The Strategic Plan of the Doctor of Audiology Program (AUD) supports the achievement of the mission, goals, and ideals of the School of Behavioral and Brain Sciences (BBS) and the Callier Center of the University of Texas at Dallas. The Strategic Plan of the BBS highlights three chief ambitions consistent with the mission, goals and strategic plan of the University. In 2008, and upon approval by the BBS faculty, the strategic initiatives were presented to the University. Highlighted below are the AUD programs and plans in support of the strategic initiatives.

1. Enhance the health, education and quality of life of children and families.

   a. The School’s plan for *The Center for Children and Families (CCF)* at *The University of Texas at Dallas (UTD)* to promote optimal family and child development through research, practice and outreach was realized in 2008. The Center's programs focus on parenting healthy children and families, strengthening interpersonal relationships, and enhancing thinking and learning. Currently housed in the *School of Behavioral and Brain Sciences* at UT Dallas, CCF is home to *Center-affiliated faculty researchers* who examine a wide range of important and cutting-edge issues related to biological, psychological, social and cultural foundations of development as well as their implications for families. The Center works to positively impact the community as well as the work of service providers and policy makers.

   The AuD program will continue to engage with CCF in two primary ways. First, *faculty affiliation* with CCF provides an avenue to increase awareness of center-sponsored events focused on child developmental science and early intervention, including assistance in planning programming, participation in the annual fall forum, and faculty presentations in the spring lecture series. Greater participation of the faculty creates new opportunities for AuD students to become involved in adjacent academic areas. Second, the AuD and CCF programs will maintain their partnership via *community outreach programs* involving faculty and students. Participation in events sponsored by the Infant Development Program of the CCF not only exposes students to a population of low-income, primarily Spanish-speaking children and families, but also to different types of developmental screenings and available therapy, support, and intervention resources in the community for families with young children. When CCF moves to the new Callier Center in Richardson (fall, 2016), we anticipate collaboration among the programs will increase in the areas of service to families and in research.

   b. The AuD program plays a pivotal role in the *Dallas Cochlear Implant Program (DCIP)*, a collaborative enterprise between The University of Texas at Dallas, The University of Texas Southwestern Medical Center and Children’s Health in Dallas. The DCIP provides opportunities for students
experience a comprehensive, interdisciplinary approach to diagnosis and intervention in pediatric cochlear implantation, including collaborations between audiologists, speech-language pathologists, auditory-verbal therapists, physicians, and researchers.

Students extend experiences with pediatric cochlear implantation from clinic to real life as camp counselors at the Crystal Charity Ball Summer Listening Camp, a week-long day camp run by the DCIP for children with cochlear implants in Dallas, Texas. Students in communication sciences and disorders (AuD and SLP) provide listening and speech-language therapy during fun-filled camp activities. The summer listening camp affords the opportunity to foster interaction among children who have cochlear implants, to encourage information sharing among family members, and to train students in an interdisciplinary environment.

Two research laboratories connect closely with the DCIP. First, the Dallas Cochlear Implant Program (DCIP) Laboratory, directed by Dr. Emily Tobey, conducts research focused on early communication development in children using cochlear implants, cortical plasticity and neural responsiveness to electrical hearing, literacy development and speech intelligibility. Long-time collaborations with top cochlear implant programs on a multi-center National Institutes of Health-funded study, the Childhood Development after Cochlear Implantation (CDaCI) project, have provided clinical and research opportunities, as well as funding, for ten AuD students since 2002 and will continue to support several students through 2018.

The second research group associated with DCIP, the CHildren and Infant Listening Laboratory (CHILL), explores development of communication (e.g., vocabulary development, early speech perception skills, etc.) and quality of life in children with hearing loss, particularly those who use cochlear implants under the direction of Dr. Andrea Warner-Czyz. Funding from local and national foundations have supported research projects examining vocabulary development, speech discrimination, and quality of life in infants, children, and adolescents with cochlear implants. The CHILL group has sponsored third-year research projects for 5 AuD students thus far. Additionally, a grant from the E. Rhodes and Leona B. Carpenter foundation that supports Dr. Warner-Czyz’s quality of life research has contributed toward opportunities for graduate students to volunteer at the Colorado Neurological Institute’s Cochlear Kids summer camp in Estes Park, Colorado. Students serve two roles at this three-day overnight family camp: (a) Facilitators, who guide families of children with cochlear implants; and professionals from across the nation working with pediatric cochlear implant recipients.

Programs associated with the DCIP will continue to provide ongoing clinical and research opportunities for faculty and students to interact with patients/participants from infancy through adolescence and their families as well as other health-care disciplines.
c. The program has implemented novel and intensive programs for adults (Summer Intensive Auditory Rehabilitation) and teens (Camp CHAT) with hearing loss, under the direction of Dr. Linda Thibodeau. Both programs occur in a retreat-like environment and emphasize real-world experiences to address the social, technological, and personal communication of needs of families who face challenges associated with hearing loss. These programs offer students invaluable insight into the social and emotional impact of hearing loss and participant outcomes reflect improvement in self-reported measures of hearing handicap. These programs will continue at UTD and the model has been shared and implemented in other University training programs.

The Program and Callier Center will continue to seek funding initiatives for children and families with limited for hearing-health services – These include Crystal Charity Ball, Callier Care fundraisers, state-employee charitable contribution and annual North-Texas Giving Day campaigns.

2. Understand the mind and brain.

The School’s plan to become an internationally recognized center for research in cognitive neuroscience and in the diagnosis and treatment of cognitive disorders has resulted in enhanced clinical and research activities in neuroscience.

a. The Lab for Clinical and Integrative Neuroscience was established in 2013 when Dr. Sven Vanneste joined the BBS and AUD faculty. The chief research themes include the use of advanced brain scanning, electrophysiological and neuromodulation techniques to map the structure and function of the human brain, to understand the effect of sensory deprivation, and to treat clustering groups of pathologies including depression and tinnitus. This program will continue to fund students, result in state-of-the-art research, and investigate treatment options.

3. Create and implement technology that repairs and strengthens human abilities.

The School’s initiative to establish a Nuerotechnology initiative within (BBS) and in collaboration with UT Dallas School of Engineering and Computer Science, UT Southwestern Medical School and area high-tech industry is met by several AUD programs and collaborations.

a. A joint program between the College of Engineering and Audiology addresses the development of technology for persons with hearing loss. Faculty collaborates to develop noise reduction and speech enhancement strategies
that can be used when coupling personal cell phones to one’s hearing aids. The program provides student funding and research opportunities.

b. The DCIP collaborates with the Department of Electrical Engineering in two ways. First, to investigate speech enhancement algorithms for improvement of speech intelligibility. This project has major implications for cochlear implant recipients, who perceive speech with a compromised signal that consistently results in decreased perception in adverse listening environments. Second, to explore links between electrical engineering and communication disorders through a multitude of undergraduate and graduate student projects.

c. The AUD program in collaboration with Dallas Summer Musicals’ (DSM) aims to significantly improve the listening experience of all patrons, including those with hearing loss. Close collaboration among DSM, the AUD program, Purdue School of Engineering, and industry has resulted in substantial advancements in DSM hearing assist connectivity options and sound quality. The resultant “Hear Us Now!” program helps to provide a clear and direct audio signal from the performers to the patrons via assistive listening technology that can interface with hearing aid T-coils, streamers, and FM/DM systems. HEAR US NOW™ is so unique that a trademark has been allowed by the United States Patent and Trademark Office.

d. By 2016, the Callier-Center, Richardson facility will expand by 50,000 square feet to address the growing numbers of students, faculty and research and patients. The facility will enhance treatment, research and graduate education opportunities. The facility, located on the main-campus, will be designed to enhance inter-program collaboration and include an emphasis on communication well-being and community engagement.

Summary

The stated initiatives, which serve to enhance the research, service and outreach capabilities of the University, School and Program, have resulted in sustained growth in facilities, faculty, and collaborative efforts over the past several years. These include: renovations of existing facilities (adding booth space to Callier Richardson; updating/adding patient areas, classrooms, and student computer facilities within Callier Dallas) and the planned new facilities (50,000 + square foot addition to Callier Richardson)) for clinical services and education.

Since, 2007, The AUD program has added three additional tenure-track and 2 additional Clinical Faculty. Faculty associates (service providers and preceptors) are maintained between 10 -12 FTE. The AUD program works in concert with other UTD departments, universities, and healthcare providers. The AUD faculty will continue to serve on university, school, professional, state, federal and international government and community committees, councils, and working groups.