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Conductive Education emphasizes active participation and creating an optimal learning environment. Students with neurological impairments have a diversity of needs ranging from intellectual and educational to psychosocial, communicative, physical and perceptual aspects. They often have difficulties in independently completing academic activities such as reading, writing, doing homework, attending examinations. Some of them cannot attend school because of limited travel tolerance due to medical and physical conditions.

Question

Can low cost and market available technologies be used to help these students to complete academic activities independently?

Objectives

This case report aims to illustrate how low cost assistive technologies can promote students' participation and improve their independence in academic activities in school, dormitory and home through a transdisciplinary team of teachers, therapists, house parents and families.

Methods

Two cases were reported. Case A was a student aged 20 with cerebral palsy and severe visual perceptual problems which adversely affect her ability to read and do homework. Screen Reader (SR) and Voice Memo in Microsoft Word (VM) are commercially available software were introduced. The student learned to use SR for reading books and VM for completing homework. The concerned teachers of Case A collaborated in modifying the format of assignment worksheets and teaching materials for compatibility with the SR. Information technology (IT) technicians modified the IT infrastructure to enable Case A to use the SR. To ensure continuity, the house parents were trained to maintain the SR applications in the dormitory. Case B was a student aged 16 with neuromuscular disease. She was homebound due to poor health and travel tolerance. To enable home schooling, a freeware Google Plus Hangout was installed to enable Case B to attend classes and participate in discussion with her classmates in real-time while the classes were conducting at her school. Trainings were organized to the concerned teachers, her classmates and her parents. Outreaching supports were delivered for software and network hardware installation at her home.

Results

Case A managed to do her homework by taking VM and submit the completed assignments through the school's intranet and revise them later. Also, she can conduct internet search for study, leisure and community participation. For Case B, she could successfully attend lessons at home through video conference.

Conclusions

In order to successfully apply information and communication technology to facilitate students' independence in academic activities, there are a number of key contributing factors. First, seamless collaborations between teachers, therapists and other supporting staff, as well as classmates and families are crucial. Second, creation of a whole school environment with consistency and continuity throughout the whole day of the students is essential. Other factors will be discussed in the presentation.



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