

Cantonese tone production performance of mainstream school children with hearing impairment

Ada Lau, Karen Cheung & Kathy Lee

This study investigated the Cantonese tone production ability of children with hearing impairment studying in mainstream schools. The participants were 87 Cantonese-speaking children with mild to profound degrees of hearing loss aged 5.92 to 13.58 from mainstream schools in Hong Kong. Most of the children were fitted with hearing aids ($n = 65$), 17 children with profound hearing-impairment and one with severe hearing loss had received cochlear implantation. In addition, there were four children with mild hearing loss who did not use any hearing device. The Hong Kong Cantonese Articulation Test was administered and the tones produced were rated by two of the authors and a speech-language pathologist. Group effects of tones, hearing loss level, and also an interaction of the two were found to be significant. Children with profound hearing-impairment performed significantly worse than most other children. Among the six tones, the high level tone (tone 1) was produced most accurately while production of the low level tone (tone 6) was the poorest. The number of years of mainstreaming was found to be unrelated to the tone production ability of these children. Analysis of the tone production error patterns revealed that confusion patterns in tone perception coincided with that in production. Tones having similar fundamental frequency (F_0) at the onset also posed difficulty in tone production for children with hearing-impairment.