

## EXPLORING ACOUSTIC VOWEL SPACE IN NORMAL MALAY CHILDREN

Ruby Izyan Atika Abu Bakar

### ABSTRACT

Acoustic vowel space of normal Malay children aged 7 months until 4 years old were explored. 28 children were selected and divided into 14 age groups where each group contained 2 children. 2 young adults were also selected as subjects. All subjects live in the Kuala Lumpur area. The subjects' speech samples in conversation were recorded by using digital camera and analyzed by using PRAAT software. Values of first formant (F1) and second formant (F2) which were extracted from the acoustic analysis were plotted on graphs. The 6 Malay vowels which are /a,i,u,o,e,ə/ were identified and elaborated. The development and changes of each vowel spaces for each age group were described. Elaboration and description were made by relating the results from this study with the vocal tract's physiology as well as the age of the subjects. Comparison between children's vowel space and adult's vowel space were also made. Results from this study found that there were changes in the pattern of vowel spaces and positions of each vowel in terms of vowel spaces as children grew. However, results also showed that the height and length of vowel spaces were not linear as their age increased. Hopefully this study would be able to provide information for speech sciences and linguistic studies in Malaysia.

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