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## Private Autism Organization Enhances Higher Education Special Programs

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### Abstract

*In recent years there has been a sharp surge in the number of children identified with autism. This has caused an increase in the demand for access to expertise in the field. This article outlines how one institution of higher education with a high Hispanic population collaborated with a non-profit private organization by using interactive video technology to enhance professional preparation, diagnostics, and research.*

Although estimates vary, there is little doubt the number of students identified with autism has grown dramatically in the past decade. As many as 1.5 million Americans are believed to have some form of autism and the overall incidence is thought to be consistent worldwide and across ethnicities (Autism Society of America, n.d.). According to the Council for Exceptional Children and the Educational Resources Information Center Clearinghouse (2001), from 1992 to 1999 school enrollment in the United States grew by only 14%, while the number of students served in special education under the category of autism grew much more rapidly, from approximately 5,500 in 1992 to nearly 55,000 in 1999, representing an increase of roughly 900%. In Texas the number of children served in special education under the category of autism in 1994 (the first year for which figures are available) was 2,129 and the number served in 2003 was 11,347. This represents an increase of 432%, compared with an increase in the overall student population in Texas of 15% during the same period (Texas Education Agency, 2003). See Table 1.

Although researchers agree that children with autistic characteristics were alive before the 20<sup>th</sup> century, Scheuermann and Webber (2002) suggest that the recent sharp rise in prevalence is likely due to increased public awareness and better diagnostic procedures. In fact, the United States Congress did not identify autism as a separate category in the Individuals with Disabilities Education Act, until 1990 and this, according to Turnbull, Turnbull, Shank, Smith, & Leal (2002), was due to largely to the lobbying efforts of the Autism Society of America.

Autism, a neurological condition detectable in young children, is usually noted before the age of 3, and affects 4 to 5 times more males than females. This condition is expected to last throughout the lifetime (Andrews & Long, 2002; Autism Treatment Center, 2003; Scheuermann & Webber, 2002). Children with this developmental disorder show severe impairments in their ability to interact and relate to others. Approximately half of the children diagnosed with autism have no speech. They often have limited interests and become preoccupied by a specific item such as a vehicle, vacuum cleaner, or toy. They also

frequently engage in repetitive behaviors such as hand flapping or spinning objects (Andrews & Long, 2002; Autism Treatment Centers, 2003).

Due to the heterogeneity of the disorder, there is a common saying among professionals who work with children who have autism, "If you've seen one child with autism, you've seen one child with autism." Children and adults with autism can vary widely in terms of their abilities, deficits, and behavior. Approximately 85% of people with autism function within the range of mental retardation on measures of intelligence and adaptive behavior, but because of the nature of autism, it is difficult to accurately measure these domains (Andrews & Long, 2002; Autism Treatment Centers, 2003). These unique factors increase the burden of those who prepare special educators to work with this population.

Lee Grossman, current president of the ASA, was quoted in 2002 as saying, "The lack of trained teachers has been of great concern to the autism community for some time and it is a problem that is only getting worse as more and more children are diagnosed with autism each year." (Special Education Report, 2002, p. 4). The reauthorization of the Elementary and Secondary Education Act (ESEA) now known as the No Child Left Behind Act (NCLB) passed by the US Congress in 2001, addressed this issue by requiring public schools to increase their effort to employ highly qualified teachers in every classroom (No Child Left Behind, 2003). The sharp rise in the number of children identified with autism along with legislative mandates place additional pressure on teacher preparation programs to meet the increasing demand.

### **Region One: A Border Region**

Texas public schools that comprise the Region One educational area, as designated by TEA, are in the southern most portion of the state within seven economically depressed counties, five of which share the Rio Grande with Mexico. The enrollment by ethnicity figures indicates that this population is 96.1% Hispanic, 3.3% White, 0.4% Asian/Pacific Islander, 0.2% Black, and 0% American Indian, and that 84.3% are considered to be economically disadvantaged (Region One Educational Service Center, 2003).

The number of children with autism identified in this region grew from 42 in 1994 to 451 in 2003, an increase of 974%, compared with an increase of 33% for all children in special education (29% statewide), and 18% growth in the overall student population for Region One during the same period. In 1994, the number of special education teachers in this region was 1,345 compared with 1,799 in 2003. This represents an increase in special education teachers of 34% (Texas Education Agency, 2003). See Table 2.

### **Enhancement of Special Education Programs via Interactive Video Teleconferencing**

The University of Texas Pan American (UTPA) is located in the heart of Region One and produces approximately 35 undergraduate special education teachers and 15 educational diagnosticians each year. Current enrollment by ethnicity figures indicates that College of Education students are 89.1% Hispanic, 9.5% White, .5% Asian/Pacific Islander, .3% Black, and .1% American Indian (E. De La Garza, personal correspondence, September 2, 2003).

In July, 2001, a representative from the Autism Treatment Centers (ATC) of Texas, a private non-profit organization, approached the Dean of the College of Education at UTPA regarding the prospect of establishing an interactive video teleconferencing network with the overall goals of: (a) increasing the level of preparedness of educational professionals, both pre and post service, in the field of autism, (b) establishing a site for the distance diagnosis of autism – "a virtual clinic," and (c) establishing a vehicle for research in the area of autism and distance diagnoses. Five established programs within the Department of Educational Psychology were targeted to participate: (a) Undergraduate Special Education, (b) Graduate Special Education for the Culturally and Linguistically Diverse Exceptional Learner, (c) Graduate Educational Diagnostician, (d) Graduate School Psychology Program, and (e) Graduate Guidance and Counseling Program. Program coordinators from UTPA assembled a team and collaborated with the ATC to form the Research and Evaluation of Autism Preparation (REAP) Project and adopted the goals noted above.

Interactive video conferencing (IVT) is the term for describing technology used to communicate in real time by voice and pictures. Funds for the IVT equipment originated from a Telecommunications Infrastructure Fund Board (TIF) grant to the ATC. In turn, the ATC awarded the Educational Psychology Department of UTPA over \$40,000 in IVT equipment, training, and technical support. In December of 2001, a formal presentation and press conference was held announcing the partnership between UTPA and the ATC. Additionally, the ATC used TIF funds to link their offices in Dallas and San Antonio, and also Southwest Texas State University, Department of Curriculum and Instruction using IVT.

### **Progress toward project goals**

During the spring 2002 semester, the REAP Project first offered graduate students at UTPA access to instructional course content via IVT. This course was directed by Dr. Jo Webber, board member of the ATC, internationally respected author, and expert in the teaching of children with autism and the use of applied behavior analysis (ABA) techniques. In subsequent courses offered at UTPA on autism, Dr. Webber continues to make her expertise available. Additionally, Alonzo Andrews, psychologist and Director of the Autism Treatment Center in San Antonio, and Dr. Kay Lewis, M.D., ATC Board Member, also regularly address UTPA students as a component of their course work. Information is provided on such topics as etiology, characteristics, prevalence, evaluation, treatments, and controversies in interventions.

Regarding progress toward establishing a site for the diagnosis of autism, in June of 2002, the ATC provided funds for the REAP Project Coordinator from UTPA to travel to Reno, Nevada to receive formal training in the administration of the Autism Diagnostic Observation Schedule (ADOS). To date, four children from the Region One area have been brought to UTPA for evaluation. This "evaluation piece" also has been formally embedded into course work. Initial contact with the parents of each of the children evaluated was made through local public school personnel. Children were administered the ADOS at UTPA while observed in real time, using the IVT equipment, by experts at the ATC in Dallas and San Antonio, and also from Houston Medical Center. Each parent received a comprehensive report, signed by a licensed professional trained in the area of autism. Students participating in the coursework on autism were required to observe, write reports, and make appropriate educational recommendations. For future research purposes, confidential case files on each of the children evaluated are maintained.

### **The international component**

Through contacts made with the ATC, UTPA students were introduced to a private school known as the Casello School, for approximately 25 children with autism, two hours to the south, in Monterrey, Mexico. In the spring of 2003, the Student Council for Exceptional Children (SCEC), an undergraduate special education organization at UTPA, voted to adopt the Casello School as one of their community service projects. More than \$800 was raised from food sales on campus, donations, and yard sales, and two busses were chartered to carry over 65 club members to visit the Casello School with a multitude of school supplies. Later in the semester, over 20 graduate students, a local public school special education director, sign language interpreter and an employee of the Association for Retarded Citizens (ARC) also visited the school. Both groups were accompanied by employees and board members from the ATC. Future plans include linking this facility and others with the REAP Project using IVT.

### **Reflections and Future Projections**

The use of IVT allows experts to communicate with those in underserved urban or rural areas and to provide a wide range of service and benefits. In the medical field, use of IVT equipment is traditionally referred to as "telemedicine" and its use is expected to grow by 40% from 2000 to 2010 (Mun, Jha, Levine, & Duk-Woo Ro, 2000).

According to Lozada (1997), in 1997 there were over 1,000 educational institutions in the United States offering some type of distance learning programs and by the year 2007 experts estimate that 50% of students enrolled in higher education courses will take classes enhanced by or completely taught through distance education (Kascus, 1994).

When considering the sky-rocketing rate of the identification of children with autism, their characteristics and needs, it is clear that those who currently possess knowledge and expertise in this area are going to continue to be in great demand. Children with autism display unique characteristics that require specific training and abilities for those who choose to work with them. As the demand for expertise in the field of autism increases, university collaboration with private organizations such as the ATC can provide considerable enhancement across programs which is greatly increased via the use of IVT.

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**Table 1**

	1994	2003	% Change
Overall Student Enrollment in Texas	3,601,839	4,146,653	15%
Students with Autism in Texas	2,129	11,347	432%

**Table 2**

	1994	2003	% Change
Students with Autism in Region One	42	451	974%
Students Receiving Special Education in Region One	24,167	32,237	33%
Students Receiving Special Education in Texas	389,458	502,700	29%
General Student Population in Region One	267,328	314,566	18%
Number of Special Education Teachers in Region One	1,345	1,799	34%