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Using videoconferencing to support teachers to conduct preference assessments with students with autism and developmental disabilities

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ABSTRACT

We used widely available videoconferencing equipment to support teachers to conduct preference assessments for three students with autism and developmental disabilities. Supervisors located at a university used videoconferencing equipment to collect data on students' choice of items, the fidelity of teacher implementation of the assessment protocol, and to provide feedback to the teachers. Preference assessment results suggested a number of potentially reinforcing items for each student. In a second phase of the study, the students were given a routine classroom task to complete (i.e., clean up). The students could choose to complete the clean up task and gain access to a neutral item or one of the highly preferred items identified in the prior preference assessment. All students predominantly chose to complete the task in order to access a preferred item identified in the preference assessment. The results of this classroom intervention validated the results of the preference assessments. The findings of this study provide preliminary support for the use of videoconferencing equipment when supporting teaching personnel during common educational assessments.

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In many parts of the United States, there is an increasing shortage of specialists with the training to work with children with developmental disabilities (Boe & Cook, 2006; U.S. Department of Education, 2004a,2004b). Given current legislation that mandates the use of evidence-based practices (IDEA, 1990; IDEA Amendments, 1997; IDEA Improvement Act, 2004), the lack of teachers who are qualified to implement such practices may be problematic for many schools. This issue may be magnified for schools located in rural communities that face higher attrition rates than urban schools (Westling & Whitten, 1996), and limited access to personnel training programs (Ludlow, Conner, & Schechter, 2005). However, recent advances in videoconferencing technology may provide educators with one way to access the specialist support they need in a more efficient and cost effective manner.

Videoconferencing technology enables two or more parties to simultaneously communicate using two way video and audio transmissions. In the health care field, videoconferencing is an increasingly common way to deliver services to patients who reside in communities with limited access to specialists (Hilty, Luo, Morache, Marcelo, & Nesbitt, 2002). This technology has facilitated psychiatric assessments (Elford, 2000; Zarate, Weinstock, & Baer, 1997), psychotherapy, and the supervision of trainee psychotherapists (Gammon, Sorlie, Bergvik, & Sorensen Hoifodt, 1998). It has also been used to provide follow up care for older adults following discharge from hospital (Tousignant, Boissy, Corriveau, & Moffet, 2006).

Many special education teacher preparation programs have used videoconferencing technology to provide coursework and feedback to pre-service and in-service teachers in rural or remote settings for over two decades (Howard, Ault, Knowlton, & Swall, 1992). The majority of these initiatives have traditionally relied on broadcasts from Universities via satellite or fiber optic networks to local colleges or schools in rural or remote sites. There are some disadvantages in delivering instruction via satellite or fiber optic network. First, instructional delivery is limited to the geographic area serviced by satellite or fiber optic network. Second, technology needed to receive these broadcasts is expensive which limits the number of locales in remote areas that can receive such transmissions.

Recent developments in videoconferencing technology may overcome many of the limitations inherent when using the above technology and also may present opportunities for using videoconferencing in novel ways to support teachers in rural and remote areas. In a recent report Ludlow and Duff (2002) described a distance education initiative at the University of West Virginia that delivered classes via video and audio streaming on the Internet. Students could participate in live classes and actively participate in class sessions using widely available and relatively inexpensive videoconferencing equipment (e.g., laptop or desktop computer, web camera, and broadband Internet connection). Conceivably, students could avail these live class sessions from any geographic location in the world if they have access to such videoconferencing equipment coupled with broadband Internet access.

The portability of this new videoconferencing equipment (e.g., many laptop computers now come with an inbuilt web camera and can access the Internet using wireless technology) may open new avenues for the use of videoconferencing when working with pre-service and in-service special education teachers. For example, a teacher could now bring a laptop computer in to the classroom to facilitate live feedback from a specialist on any number of issues (e.g., conducting assessments, delivering instruction, classroom management, etc.). University supervisors could observe teachers delivering instruction in classrooms and provide immediate feedback on their performance while remaining at the University.

When working in highly specialized teaching areas that require considerable attention to detail the opportunity to provide immediate feedback to student teachers on their performance is of critical importance. However, despite the potential usefulness of technology in the provision of on-site training to in-service and pre-service teachers little attention has been given to the way in which this technology may improve the skills of individuals working with students with disabilities.

One of the fundamental assessment skills that graduate students who are specializing in autism and other developmental disabilities at the University of Texas at Austin must acquire is the ability to accurately conduct a preference assessment. Once preference assessment results have been obtained it is then possible for the teachers to develop individualized instructional interventions for the children in their classrooms.