



Integrating iPads as a curriculum-based pedagogical tool to facilitate communication in nonverbal students with autism

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Communication is one of the significant challenges faced by students with autism spectrum disorder (ASD). Nearly 30% of individuals diagnosed with autism are nonverbal or minimally verbal despite engaging in extensive interventions and a range of educational programs. By enhancing communication skills, there may be a positive impact on joint attention skills, adaptive skills which may potentially lead to further opportunities in the development of cognitive, social and emotional skills. Owing to the unique nature of autism students require a high level of support throughout their school years. Based on the students' strengths, interests and challenges, their learning goals are designed. Emerging tablet technologies including iPads are used as an augmentative and alternative communication (ACC) device to facilitate communication and other learning goals in these students. The ability to customize the software applications (apps), that have been specifically designed and created to cater to specific areas of support, combined with appropriate teaching strategies facilitates the achievement of individual learning goals. One of the prime factors influencing the development of communication skills has been the role of educators in implementing suitable teaching strategies and learning environment to promote student autonomy as well as persistence to enhance their communication and interaction skills.

The study was conducted in three special education schools in South Australia. Using a mixed-method design of observations and semi-structured interviews, ten students (aged 6 – 12 years) presenting as nonverbal with autism and their respective class teachers were observed in group sessions and one-to-one sessions during different times of the day over a 10-week period in a classroom setting. Interviews were conducted with classroom teachers, school support staff, parents/carers of the ten student participants, their older siblings (above 6 years) and other allied health professionals (speech therapists and occupational therapists) who worked closely with the students.

The findings from this study indicate that the implementation of the teaching strategies by the educators using iPad-based communication apps were effective as the majority of the students showed positive outcomes in achieving their curriculum-based communication goals. Students were able to apply their learning skills to communicate using apps across various settings including home, therapy (clinical) and in the wider community. Implications of this study suggest that iPad can be integrated as a curriculum-based pedagogical tool to facilitate communication skills in students presenting as nonverbal with autism.