

Distinctive Feature Analysis of Telugu Consonants*

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Distinctive features which are the smallest units of language are defined to be the "physical and psychological realities of a phoneme (Singh, S., 1976)". The present study aimed at establishing a distinctive feature system of Telugu consonants.

Four hundred and thirty word pairs were prepared using 31 Telugu consonants. These word pairs were prepared such that there was at least one feature difference between the two consonants of the word pair. Perceptual and Acoustical analysis were carried out to establish the features.

Perceptual analysis was carried out in two stages—Part I—the word pairs were presented to a group of 30 subjects (individually) who were native speakers of Telugu. Subjects had to speak out what they heard and these responses were recorded for further analysis. Part II—The same stimuli were presented to a group of 30 non-Telugu speakers and their responses were recorded.

The perceptual data was analysed using confusion matrices and by calculating information content of each feature. 30 words were analysed spectrographically to observe the acoustic characteristics. The following conclusions were drawn from the study :

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- (1) It is possible to propose a distinctive feature system in Telugu based on phonetic descriptives of Telugu language.
- (2) Consonants in Telugu are made up of the following features :
 - (a) Voicing, (b) Nasality, (c) Continment, (d) Anterior, (e) Coronal, (f) Stridency, (g) Aspiration and (h) Lateral.
- (3) Information carried by each feature differs.
- (4) Each feature has distinctive acoustic characteristics.
- (5) No significant differences were found between the listening performance of Telugu and non-Telugu speakers when the word pairs were presented in a quiet situation.

Implications

- (1) The distinctive feature system thus established gives an indepth analysis into the phonology of Telugu.
- (2) This distinctive feature system can be used to study the phonological acquisition of Telugu in children, to assess articulatory disorders and in planning articulation therapy.

- (3) Distinctive feature discrimination tests can be developed for audio-logical testing.
- (4) An articulation drill book in Telugu can be prepared based on this.
- (5) It can be used to improve the telecommunication system for transmission in Telugu.
- (6) It can be used in the development of speech synthesizers.

Recommendations

- (1) The present distinctive feature system can be further validated using other methods of distinctive feature analysis.
- (2) Further study can be done on substitution analysis that is which of the features are substituted by the other features.
- (3) Distinctive feature system can be developed for vowels in Telugu.
- (4) An articulation test in Telugu can be developed on the basis of the distinctive feature system.