durations of closure, voicing, burst, aspiration, affrication, murmur, stop consonant, preceding vowel and total word, transition durations of F1, F2, F3 of the preceding and following vowel and speed of transition of F1, F2, F3 of the preceding and following vowel. The spectral extracted include F1, F2, F3, B1, B2, B3, L1, L2, L3, steady and terminal F0 of the preceding vowel, initial and steady F0 of the following vowel, amplitudes of burst, following vowel and consonant and overall amplitude of the stop. The extraction of these features is under progress.

An audio cassette has been prepared and given for two subjects for the perceptual evaluation of imitation'.

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