

Tracking the Mind's Mouth: Use of Smart Technology for Effective Teaching of Speaking to Pupils with Developmental Co-ordination Disorder

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Abstract : Developmental co-ordination disorder (DCD) (also known as dyspraxia) causes a child to speak less well than expected in social conversations. We propose that the smart speaking technology could help improve sound production mechanism at both phonetic and phonological levels, which leads to better articulation of an utterance. The participants are twelve privately beginner pupils aged between 6-12 years old and diagnosed with DCD (apraxia) divided into two groups: Experimental group (n=6) and control group (called apraxic control group) (n=6). A total of fifty typically developing and achieving (TD) pupils participated as control group 2 in both groups and were preassigned into two groups (27 pupils with the treatment group and 23 with the apraxic control group). Weekly quizzes were given to all participants each week for four continuous months and results were analyzed by psychoneurolinguists and a statistician. Although being taught by the same speech-language therapist (SLT), treatment group along with TD groups were taught a full-time speaking course with sociolinguistic themes covering both phonetic and phonological properties. The course lasted for a whole semester whereby smart speaking aids have become dominant while apraxic control group and its TD group were not. Compared with apraxic control group and its TD subgroup, results show obvious changes in speaking behavioral mechanism of the DCD experimental group and its TD subgroup. Improvement could be taken from the scores where the zero marks disappeared in the fourth week (end of the first month of treatment). Good marks (5 +/10) were seen starting from the eighth week and culminating with full marks in the week number 15 of treatment where some participants scored full mark. This study concludes to support the primacy of the smart educational technology for speaking purposes and also shows that such aids can expand the range of academic performance differential categories. Further research is required to evaluate the current demonizing of smart educational aids and weighting more reasonably the relationship specificity that speaking aids can offer to other language skills, as well as their limitations.

Keywords : smart educational technology, speaking aids, pupils with SCD, apraxia

Conference Title : ICP 2024 : International Conference on Psychiatry

Conference Location : New York, United States

Conference Dates : June 03-04, 2024