

Autism Grant Program: Annual Progress Report

July 2023

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Agency Mission

The mission of the Texas Higher Education Coordinating Board (THECB) is to serve as a resource, partner, and advocate for Texas higher education, resulting in a globally competitive workforce that positions Texas as an international leader.

Agency Vision

The THECB will be recognized as an international leader in developing and implementing innovative higher education policy to accomplish our mission.

Agency Philosophy

The THECB will promote access to and success in quality higher education across the state with the conviction that access and success without quality is mediocrity and that quality without access and success is unacceptable.

The THECB's core values are:

Accountability: We hold ourselves responsible for our actions and welcome every opportunity to educate stakeholders about our policies, decisions, and aspirations.

Efficiency: We accomplish our work using resources in the most effective manner.

Collaboration: We develop partnerships that result in student success and a highly qualified, globally competent workforce.

Excellence: We strive for excellence in all our endeavors.

The Texas Higher Education Coordinating Board does not discriminate on the basis of race, color, national origin, gender, religion, age or disability in employment or the provision of services.

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Introduction: Autism Grant Program

The 84th, 85th, and 86th Texas Legislatures appropriated \$8.1 million to the Texas Higher Education Coordinating Board (THECB) to make competitive grant awards to Texas public and private general academic institutions that conduct research and/or provide treatment to children with autism spectrum disorder (ASD). In 2021, the 87th Texas Legislature, Regular Session, continued support for the program by appropriating \$7.41 million to the THECB and expanding eligibility by authorizing the participation of Texas health-related institutions and independent universities. The General Appropriations Act, Senate Bill 1, Article III, Rider 44, directed the THECB to offer the following three categories of funding to eligible institutions:

- Parent-directed Treatment – \$2,055,000 total available in each fiscal year for research centers serving a combined total of at least 750 children with ASD annually through Parent-directed treatment methods. The amount available represents a 5% reduction from Fiscal Year (FY) 2015, 2017, and 2019 appropriations.
- Board-Certified Behavior Analyst (BCBA) Training for Teachers/Paraprofessionals – \$950,000 total available in each fiscal year to autism research centers that serve a combined total of at least 2,547 children with ASD per year by training teachers and/or paraprofessionals. Teachers and paraprofessionals may be in public or private institutions, teaching prekindergarten through 12th grade.
- Research, Development, and Evaluation of Innovative Autism Treatment Models – \$700,000 total available in each fiscal year to one or more autism research centers to research, develop, and evaluate innovative autism treatment models that provide treatment to the greatest number of children with ASD.

The THECB administers the Autism Grant Program (AGP) through a competitive grant application process. Grant recipients provide treatments through multiple approaches: conventional treatments (behavioral analysis), innovative treatments, treatments in the public school system, and treatments in the home environment with parents and caregivers.

Since the start of the program in FY 2016, the AGP grants have served a total of 66,764 children over six rounds of grant awards to institutions, more than 2.5 times the minimum target of 26,376. Over this period, the AGP has undertaken the following activities:

- The initial ASD grant awards were made in all three funding categories in FY 2016. Grant recipients treated 17,229 children with ASD in the first grant cycle (2016-2018), which ended in June 2018.
- A second round of awards was made to support Parent-directed Treatment in FY 2017. The initial AGP grants ended in June 2018, and the second set of grant awards for the Parent-directed Treatment ended in June 2019. An additional 917 children with ASD were treated during this second grant period (2017-2019).
- A third round of ASD grant awards was made in all three funding categories in FY 2018, ending in June 2020. This third grant cycle (2018-2020) allowed for the treatment of an additional 23,331 children with ASD.

- A fourth round of AGP grant awards was made to support Parent-directed Treatment in FY 2019. The fourth round ended in December 2020 and served 6,380 additional children with ASD.
- A fifth round of ASD grant awards was made in all three funding categories in FY 2020, ending in June 2022. As of March 2023, this fifth grant cycle has served 16,775 additional children with ASD.
- A sixth round of ASD grant awards was made in all three funding categories in FY 2022, ending in May 2024. As of March 2023, this sixth grant cycle has served 2,132 additional children with ASD for a combined total of 66,764 children with ASD served since the program began in 2016. Individual grants have received no-cost extensions of various lengths, depending on the circumstances and unexpended grant funding, particularly as it pertains to delays caused by the COVID-19 pandemic and/or the statewide freeze storm in February 2021.

Table 1. Autism Grant Program Categories and Service, March 2022 through March 2023

Autism Grant Program Category	Biennium Amount Awarded	Children Served	Teachers/ Paraprofessionals
Parent-directed Treatment	\$4,110,000	823	n/a
Behavior Analyst Training for Teachers/Paraprofessionals	\$1,900,000	6,292	1,400
Innovative Autism Treatment Models	\$1,400,000	234	n/a

Source: AGP grantee required reports

The AGP has a target for its recipients to serve a combined 13,188 children with ASD for grants awarded in FYs 2020, 2021, 2022, and 2023, or 26,376 children since the program began in 2016. The program is exceeding its targets for the Parent-directed Treatment (minimum 750 each FY) and Behavior Analyst Training for Teachers/Paraprofessionals (minimum 2,547 each FY).

The AGP also included \$150,000 per fiscal year for administrative costs, which the THECB may use to support staff salaries, external reviewers, and other related administrative costs.

Program Development

Rules for the AGP were established using the THECB’s negotiated rulemaking process in 2015 with input from stakeholders, including representatives from Texas public universities, the Texas Autism Research and Resource Center, the Texas Health and Human Services Commission, and the Texas Council on Autism and Pervasive Developmental Disorders. Following the negotiated rulemaking process, the THECB adopted rules for the program in

April 2016. Rules are codified in Texas Administrative Code, Title 19, Chapter 6, Subchapter K. The THECB maintains a [webpage for the Autism Grant Program](#) is on its website.

Review, Assessment, and Selection Process

The AGP is a competitive grant, and applications are reviewed by THECB staff and external expert reviewers. To assist in the selection process, the THECB contracted with four external reviewers with primary expertise in parent-based treatment and/or teacher/paraprofessional training. An external reviewer from the Texas Health and Human Services Commission with expertise in ASD grant projects volunteered and participated in the review process. Applications were reviewed by a three-member team comprised of the THECB grant administrator and two external content expert reviewers.

Proposals were assessed based on criteria described in the request for applications (RFA), including the projected number of children with ASD to be served, feasibility of the timeline, attainability of the goals, long-term influence of the project past the grant period, management structure, plans for evaluation, sufficiency and economy of the budget, and qualifications of the directors and key staff. The THECB staff compiled the assessment results and made recommendations for funding to the Commissioner of Higher Education. The commissioner reviewed the information and finalized award selection for funding.

Fiscal Years 2020-2021

An RFA with funding available for all three categories of the grant program was published in January 2020 for FY 2020. Eight applications were received for Parent-directed Treatment, and seven were awarded. Eight applications were received for Teacher/Paraprofessional Training, and six were awarded. Six applications were received for Innovative Treatment models, and four were awarded.

Due to the impacts of the COVID-19 pandemic, 11 of the 17 awards were granted no-cost extensions of various lengths, according to their activities and unspent funds, to continue grant activities up to one year past the original grant end date of May 2022. Six of the grants remain active: Baylor University and Texas A&M University for Parent-directed Treatment; Baylor University and Texas A&M University for Teacher/Paraprofessional Training; and Baylor College of Medicine and Baylor University for Innovative Treatment models.

Parent-directed Treatment

In the Parent-directed Treatment category, the THECB funded the following seven applications:

1. Texas A&M University, Center on Disability and Development

The project involves online, self-paced instructional modules and coaching of parents to identify their children's needs and priorities related to communication deficits via a multimodal communication intervention. The proposed project builds upon a THECB-funded (2016-2020) Parent-directed Treatment project.

The project has been featured on two different local news channels. In 2021, project representatives were invited to introduce the project to the Texas Statewide Leadership for Autism Training in August and Humble ISD in December. To address pandemic challenges, meetings were planned with public school districts with high proportions of at-risk students to provide multiple live workshops to train bilingual and diverse educators more intensively. Project leaders were awarded the 2022 *Journal of Special Education Technology's* Diversity, Equity, and Inclusion Article of the Year award for an article they authored that reported findings from this project.

Children with ASD in 63 counties were served, with projections exceeded. The project received a no-cost extension until May 2023 to use funds that experienced expending delays in part due to COVID-19.

Total award: \$499,861

Expenditures to date: \$328,055

Parent/children pairs projected to be served: 300

Parent/children pairs served to date: 327

2. Texas Tech University, Burkhart Center for Autism Education and Research

The project provided a telehealth autism outreach clinic directed at parent/family-mediated interventions that expanded on services available to rural and migrant families in the West Texas region, with a focus on providing families in underserved areas the same high-quality

services available in urban or largely populated areas. Training and support for parents was offered locally as well as via a mobile clinic to reach a greater number of parents across regions of Texas.

The final number of people served was very limited due to school shutdowns and the lack of ability to travel to share project information, which had a significant negative impact on the implementation of the program. Despite these unforeseen challenges, data show that the project made a notable impact on the families who were served. Graduate research assistants presented project findings at the Association of Professional Behavior Analysts Conference in March 2022.

Parents reported that they have seen progress in their child outside of sessions in other environments and continue to use the skills taught during the session with their child, adding that their learned skills were easy to teach their spouse to ensure they can both help their child develop. Parents have also reported that schoolteachers have also seen a change in how their child interacts with other students. Family participants reported they would participate again in such a project.

The project received a no-cost extension until August 2022 to use funds that experienced expending delays in part due to COVID-19.

Total award: \$456,000

Expenditures to date: \$327,964

Parent/children pairs projected to be served: 300

Parent/children pairs served to date: 58

3. Texas Woman's University, Speech and Language Clinic

The project applied imitation therapy in the home setting. Following training, parents served as interventionists, and data was collected via a tool that automatically recorded and quantified the interactions exchanged between adults and children. The major objective of the project was to determine the increase in the sound and imitation repertoire of the participating children.

Pandemic restrictions created unforeseen challenges regarding efforts to contact and screen potential participants for the study while practicing the appropriate state, federal, and CDC guidance safety guidelines. Additionally, many families were unable to participate due to the statewide winter storm in February 2021 and hospitalizations associated with COVID-19. Further, several parents and families stated that although they were very interested, due to personal/family situations, including employment difficulties and/or employment changes directly associated with the pandemic, they did not have the time to commit.

Project participants indicated positive results, reporting that their children are enjoying the study sessions and have been producing more speech-related sounds, increasing word usage, and developing new vocabulary. The preliminary data analyses appear highly encouraging, despite the smaller than anticipated data set.

The project received a no-cost extension until August 2022 to use funds that experienced expending delays in part due to COVID-19.

Total award: \$291,847

Expenditures to date: \$284,924

Parent/children pairs projected to be served: 300
Parent/children pairs served to date: 53

4. The University of Texas at Austin, Speech and Hearing Center

The project provided evidence-based parent training to caregivers of children with ASD. For socioeconomically, culturally, and linguistically diverse families, a cultural adaptation was used to meet their needs face to face, on demand, and via workshop opportunities.

Parents and caregivers displayed significant and consistent progress in their acquisition of skills taught in the project. They showed increased confidence in engaging with their child and implementing the different language-facilitation strategies. Project representatives observed increased instances of spontaneous initiations and requests from the participants that demonstrated enhanced expressive and receptive language skills. The positive parent/caregiver testimonials from participating family surveys included: "This program has been tremendously helpful in teaching us how to best engage with our son to enhance his language and communication skills. [Child] and I read a little bit about developmental relationship-based intervention (DRBI) and are happy that this class uses these strategies. DRBI is hard to find in TX!"

The project exceeded projected numbers, in part due to the robust referral process by professionals and participating families.

Total award: \$399,044
Expenditures to date: \$ 389,564
Parent/children pairs projected to be served: 480
Parent/children pairs served to date: 592

5. The University of Texas at Rio Grande Valley, Department of Human Development & School Services

The project aimed to assist parents who have children or adolescents with ASD to improve their psychological flexibility, confidence, and psychological well-being via opportunities to connect and support each other while learning evidence-based strategies. Exposure to meaningful social experiences regularly helped children with autism adjust to future environments and maximize their development in social communication skills. Bilingual services were also included in the project.

Current data indicates that parents are not only developing knowledge about evidence-based strategies but also applying what they learn to help their children and, in turn, observing improved desirable child behaviors. Parents reported application of project training when advocating for their child's inclusion through public school participation provided under federal and state laws. Culturally responsive and family-oriented social events served to increase adult-child learning, positive interactions, and sense of belonging.

A symposium of special education providers (i.e., Special Education Directors, Special Education LSSPs, Special Education Occupational and Speech Therapists, Special Education Behavior Strategists) that service different local education agencies in the Rio Grande Valley provided the opportunity to build positive relationships for parents in the program.

The project received a no-cost extension until August 2022 to use funds that experienced expending delays in part due to COVID-19. The projected number of those served was exceeded.

Total award: \$499,265

Expenditures to date: \$478,516

Parent/children pairs projected to be served: 398

Parent/children pairs served to date: 453

6. Baylor University, Baylor Center for Developmental Disabilities

The goal of this project is to provide rural community parent training to parents of children with ASD via telehealth technology to increase children's access to evidence-based practices to decrease reliance on professionals and resources required for lifespan support. The project aims to lead to a generation of new knowledge with the dissemination of findings yielding improvements in the standard of care.

Despite a decrease in response to advertisement of the program relative to the response rate from previously funded parent-directed projects, as an indirect effect of the pandemic with significant upheaval of family routines, the children served and their caretakers are making improved strides in meeting their goals. Among multiple, highly positive comments via social validity measures, one parent shared, "The team was very understanding if we could not make a session and needed to reschedule. I liked the patience that [project staff name] had with us throughout the entire process, especially when explaining instructions and teaching us how to implement the intervention. I loved the kindness, warmth, and empathy she has when interacting with [child's name] as well as with us. I also love and appreciate that this program was free of charge."

Project participants rate the program favorably, suggesting it is feasible and socially valid. In the most recent reporting period, participants implemented 96% of the steps of the evidence-based practices with fidelity (measured during 91% of sessions), indicating that the parent coaching was effective in training the parents to implement the intervention. Moreover, the children who completed the program to date made improvement on 75% their goals from baseline to intervention.

The project received a no-cost extension until May 2023 to use funds that have experienced expending delays in part due to COVID-19.

Total award: \$369,699

Expenditures to date: \$262,124

Parent/children pairs projected to be served: 180

Parent/children pairs served to date: 149

7. University of Houston-Clear Lake, Center for Autism and Developmental Disabilities

The project was an expansion of an established funded program that provided communication and behavior management, assessment, and training to caregivers of individuals diagnosed with autism. Children who have language or social skills deficits and mild-to-moderate problem behavior were referred to the project. Services were available in person or via telehealth.

The pandemic impacted the ability to provide services directly. Despite initial project obstacles, in-person services returned in late spring 2021. In the summer of 2021, an increase in COVID-19 cases began across Texas. Potential family recruits communicated a strong desire to delay until a vaccine was available for their children. Families showed minimal interest in telehealth services throughout fall 2021.

Parents reported the project's impact as follows: "I forgot the reason we came to (the program) was for tantrums. Since starting with you guys, we haven't seen any tantrums," and "I liked how the teachers explained everything to us. Everyone was patient with my daughter. They made sure I understood everything they were teaching her, so I can apply it at home. When I became overwhelmed with emotions of her disability, they stopped lessons and gave me reassurance. They were just overall awesome people to work with and I am forever grateful."

Total award: \$366,811

Expenditures to date: \$366,810

Parent/children pairs projected to be served: 210

Parent/children pairs served to date: 125

Teacher/Paraprofessional Training

The THECB awarded six grants in the Board-Certified Behavior Analyst Training for the Teachers/Paraprofessionals category:

1. Baylor University, Center for Developmental Disabilities

The goal of the project is to provide high-quality professional development to special education teachers with ongoing support to improve the quality of instruction provided to children with ASD, leading to better outcomes for children with autism in Texas. The project works collaboratively with regional ESCs (Education Service Centers) to conduct the project.

The COVID-19 pandemic caused the teacher training format to adapt to function entirely online, creating a one-month delay. The fact that teachers trained under the project are pursuing and receiving their Registered Behavior Technician (RBT) certification is cited as further evidence that the project will improve the quality of services delivered to children with autism in Texas. Project results were presented at the 2021 and 2022 Texas Association of Behavior Analysis regional conferences and the Association of Behavior Analysis International national conventions.

Project representatives were granted a no-cost extension until May 2023 to train more teachers and serve more children with ASD across all three phases of the project, which would provide additional time to meet the project goals and expend all funds. To date, the project has exceeded projections in teachers and children served.

Total award: \$474,843

Expenditures to date: \$407,260

Children projected to be served: 850

Children served to date: 4,250

Teachers projected to be served: 240

Teachers served to date: 546

2. Texas A&M University, Center on Disability and Development

The project supports students with autism via a tiered training and coaching model on the foundations and applications of behavior analysis for paraprofessionals in public and charter schools with ongoing access to continuing education training videos.

Although the planned hiring of a postdoctoral student did not transpire, the graduate assistants hired in lieu of postdocs are showing excellent completion rates in their duties related to the grant. Teacher participant responses at the end of training have been highly favorable: "Thank you so much for your great training. I am blown away with all the things I will take from this training and use with my students," and "This is by far one of the best trainings I have had! Loved it!!" Project representatives presented at the Texas Applied Behavior Analyst Conference in February 2021 and at the Division for Autism and Developmental Disabilities in January 2022.

Project representatives were granted a no-cost extension until May 2023 to train more teachers/serve more children with ASD and provide additional time to expend all funds. To date, the project has exceeded projections in teachers and children served.

Total award: \$471,662

Expenditures to date: \$ 358,906

Children projected to be served: 850

Children served to date: 5,397

Teachers projected to be served: 170

Teachers served to date: 1,476

3. Texas State University, Clinic for Autism Research, Evaluation, and Support

The project provided training on evidence-based practices for students with ASD to certified teachers and teaching assistants (paraprofessionals) that provide direct education and intervention services to students with autism in Texas public schools via one of two possible training paths.

The school's restrictions on in-person training, due to COVID-19, hindered recruitment, contributed to attrition, and complicated the project service delivery process. Despite hinderances caused by COVID-19, the project increased recruitment and recovered from delays during Year 2 of the project. Continued easing of COVID-related restrictions during Year 2 resulted in the ongoing increase in training and children served.

All project goals were met or exceeded. Project representatives reported that 29 educators successfully earned the RBT credential from the Behavior Analysis Certification Board. In qualitative social validity data, trainees' feedback included: "This is the best training I have ever had working with students with autism," and "The RBT training was the best training I have. I loved that our district participated in this training."

Total award: \$286,701

Expenditures to date: \$230,751

Children projected to be served: 1,025

Children served to date: 1,072

Teachers projected to be served: 114

Teachers served to date: 114

4. Texas Tech University, Burkhart Center for Autism Education and Research

The project was focused on providing training to educators by incorporating a coaching and feedback model with a focus on generalization of skills in the classroom setting. The project goal was to offer assessment teams and educators the knowledge and resources necessary to provide a high-quality assessment in the school setting, with additional resources to develop function-based interventions founded on evidence-based practices to address problem behavior in the classroom setting.

COVID-19 restrictions and the February 2021 statewide freeze proved problematic regarding implementation of the project, access to the internet, and time to complete the project goals in a timely manner. Project representatives addressed these unforeseen challenges by speaking with special education directors or school district leaders to facilitate adequate turnout of participants in training.

Given the strain that the pandemic caused teachers and educational systems, modifications put into place following the creation of solutions by program representatives have resulted in stronger outcomes. The project exceeded its projected goals. In the post-grant phase, project representatives worked with their IT team to ensure the asynchronous trainings were freely available to educators moving forward to ensure access for all educators to high-quality, evidence-based interventions.

Total award: \$460,000

Expenditures to date: \$394,848

Children projected to be served: 850

Children served to date: 1,462

Teachers projected to be served: 174

Teachers served to date: 223

5. The University of Texas at San Antonio, Educational Psychology

The widespread lack of access to applied behavior analytic-based education for children with ASD in San Antonio focused this project to address this systemic problem by helping special education teachers become Board-Certified Behavior Analysts. The project incorporated applied behavior analysis into teaching practices and classroom management to meet educational reform law targets more effectively, such as equity, reliance on evidence-based interventions and accountability, and demonstration of proficiency in data-based decision making.

In March 2021, project representatives launched the Severe Behavior Outpatient Clinic to provide behavior assessment and intervention services to families of children with severe behavior problems. In May 2021, outpatient services provided three-hour events via two evenings, where children were paired with a therapist to work on social-communication, adaptive, and leisure skills using behavior analysis.

In June of 2021, project representatives launched intensive summer programming for children with autism to spend a week with project teachers, supervisors, and volunteers to teach communication, social, and adaptive skills in the context of enjoyable camp activities. The

project served 168 families throughout the eight-week summer program. Over 300 families registered to participate in the summer program. The families who were not able to attend were referred to other services in the community. The summer program taught participants new skills using behavior analysis and provided an opportunity for community connections.

Two teacher participants passed the Board-Certified Behavioral Analyst (BCBA) exam. One was promoted to an administrative position focusing on challenging behaviors, and the other works in early intervention and education as the lead BCBA. The other teacher candidates completed their hours and will take the exam in spring of 2023. A total of three teacher participants passed the Registered Behavior Technician Exam (RBT), passing on their first attempt. The project received a no-cost extension until November 2022 to use funds that experienced expending delays in part due to COVID-19.

Total award: \$474,921

Expenditures to date: \$474,626

Children projected to be served: 850

Children served to date: 1,166

Teachers projected to be served: 12

Teachers served to date: 17

6. University of Houston-Clear Lake, Center for Autism and Developmental Disabilities

The project targeted public school teachers and paraprofessionals who instructed students with a primary diagnosis of autism in the Houston metropolitan area to receive training and classroom consultation services on effective practices, with particular focus on understanding and managing problem behavior.

Due to the pandemic, the project was completely modified to provide it via a virtual platform (e.g., Zoom™) and to accommodate complicated teacher schedules. Although trainers were unable to visit teachers in their classrooms, follow-up emails were continually sent to all teachers and paraprofessionals as they progressed through the training, and they were provided with additional in-vivo support via virtual meetings. Additionally, representatives reported a new partnership with YES Prep open-enrollment public charter school system and began training with teachers from the district in February 2022.

Satisfaction surveys indicate participants were highly satisfied with the trainings and overall program, demonstrating what they learned with high integrity, increasing the likelihood of them correctly implementing these procedures and effectively managing problem behavior in their classrooms. Survey participant comments included: "Great training with real-life applications. I really enjoyed that we were able to practice what we were learning," and "The training was not only engaging for our staff, it is making a major difference in the daily experiences and overall achievement of our students with autism."

Project representatives received requests to train professionals in other settings beyond public schools. One of the graduate assistants provided portions of the training to the West Houston Chinese Church, which benefitted Sunday School teachers who serve children with ASD and related disabilities as well as neurotypical children. In May 2022, another graduate assistant provided training to an academic preschool and daycare program. More than 20 daycare and

private school teachers and aides received training on understanding and reducing difficult behaviors via a remote presentation. Project findings were published in the *Journal of Behavioral Education* 2022.

Total award: \$466,593

Expenditures to date: \$466,593

Children projected to be served: 850

Children served to date: 1,045

Teachers projected to be served: 288

Teachers served to date: 318

Innovative Treatment Models

The THECB awarded four grants in the Research, Development, and Evaluation of Innovative Autism Treatment Models category:

1. Baylor College of Medicine with Texas Children's Hospital Neurological Research Institute

The goal of the project is to develop and evaluate a parent-led, internet-delivered CBT (iCBT) treatment model consisting of an interactive website with treatment materials that parents can work through with their child, provided in English and Spanish. The project will evaluate the clinical and cost-effectiveness of different models of brief therapist support to enhance iCBT use and outcomes and inform sustainability. Given the impacts of COVID-19 on face-to-face research and services, project representatives aim to provide this timely resource for the ASD community.

Most of the youth who have completed the program have experienced clinically significant improvement. The primary outcome measures for this project are the Pediatric Anxiety Rating Scale-Modified for Autism Spectrum Disorder and the Clinical Global Impressions Scale-Improvement. The pilot showed an average 44% improvement in scores, exceeding the clinically significant threshold of 35%, and 71% experienced clinically significant improvement in anxiety. Project results were presented at the March 2023 Anxiety and Depression Association of America conference.

Given that the project experienced significant launch delays that included slower than anticipated IRB approval, changes to research procedures due to COVID-19, and subsequent administrative delays (including replacing the program director), an altered timeline resulted for the study. Project representatives were granted a no-cost extension until May 2023 to fulfill original goals for children with ASD served and to expend all funds.

Total award: \$690,963

Expenditures to date: \$579,162

Children projected to be served: 140

Children served to date: 69

2. Baylor University, Baylor Speech, Language, and Hearing Clinic

The project investigates and quantifies effects of multitasking organic motion stimulus as an intervention to benefit children with autism. The intervention involves stimulating the body

with organic motion through riding on a mechanical horse-riding simulator, while simultaneously engaging the rider with motor and cognitive activities. The project will determine the extent to which the intervention affects various autism symptoms including core behavior, balance, motor coordination, and speech and language. The project aims to reveal neural changes associated with the intervention and the extent to which these changes may provide predictive biomarkers of therapeutic response.

Recruitment efforts, recruitment flyer upgrades, and continuous, active communication with the community and with clinic recruitment partners were completed. Project leaders endeavored to develop some of their own automated software algorithms to accommodate unexpected data variations while remaining focused on the quantitative measure (e.g., stride width). EEG data (e.g., sitting still) showed the need for increased creative efforts to process the data while also adhering to the standard measures.

Although the number of completed participants remains too low for publication of data analysis at this time, project representatives have presented study methods and preliminary results at eight conferences, and one journal article in preparation. Anecdotal evidence of positive project effects via parent comments include: "She is talking more. The teachers have noticed some small changes in communication, and she is more organized; she seems to be able to stop irritating behaviors better. Better able to handle physical space and is communicating better; he seems to understand consequences better. Less impulsive, thinking twice before reacting. He wants to have friends now; she is more willing to participate in other things. Stairs and swinging are still challenges."

Project representatives were granted a no-cost extension until May 2023 to fulfill original goals for children with ASD served and expend all funds.

Total award: \$599,209

Expenditures to date: \$565,326

Children projected to be served: 30

Children served to date: 22

3. Texas Woman's University, School of Occupational Therapy

This project established high school-level autism rating teams and protocols to evaluate the autism friendliness of community venues and events. The goal of this research was to create an innovative, sustainable approach to promoting community participation for students, schools, and venues impacted by autism spectrum disorders via the development of the Community Participation curriculum, teaching activities, and tools.

Project representatives worked with community partners, namely collaboration with [nonPareil Institute](#), to perform environmental audits alongside individuals with ASD at various venues, including Target, Hobby Lobby, Haggard Public Library, a fast-food drive-thru, and a to-be-determined entertainment venue. This project outcome increased the confidence of individuals with ASD to self-advocate for autism-friendly environments. A digital platform for community partners that promoted awareness of sensory challenges that individuals with ASD might face was also created. The digital platform educated community partners on how the environmental factors of their facilities (e.g., lighting, noise level) might impact individuals with ASD.

Project representatives created Sensory Space on Wheels (SSW), a portable sensory space that promotes self-regulation when the surrounding environment becomes overwhelming. SSW is an ice-fishing tent equipped with objects that provide visual, auditory, tactical, proprioceptive, and vestibular input: rocking chairs (back-and-forth movement), weighted lap pads (deep pressure touch), weighted blankets (body warmth), and sensory lighting (soothing and calming effect).

SSW was deployed at the Dallas Zoo during their Homeschool Day Event for approximately 3,200 students in early March 2022 with the assistance of 15 occupational therapy (OT) students from Texas Woman's University (TWU); approximately 350 children with ASD were in attendance. The SSW was deployed at Nasher Sculpture Center with the assistance of six to eight OT students from TWU in April 2022, with approximately 100 children with ASD anticipated to attend.

Based on the SSW work developed in this project, representatives were asked to partner with Dallas' Frontiers of Flight Museum's grant to use the SSW in their space. The grant was ultimately selected for funding by [NASA's Universe of Learning](#), a worldwide collaboration of museums and cultural institutions affiliated with the Association of Science and Technology Centers and the Smithsonian Institution to develop and test sustainable models of innovative science, technology, engineering, and math (STEM) learning for informal learning institutions. There are over 40 informal learning institutions from across the nation (this will be the second in Texas, joining the International Museum of Art & Science in McAllen) that have developed and tested program models for their audiences, using NASA Astrophysics resources in their efforts to make STEM learning more accessible and engaging.

Total award: \$267,477

Expenditures to date: \$212,246

Children projected to be served: 250

Children served to date: 1,200

4. The University of Texas at Dallas, Callier Autism Treatment Research Center

The project was an autism-specific, parent-mediated, naturalistic developmental behavioral intervention that blended developmental and applied behavioral analysis techniques. It differed from other interventions in its innovative protocol to facilitate mutual gaze by coaching parents to use implicit teaching with contingent natural reinforcement during motivating face-to-face routines. The aim was that the focus on mutual gaze may adjust brain activity toward a more typical trajectory. The project served culturally and economically diverse children with severe ASD and intellectual impairment.

The project served fewer families than originally projected due to COVID-19 barriers, including the modification to telehealth that impacted family readiness for intervention. The project experienced a considerable amount of turnover, namely early childhood intervention providers, which negatively impacted the timeline. Community outreach to increase awareness of the project and referrals improved participation.

Project leaders provided an in-service in Spanish to approximately 50 parents and educators in a Dallas ISD meeting. Project status was presented in a webinar as part of The University of

Texas System Early Childhood Scholars Series. Approximately 125 people attended the livestreamed lecture.

Project studies were published in national and international peer-reviewed journals, and findings were presented at international conferences. In addition, published results have influenced early intervention providers in 63% of Texas counties to adopt Pathways. Project representatives were granted a no-cost extension until November 2022 to fulfill original goals for children with ASD served and to expend all funds.

Total award: \$863,926

Expenditures to date: \$639,462 to \$863,926

Children projected to be served: 200

Children served to date: 108

Fiscal Years 2022-2023

An RFA with funding available for all three categories of the grant program was published April 2022 for FY 2022. Seven applications were received for Parent-directed Treatment, and seven were awarded. Seven applications were received for Teacher/Paraprofessional Training, and four were awarded. Seven applications were received for Innovative Treatment models, and three were awarded. All 14 grants are active to date.

Parent-directed Treatment

In the Parent-directed Treatment category, the THECB funded the following seven applications:

1. Texas A&M University, Center on Disability and Development

The project, Coach-to-Communicate: Parent Partnerships Supporting English Learners and Adolescents, provides online instructional modules and coaching for parents to elicit communication from their children with ASD. The project serves parents of school-aged children with autism and involves the development and delivery of strategies and materials aimed at addressing the communication needs of adolescents, those with more complex communication skills, and English-language learners. Two new online modules are being developed (adolescent intervention and complex communication instruction), and current modules and parent coaching materials will be translated into additional languages spoken in Texas (i.e., Spanish, Vietnamese, Mandarin, Hindi, and Bengali). The project builds upon a THECB-funded (2016-22) Parent-directed Treatment project.

Recruitment efforts among multiple school districts in Texas focused priority on counties with more than 20% poverty, as well as charter schools throughout the state. All Special Education Cooperatives (SSAs) in Texas, who often provide Special Education services to smaller and more rural school districts, have also been recruited. Recruitment materials were sent to Texas educators and service providers, including flyers and informational letters for parents in both English and Spanish. Materials are currently being translated into Thai and will be included with recruitment materials during the next grant reporting period. The project website is currently being updated (autism.tamu.edu) to provide ease of information access to for parents with English as a second language.

Total award: \$500,000

Expenditures to date: \$3,517.66

Parent/children pairs projected to be served: 190

Parent/children pairs served to date: 48

2. Texas Tech University, Burkhart Center for Autism Education and Research

The Mobile and Telehealth Outreach Clinic for Autism is an amalgamated initiative for addressing disparities for ASD in families with restricted access to services. This model combines two previous models to better serve families who have a child with ASD. This allows the Burkhart Center to continue its goal of decreasing the disparities sometimes present in rural communities by providing high-quality intervention services and training to parents

across all areas of Texas as well as families who do not have the resources available to receive services.

With the current timeline and training plans, it is estimated the project will be able to provide face-to-face services to families in underserved areas on a consistent basis with continued follow-up via telehealth. These services could include individual assessment and consultative services as well as group training for caretakers with the goal of providing services to underserved populations.

The program has received significant interest from families throughout the state, and there is currently a longer waitlist for services since the most recent grant reporting period. Other agencies (i.e., school districts, educational service centers, etc.) have also inquired with interest in the group parent training workshops and endeavor to schedule the workshops for their community in the upcoming academic year. Additionally, a project staff member has attended several conferences and transition fairs in Central Texas to disseminate project information, successfully sharing information with families and agencies who are interested in using project services.

Total award: \$437,701

Expenditures to date: \$78,362

Parent/children pairs projected to be served: 190

Parent/children pairs served to date: 5

3. Texas Woman's University, Speech, and Language Clinic

The project aims to train parents to provide language intervention to children diagnosed with ASD to increase reciprocal imitation, the number of verbalizations, the variety of sounds, and words produced by the child.

The project uses a specific treatment approach, "Imitation Therapy" (IT), that has proven successful in clinical settings and trains parents to apply it in a home setting for their children. A major advantage of this approach is that parents/caregivers from diverse linguistic backgrounds can provide intervention in their home language. After receiving appropriate training, the parents will continue to serve as the interventionists. The intervention will be conducted for 30 minutes, five times a week, for a total of two weeks.

The major objective of the project is to determine the increase in sound and imitation repertoire of the children. This will be measured by analyzing the data for adult-child intervention sessions, pre- and post-baselines, and parental reports. Training parents, teachers, and Speech Language Pathologists will also assist in developing sustainability as they can continue to implement the training in the future.

Total award: \$450,508

Expenditures to date: \$ 50,515

Parent/children pairs projected to be served: 200

Parent/children pairs served to date: 0

4. The University of Texas at Austin, Speech and Hearing Center

The goal of the project, Skills and Knowledge of Intervention for Language Learning Success 2.0, is to provide evidence-based parent training to caregivers of autistic children. The project offers five semesters of training in evidence-based intervention for enhancing language skills in young autistic children by meeting the current need for inclusive programs. Specifically, the project will include continuation of existing successful parent-mediated intervention services and create a new focus on diversity, equity, and inclusion within project services.

Clinicians work directly with families during live/synchronous sessions conducted either in-person or via telehealth at the family's discretion, and parents can choose the primary language of intervention. This evidence-based intervention improves parent knowledge and implementation of strategies to teach social communication skills. Parents can access the pre-recorded training at any time. Twelve workshops will specifically focus on current trends in the field, such as building self-advocacy skills, sensory regulation strategies, and neurodiversity-affirming practice. The on-demand series also includes a recorded version of the Teaching Social Skills curriculum presentations (available in English and Spanish).

Total award: \$460,683

Expenditures to date: \$36,977

Parent/children pairs projected to be served: 400

Parent/children pairs served to date: 70

5. The University of Texas at Rio Grande Valley, College of Education Special Education Research

The goal of the project is to improve the behavior of children with ASD by providing culturally adapted evidence-based strategies through a parent-directed training support program for their families.

The Hispanic population is one of the fastest growing groups in the United States with Hispanic children continuing to have high growth rates of autism with lower rates of educational support, medical diagnoses, and limited access to evidence-based knowledge and interventions. UTRGV is the second-largest Hispanic-Serving Institution in the United States and in a region that is comprised of over 90% Hispanic individuals. This project will partner with 12 school districts that service over 20 cities in South Texas.

The project's large and small group workshops/sessions between parent leaders and parents have improved parents' knowledge and application of evidence-based strategies as well as created a sense of belonging and community. Parents are appreciative of the opportunity to participate in an evidence-based training program, where they not only learn how to use evidence-based strategies to help their children improve behaviors but also receive support and encouragement in a supportive learning environment.

Total award: \$500,000

Expenditures to date: \$53,865.41

Parent/children pairs projected to be served: 240

Parent/children pairs served to date: 88

6. The University of Texas at San Antonio, Child and Adolescent Research and Policy Institute

Project FIESTA (Family Intervention and Education Services to Treat Autism) aims to serve child-caregiver dyads through a progressive service model, including Brief Outpatient Autism Therapy, and short-term and long-term severe behavior outpatient intervention with caregiver coaching as a pillar of the intervention approach.

All families served have achieved their targeted outcome regarding decreased challenging behavior and increased caregiver fidelity. Overall, results of the social validity assessment show that Project FIESTA has decreased caregiver stress, and caregivers viewed the services received favorably. The children served thus far are making improved strides in meeting their goals, and caregivers are reporting high satisfaction with the program.

Total award: \$500,000

Expenditures to date: \$28,181

Parent/children pairs projected to be served: 250

Parent/children pairs served to date: 62

7. University of Houston-Clear Lake, Center for Autism and Developmental Disabilities

The project expands the established Parent-directed Treatment program, Connecting the Dots. The goal of the project is to provide communication and behavior management assessment and training to caregivers of individuals diagnosed with ASD. The participants with ASD range in age from 2-18. Participants are referred to the program through various referral sources from the Houston metropolitan area and surrounding counties. Children who have language or social skills deficits and mild-to-moderate problem behavior will be referred to the project based on scheduling availability and proximity. Services are available in person or via telehealth. The goal is to expand the reach of services to a greater number of families.

Total award: \$500,000

Expenditures to date: \$0

Parent/children pairs projected to be served: 190

Parent/children pairs served to date: 0

Teacher/Paraprofessional Training

The THECB awarded four grants in the Board-Certified Behavior Analyst Training for the Teachers/Paraprofessionals category:

1. Sam Houston State University, Low Incidence Disabilities and Autism Program

The goal of the project is to provide high-quality professional development to special education teachers with ongoing support to improve the quality of instruction provided to children with ASD, leading to better outcomes for children with autism in Texas. The project works collaboratively with regional ESCs to conduct the project.

Recruitment for this project will focus on teachers with less than five years of experience and with positions in Title 1 schools (teachers will not be excluded if they do not fit this criteria) to increase the probability of serving students from diverse backgrounds.

Teachers will develop written action plans for integrating various topics into the classroom with their students. Teachers will also complete several pre-and post-test measures to evaluate changes in knowledge, performance, and perceptions.

Total award: \$359,000

Expenditures to date: \$6,912

Children projected to be served: 1,800

Children served to date: 250

Teachers projected to be served: 180

Teachers served to date: 25

2. Texas State University, Clinic for Autism Research, Evaluation, and Support

The goal of the project is to provide Board-Certified Behavior Analyst Training for teachers. The project formed partnerships with five diverse counties/school districts: (1) Round Rock, (2) Pflugerville, (3) San Marcos, (4) Comal ISD, and (5) La Verna ISD. Trainees are learning to implement focused Applied Behavior Analysis (ABA) interventions.

First, trainees will select an online group-training topic that meets their needs. Following group training, trainees are offered individualized Behavioral Skills Training (BST) from a BCBA-Trainer. BST is offered in trainees' own classrooms and/or online, dependent on trainees' scheduling needs. Online and in-person training will be conducted by a BCBA-trainer with certification and licensure in ABA. Before and after training, trainees will complete quantitative and qualitative measures focused on evaluating skill acquisition, student progress, and social validity.

Six teachers indicated that they are training their classroom paraprofessionals on the skill(s) they are receiving from the project's training. As evidence of the social validity of this project's approach to training and outcomes, teachers recruited other teachers to participate in the project (past participants are referring new participants). One behavior specialist has already generalized her training and is using the skills in her district regularly. Teachers reported using what they had learned during the training to train their students' parents as well.

Total award: \$312,000

Expenditures to date: \$74,052.71

Children projected to be served: 1,150

Children served to date: 269

Teachers projected to be served: 120

Teachers served to date: 23

3. The University of Texas at San Antonio, San Antonio Applied Behavior Analysis Research Consortium

The goal of the project is to help teachers become BCBA's and incorporate ABA into their teaching practices and classroom management. The project aims to recruit 10 diverse teacher participants who reflect the population of San Antonio, which is 65% Hispanic. For the child

participants in the project (not including those participating from the teachers' classrooms), recruitment is achieved through community partnership with the Autism Treatment Center, which provides services to diverse populations. Additionally, recruitment information is disseminated via flyers through other ABAs at UTSA community partnerships, including local ABA clinics, school districts, the Children's Hospital of San Antonio, and the Multi-Assistance Center at Morgan's Wonderland™, all of which are located in San Antonio and service a variety of diverse populations around the city, as well as through social media.

Total award: \$400,000

Expenditures to date: \$12,797

Children projected to be served: 1,050

Children served to date: 288

Teachers projected to be served: 10

Teachers served to date: 9

4. University of Houston-Clear Lake, Center for Autism and Developmental Disabilities

The project goal is to increase the number of Texas school teachers who are prepared to provide evidence-based ABA approaches in classrooms that serve students with ASD and related disorders. The project will train teachers who serve students with ASD by providing initial cross-district group training, with added opportunities to experience more in-depth training with 1:1 flexible meeting time scheduled by teachers at their convenience. Training will afford teachers the knowledge of basic ABA strategies shown to be effective in helping students with ASD learn in school and classroom environments. Teachers who work in greater-Houston areas as well as rural and underserved Texas school districts located beyond driving distance of the University of Houston-Clear Lake are targeted for recruitment. The inclusion of virtual training options assists with recruiting and serving a greater number of diverse, underserved areas of the state.

As a result of ambitious marketing, professionals in a variety of roles within community and school environments have expressed interest in the project. For example, a training will soon be conducted that includes a juris doctorate professional functioning as the Youth and Advocacy Program director at The Arc of Fort Bend County. Given the success of the completed training in Pearland ISD, project leaders have been asked to return to the district to provide further training and extend outreach to general education classrooms and special education teachers (all providing support to students with ASD) in an event hosted at one of their district campuses in the fall of 2023. Brownwood ISD requested that the BCBA's return at the beginning of fall 2023 to offer training to new teachers in a newly formed "behavior unit." The training event will focus heavily on the needs of students with ASD and methods for creating a routine-based classroom. Approximately 40 new and seasoned teachers who serve students with significant behaviors are projected to be trained in Brownwood ISD, in addition to Licensed Specialists in School Psychology, campus administrators (principals), related service therapists, and special education district staff. Planning is currently underway for this training opportunity.

Total award: \$400,000

Expenditures to date: \$119,938

Children projected to be served: 1,020
Children served to date: 1,041
Teachers projected to be served: 204
Teachers served to date: 65

Innovative Treatment Models

The THECB awarded three grants in the Research, Development, and Evaluation of Innovative Autism Treatment Models category:

1. Baylor College of Medicine with Texas Children’s Hospital Neurological Research Institute

Developing effective treatments for anxiety and depression is a top priority for adolescents with ASD, as these disorders contribute to suicidality, family stress, and social impairment. Research in typically developing youth has shown that transdiagnostic cognitive-behavioral therapy (CBT) has broader and more durable benefits than disorder-specific CBT and can be more easily learned by community clinicians. Given the minimal efforts to develop transdiagnostic interventions for anxiety and depression in adolescents with ASD, this population is at higher risk for suicide, more complex clinical presentations, and poorer outcomes as they transition into adulthood without effective treatments. The project directly addresses this service gap by building off evidence-based practice in typically developing adolescents to develop and test streamlined, transdiagnostic CBT for anxiety and depression in adolescents with ASD.

Total award: \$833,147
Expenditures to date: \$2,607
Children projected to be served: 112
Children served to date: 1

2. Baylor University, Baylor Center for Developmental Disabilities

The goal of the project is to develop a service model in which siblings of children with autism are invited to collaborate and participate as vital members of intervention teams. The project provides three levels of training and support related to including siblings within behavioral interventions. Level 1 is an extended program targeting the reduction of challenging behavior and the increase of prosocial behaviors. Level 2 is a four-week program promoting positive interactions between siblings. And Level 3 will be a one-day workshop to teach siblings to use basic behavioral tools to enhance the quality of interactions with their siblings with autism. In addition to these direct services, a professional development workshop on collaborating with siblings to 60 practitioners working with children with autism will also transpire through the project.

Total award: \$893,410
Expenditures to date: \$50,273
Children projected to be served: 125
Children served to date: 0

3. The University of Texas at Dallas, Callier Autism Treatment Research Center

This project builds on and extends previous AGP-funded UTD research. The project goal is to evaluate the efficacy of the entire Pathways program on: (a) the development of social orienting, joint attention, and social language in autistic children; and (b) relieving their parents' stress. Recruitment of families is conducted through local infant-toddler programs, community centers, advocacy groups, physicians' offices, social media, and past participant referrals. Many of the community referral sources serve low-income Hispanic children and their families (e.g., Catholic Charities, The Lumin Bachman Lake Community School, and Center for Children and Families). Community referral sources that serve low-income Hispanic children with quarterly in-service training on the signs and symptoms of autism, how to screen children for autism, how to talk to parents about autism, and the necessity of early intervention will be provided by project clinicians. Inherent in executing/implementing the project, it aims to simultaneously minimize cultural, economic, and social barriers to clinical care for Hispanic autistic children in families experiencing low income.

Total award: \$854,000

Expenditures to date: \$164,141

Children projected to be served: 150

Children served to date: 10

Fiscal Years 2024-2025 awards will be announced in winter 2023, pending legislative reappropriation. The THECB maintains information about the AGP online at www.highered.texas.gov/agp.

Appendix A: Annual Reporting Requirement

General Appropriations Act for the 2022-23 Biennium, 87th Texas Legislature, Regular Session, 2021. Article IX – General Provisions, Health-Related Provisions.

Section 10.05. Funding for Autism Services. (IX-57). Appropriated elsewhere in this Act for autism services is \$21,702,870 in General Revenue Funds for the 2022-23 biennium, which is allocated to the following agencies for the following purposes:

(a) Health and Human Services Commission (HHSC): General Revenue Funds totaling \$14,292,870 for the biennium for focused Applied Behavior Analysis (ABA) treatment services.

(b) Texas Higher Education Coordinating Board (THECB): General Revenue Funds totaling \$7,410,000 for the 2022-23 biennium to distribute to autism research centers at institutions of higher education that currently provide evidence-based behavioral services and training, in the amounts and for the purposes as follows:

(1) Parent-directed Treatment: \$2,055,000 per fiscal year to serve 750 children per year;

(2) Board-certified Behavioral Analyst (BCBA) Training for Teachers/Paraprofessionals: \$950,000 per fiscal year to serve 2,547 children per year. The research centers may contract with educational service centers to provide this training;

(3) Research, development, and evaluation of innovative autism treatment models: \$700,000 per fiscal year;

(4) Administrative support of the programs in subsections (b)(1) through (b)(3): \$150,000 per fiscal year may be expended by the Higher Education Coordinating Board;

(5) If funds appropriated under Subsections (b)(1), (2), or (3) exceed the funds that can be expended in accordance with the requirements of that subsection, the Higher Education Coordinating Board may expend the excess funds on any purpose described in Subsections (b)(1), (2) or (3); and

(6) Any unexpended balances on hand at the end of fiscal year 2022 are appropriated for the same purpose for fiscal year 2023.

(c) THECB shall gather data on the above programs from each institution's autism research center and submit an annual report on the effectiveness of each program, including the number of children served, the number of parents and/or teachers/paraprofessionals trained, and the results of the research on innovative treatment models. The report shall be submitted no later than September 1 of each year to the Legislative Budget Board, Office of the Governor, the Chair of the House Appropriations Committee, Chair of the Senate Finance Committee, Speaker of the House, and Lieutenant Governor.

**Texas Higher
Education**
COORDINATING BOARD

This document is available on the Texas Higher Education Coordinating Board website:
<http://highered.texas.gov>.

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