

Effectiveness of Automated Speech Training System in Enhancing Speech among Hard of Hearing Learners in Selected Schools in Nairobi City County Kenya

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Abstract

Speech training of learners who are hard of hearing in Kenya has been lacking necessary attention since 1980s. Education of learners with hearing impairment including learners who are hard-of-hearing has been skewed towards manual communication. The purpose of this study was to investigate the effectiveness of an Automated Speech Training System in enhancing speech among learners who are hard of hearing in selected schools in Nairobi City County. Objectives of the study were to: establish the level of speech perception and production of learners who are hard-of-hearing before using Automated Speech Training System, establish the effects of Automated Speech Training System on enhancing speech perception and production among learners who are hard of hearing, compare the effects of Automated Speech Training System on speech perception and production of learners who are hard of hearing with traditional methods of speech training, Find out the role played by selected demographic factors in the effectiveness of ASTS in enhancing speech among learners who are hard-of-hearing, establish the views of learners on communication modes and Speech training using traditional methods and Automated Speech Training System, and to find out the opinions of teachers on speech training of learners who are hard-of-hearing. The study adopted a mixed research design combining single-subject research design and descriptive survey design. Single-subject research design was considered for this study to allow systematic testing of the effects of the Automated Speech Training System on perception and production of speech among learners who are hard-of-hearing. The target population for the study was ninety four learners with hearing impairment and thirteen teachers in the selected schools. Using purposive sampling technique, thirty two learners who are hard of hearing and thirteen teachers were sampled. To collect data, the Automated Speech Training System was used and two semi-structured interview guides one for the learners and one for teachers. Statistical Package for Social Sciences was used to analyze quantitative data. Qualitative data was analyzed by means of descriptive statistical techniques. Major research finding of the study was that Automated Speech Training System which utilizes 3-D animation technology with both visual and audio components significantly enhanced speech among learners who are hard of hearing. Based on the research findings, the study recommended that the government should put in place policies and proper mechanisms of ensuring that speech training forms an integral part of curriculum for learners who are hard-of-hearing. This will not only help to address some of their communication challenges but also incorporate the new technology to the already existing methods of speech training to enhance speech of all learners who are hard-of-hearing.

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