ED GAMES EXPO SHOWCASE: SPECIAL EDUCATION AND TECHNOLOGY

Event Information

Date: September 21st, 2023

Time: 8:30 a.m.– 12:30 p.m. Eastern Time

Location: Studio F. The Reach at the John F. Kennedy Center 2700 F St NW, Washington, DC 20566

Hosted By: Sarah Brasiel, Institute of Education Sciences (IES); Anita Vermeer, Tina Diamond, Brianne Burger, Rebecca Sheffield, Office of Special Education and Rehabilitation Services (OSERS)

Contact for Questions: Sarah Brasiel, IES (Sarah.Brasiel@ed.gov)

To RSVP to Attend: https://forms.office.com/g/LMxP3LzbDE

Note: This showcase is one of the exhibitions at the ED Games Expo. Technology demonstrated at this Special Education and Technology Showcase will also be demonstrated on September 20th for the evening public event. See the ED Games EXPO Full Agenda for more information)

Overview

While Artificial Intelligence (AI) tools and products are spreading across the market it is important to keep accessibility and inclusion at the forefront of the conversation about technology in schools and wherever learners are. Accessibility needs to be considered from the beginning stages of design/development of technology including digital games and learning technology. This showcase will highlight product developers doing just that! The event will also build awareness of the many resources available to support developers in ensuring digital accessibility and showcase models that special education technology developers need to have in place to disseminate and sustain their innovations.

Government Program Offices that Support Development of Accessible Technology

- Institute of Education Sciences (IES), National Center for Special Education Research (NCSER)
- Department of Education (ED), Small Business Innovation Research (SBIR)
- Office of Special Education and Rehabilitation Services (OSERS)
- Health and Human Services (HHS) National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)
- National Science Foundation (NSF)

Agenda

Wednesday, September 20th

Evening: (5:30 – 8:30 p.m.) ED Games Expo Open to the Public: Tables will be set up in Studio F in the REACH at the Kennedy Center to showcase Special Education Technology to improve outcomes for learners with disabilities including accessible technology.

Thursday, September 21st

Morning: (8:30 a.m. – 12:30 p.m.) Special Education and Technology Showcase:

- 8:30 a.m. - 9:00 a.m. Networking: **Gallery walk of special education technology products**
- 9:00 am Opening Remarks, OSERS
- 9:05 a.m. Keynote Address
    - Laura Allen, Head of Strategy & Programs, Accessibility & Disability Inclusion at Google
- 9:20 a.m. Part I: Disseminating and Sustaining Technology Innovations
    - Erin Mote, Innovate Edu
    - Molly Levitt, Remarkable
    - Rita Ferrandino, ARC Capital Investments
- 10:00 a.m. Part II: Accessible Technology Innovations
    - Scott Davert, Helen Keller National Center for the DeafBlind
    - Dr. Matthew Seita, Gallaudet University Center for Artificial Intelligence, Accessibility and Sign Language
    - Katrina Best and Sarah Bradley, American Printing House for the Blind
- 10:45 a.m. - 11:15 a.m. Break/Networking: Gallery Walk of special education technology products
- 11:15 a.m. Part III: More Accessible Technology Innovations
    - Jason Roop and Denise Kavin, National Technical Institute for the Deaf and Alabama Institute for the Deaf and Blind
    - Spencer Montan, National Technical Institute for the Deaf
    - Jason Stark, Described and Captioned Media Program
    - Tara Courchaine, CAST Inc.
- 12:00 p.m. Closing Remarks: IES/NCSER
- 12:05 p.m. - 12:30 p.m. Networking: **Gallery walk of special education technology products**

Afternoon (3:00 - 5:30 p.m.) Office Hours:

Meet face-to-face with representatives from 50+ Government agencies/offices that invest and support education technology initiatives as well as organizations that fund and lead initiatives to support education technology innovation and research.

Guest Speakers

Laura Allen, Google

Laura Allen is the Head of Strategy & Programs for Accessibility & Disability Inclusion at Google. She works cross-functionally across teams to improve the accessibility and usability of Google products and processes, and to make Google a more accessible and equitable place for people with disabilities. In addition to her core role, Laura is the Co-Head of Operations of the Disability Alliance Employee Resource Group. Due to her personal experience with low vision, she believes that technology has more power now than ever to transform lives, and progressing accessibility and disability inclusion is her true passion and purpose. Prior to her role as Head of Strategy & Programs, Laura was the Senior Accessibility Program Manager for the Chrome and Chrome OS teams and as an Account Manager in Google's Large Customer Sales division. She serves as the Chair of the Teach Access Board of Directors and the San Francisco Lighthouse for the Blind and Visually Impaired, and the Alphapointe Foundation. For her undergraduate education, Laura studied International Business, Marketing, and Music at Georgetown University. She also completed an Executive Leadership graduate program at Stanford University in March 2021.

Erin Mote, Innovate Edu

Erin Mote is the Executive Director and Co-Founder of InnovateEDU. In this role, Erin leads the organization and its major projects including technology product development, work on data interoperability and data systems, and an urban education Fellowship for new educators. She leads the organization's work on creating uncommon alliances to create systems change - in special education, talent development, and data modernization. An enterprise architect, she created, alongside her team, two of InnovateEDU's signature technology products - Cortex, a next-generation personalized learning platform, and Landing Zone - a cutting-edge infrastructure as a service data product. She is a recognized leader in technology, mobile, and broadband and has spent much of her career focused on expanding access to technology in the US and abroad. She has led ground-breaking initiatives, including scaling wireless communications to the developing world, developing global and national strategic technology plans, and work with the country's leading technology companies.

Molly Levitt, Remarkable

Molly Levitt is the Director of the Remarkable accelerator, the world's longest-running startup accelerator for assistive technology. She is also the founder of Include, which supports entrepreneurs and organizations committed to inclusion - her most recent work was through the National Federation of the Blind. Her first foray into tech was serving as the Founder and CEO of BrightLoop, an EdTech platform that helped teachers individualize learning. She took the organization through a number of accelerators including Y Combinator and Mass Challenge. More recently she has served in senior-level marketing roles with several Bay Area startups. Molly's lifelong dream is to build Camp Linda- a fully inclusive center that is designed for accessibility from the ground up. It will be a camp for people with disabilities in the summer and the work of supporting inclusive businesses and disabled entrepreneurs during the year.

Rita Ferrandino, Founding Partner, Arc Capital Development & Innovation Consultant Catalyst@PennGSE

Rita Ferrandino has built an international reputation as one of the most effective strategist and coalition-builders in the education entrepreneurship community. She is a recognized STEM education expert, an authority on US education policy and politics, and a leader in Future of Work strategies. Rita is the founding partner at Arc Capital Development, a global private investment and advisory firm. Arc invests in, operates and advises companies in the education and corporate training markets and has served over 150 clients. www.arccd.com Rita currently is the Innovation Consultant at the Catalyst@PennGSE Innovation Center at the University of Pennsylvania's Graduate School of Education. She was the lead Capstone instructor at the Education Entrepreneurship Graduate Program for four years. For three years, she was President of the Education Design Studio Inc Incubator funded in collaboration with the Milken Foundation & University of Pennsylvania.

Scott Davert, Helen Keller National Center for the DeafBlind

Scott Davert has been working in the field of adaptive technology for over a decade. Within the Helen Keller National Center for Deafblind Youths and Adults, he has worked as a senior instructor in the Adaptive Technology Department, served as a regional representative for the Rocky Mountain area, was the coordinator of the New York Deaf-Blind Equipment Distribution Program, and represented the agency on the FCC Disability Advisory Committee. He also worked for the state of North Carolina as a DeafBlind services specialist, and as a customer relationship manager for Sprint and then T-Mobile Accessibility. In addition, Mr. Davert assists in the running of AppleVis.com, a community-based website that strives to empower blind and low-vision users to advocate and promote the accessibility of Apple products. He has been publishing articles in various publications since 2008 on technology as it relates to the DeafBlind community. His most recent article, published on the TRIC Blog in September 2022, is a review of braille bugs in iOS 16 and braille keyboard commands.

Matthew Seita, Gallaudet University

Dr. Matthew Seita is currently a postdoctoral researcher at Gallaudet University in Washington, D.C. working under Dr. Raja Kushalnagar. Dr. Seita got his Computing and Information Sciences Ph.D. from the Rochester Institute of Technology in Rochester, New York. His research focuses on the field of human-computer interaction and accessibility for those who are deaf and hard of hearing (DHH) which was supported by the National Science Foundation Graduate Research Fellowship and the Rochester Institute of Technology AWARE-AI NRT Fellowship. Dr. Seita's current research at Gallaudet continues his work with accessible technologies for the Deaf and Hard of Hearing community. He is involved with projects such as ASL signing privacy (anonymizing videos in American Sign Language so that Deaf users can communicate online in their native language and enjoy the benefits of privacy). Dr. Seita is interested in incorporating artificial intelligence and machine learning within accessibility; for example, another project he is involved with currently is on automatic ASL-to-English translation (using Gallaudet's ASL video corpus) at the word- and sentence-level.

Katrina Best, American Printing House for the Blind

Katrina Best is the Accessible Coding Product Manager with American Printing House for the Blind (APH). She has extensive experience as a Certified Assistive Technology Instructional Specialist, Certified Vision Rehabilitation Therapist, Certified Orientation and Mobility Specialist, and Teacher of Students with Visual Impairments. Prior to her role at APH, Katrina worked for 9 years as an itinerant TVI and O&M professional in Illinois and Florida. She also served as an Assistive Technology Specialist for non-profit organizations and co-founded an educational assistive technology training company for teachers, students, and parents. Katrina holds a Bachelor of Science in Education with a specialization in Low Vision and Blindness from Illinois State University. She furthered her education by earning a Master of Science in Education with a focus on Visual Disabilities from Northern Illinois University.

Sarah Bradley, American Printing House for the Blind

Sarah Bradley, Braille Tech Product Manager at American Printing House for the Blind (APH), is an accomplished professional with a deep passion for enhancing accessibility and empowering individuals with visual impairments through technology. With a strong background in education with a master's in special education: Visual Impairments from Vanderbilt University and a keen understanding of assistive technology, Sarah has dedicated her career to making a difference in the lives of those with visual impairments. In her role as a Braille Tech Product Manager at APH, Sarah has taken her dedication to accessibility to new heights. APH is renowned for its commitment to developing innovative solutions for the visually impaired community, and Sarah plays a pivotal role in driving the development and implementation of groundbreaking braille technologies.

Jason Roop, Alabama Institute for the Deaf and Blind

Jason Roop is currently the director of the NTID Regional STEM Center (NRSC) at the Alabama Institute for Deaf and Blind (AIDB) in Talladega, Alabama. He is a native of Virginia and a graduate of George Mason

University where he earned a bachelor's in computer engineering. Instead of working in the private sector after completing his undergraduate studies, he chose to begin a career in technology education at the Alabama School for the Deaf (ASD). He received his Master's in Deaf Education from Lamar University shortly thereafter. Because of his personal experience as a Deaf student in a mainstream program and the benefits of being exposed to STEM courses in high school, he desired to promote the same life-changing impact for the students he worked with at ASD. His nearly 21 years of experience in the Deaf Education and Information Technology fields give him a unique perspective for championing STEM content in education. Jason currently oversees NRSC's robotics, engineering, and academic and transition programs for postsecondary deaf and hard-of-hearing students nationwide.

Denise Kavin, National Technical Institute for the Deaf

Denise Kavin has been with the National Technical Institute for the Deaf (NTID), a college of the Rochester Institute of Technology (RIT) in Rochester, New York for twenty years. She presently serves as Assistant Dean for Admissions, STEM Outreach and Special Project where she provides oversight for four departments: Admissions, Pre-College Outreach, Project Fast Forward, and the NTID Regional STEM Center, a partnership with the Alabama Institute for Deaf and Blind serving the 12-state Southeastern region and nationally. In addition, Denise is an instructional faculty member with NTID's Department of Liberal Studies. Denise Kavin holds an Ed.D. in Leadership and Educational Policy Studies from Northern Illinois University, a M.S. in Education and Social Policy from Northwestern University, a M.S. in Secondary education of the Deaf, from NTID/RIT, and a B.A. in Communication Arts and Psychology from Gallaudet University.

Spencer Montan, National Technical Institute for the Deaf

Spencer Montan is RIT/NTID's Center on Access Technology Associate Director. With a passion for leveraging technology to improve the lives of people with disabilities and others with access and functional needs, Spencer oversees various projects that advance access technologies. Prior to joining RIT/NTID, Spencer co-founded several successful startups with Deaf business partners, where he gained invaluable experience in sales, marketing, and building relationships with customers and business channel partners. Spencer holds a B.S. and M.S. in Business Management and Entrepreneurship and Innovative Ventures from Cal State University, Northridge, and Rochester Institute of Technology. His unwavering dedication to finding technological solutions that enhance the quality of life for people with disabilities has earned him a reputation as a thought leader and industry expert.

Jason Stark, Described and Captioned Media Program

Jason Stark has devoted his entire career to ensuring equal access for students who are deaf and blind through accessible educational media. Under his guidance, DCMP brought captioned and described streaming video into classrooms and homes years before YouTube or Netflix and became a leading authority on media accessibility. Jason helped plan and design innovative technology systems that delivered the first streaming of captioned classic movies as well as the first provision of a free-loan service of streamed captioned and described educational media. Under his guidance, the DCMP platform has been expanded to include direct service to students, enabling them to take more control over their own learning both in the classroom and "on the go."

Tara Courchaine, CAST Inc.

Dr. Tara Courchaine is the Chief Research & Development Officer at CAST. In her role, she leads CAST's research and development division to re-set CAST's transformative vision for applied research in education for the next generation. She expands CAST's network of enduring strategic partnerships across the applied research eco-system and helps to ensure equitable access to learning by advancing the body of knowledge around Universal Design for Learning, supportive technologies and inclusive education. Before joining CAST, Dr. Courchaine was an Education Program Specialist in the Office of the Director in the Office of Special Education Programs (OSEP) at the U.S. Department of Education. As part of her former role, she helped to support the work in both the Research to Practice and Monitoring and State Improvement Program Divisions.

Researchers and Developers Confirmed to Showcase their Technology

Accessible Educational Materials (AEM) Pilot **| Kelli Suding** (ksuding@cast.org), CAST Inc.

- The AEM Pilot is a self-assessment and progress monitoring tool for states and districts to use in the implementation of the Quality Indicators for Providing Accessible Educational Materials (AEM) and Technologies. This demonstration will feature the use of the tool and examples of how states and districts are benefiting from it. Developed by CAST with funding from OSEP.

Access Language Arts **| Carol Stanger** (cstanger@attainmentcompany.com), Attainment Company

- In Access Language Arts (video trailer) secondary special education students have access to adapted literature and language arts instruction grade-aligned to middle school. In Early Reading Skills Builder (video trailer) students in special education learn to read at a second grade level through phonics instruction. Developed by the Attainment Company through an ED/IES SBIR award in 2011 and another award in 2014.

Kasi and Epiphany | **Julia Winter** (julia@alchem.ie) |Alchemie

- Alchemie creates interactive learning tools for STEM that are born accessible. Kasi (video trailer), is an inclusive system that uses sound-based augmented reality and computer vision to make physical manipulatives talk to students to give them instant feedback and guidance as they learn. For screen-reader users, Kasi functions as the alternative interface for digital learning so that students can manipulate physical plastic pieces instead of using a mouse or touchpad when learning foundational concepts. Epiphany is an AI-based system that guides all users through exploratory learning of STEM diagrams. Screen reader users have an accessible interface and can access real-time alt text descriptions of diagrams as they explore the content. Kasi is being developed with ED/IES Phase II awarded in 2022. Epiphany is being developed with NSF Phase I awarded in 2023.

American Printing House for the Blind (APH) | **Katrina Best and Sarah Bradley (**kbest@aph.org and sbradley@aph.org)

- The Monarch (https://www.aph.org/meet-monarch/) device will provide students, for the first time, with ten lines of braille and the capacity to show tactile images on a single display surface. The Monarch will also support other modern applications to support access to STEM content. Over the next year, APH has received funding to provide early-stage units to educators to train and equip them to support their braille reading students. Recognizing that blind individuals must be involved in all stages of developing this product, APH has worked closely with key partners, especially the National Federation of the Blind, to engage in research, development and training on the Monarch. More information is in this Trailer. The project is supported in part by the Office of Special Education and Rehabilitation Services.

ATHEMOS the Game | **Brandon K. Schultz** (SCHULTZB@ECU.EDU), East Carolina University

- ATHEMOS (Trailer) is a videogame and real-world intervention package to help middle school students with ADHD improve their organization, scheduling, and note taking skills. The game challenges players to sort information about mysterious extraterrestrial aliens to learn why they are in our solar system and why they seem to be attacking Earth. A real-world teacher mentor then helps players transfer skills used in the game to the classroom. The targeted academic skills and rehearsal strategies are derived from the *Challenging Horizons Program* (CHP), an evidence-based treatment program for adolescents with ADHD. Click here for Informative video for teachers. ATHEMOS the Game was supported by the Institute of Education Sciences through a 2018 grant to East Carolina University and Ohio University.

ATLAS-PA | **Lori Skibbe** (skibbelo@msu.edu), Michigan State University and Ventris Learning

- ATLAS-PA (video demo)was developed for children who are 3 to 7 years of age and includes three subtests, including items related to rhyming, blending, and segmentation. It has four key features consistent with principles of Universal Design and removes barriers of assessment for children with speech production difficulties and/or other disabilities:
    - requires no spoken responses by utilizing a multiple-choice format;
    - is web-based so that it is accessible using tablets and laptops;
    - is an adaptive test, which minimizes testing time; and

- includes individualized instructions and opportunities for practice, to make it accessible to a broader range of children.

ATLAS (formerly known as IPAAR) was created with support from a 2015 grant from the Institute of Education Sciences.

Bookshare | **Lisa Wadors** lisaw@benetech.org

- Bookshare (video demo) is a FREE repository for Accessible Education Materials for students with print disabilities. People with dyslexia, blindness, cerebral palsy, and other reading barriers can customize their experience to suit their learning style and find virtually any book they need for school, work, or the joy of reading. Bookshare operates through grants provided by Office of Special Education Programs EdTechM2.

BuddyBooks | **Marty Schultz** (marty@objectiveEd.com), ObjectiveEd

- BuddyBooks (video trailer) helps students with a reading disability, such as dyslexia, improve their reading skills. It works by students and a computer "buddy" co-reading any book (including the 1M+ fiction/nonfiction books in the Bookshare library), which keeps the student engaged in the story. Meanwhile, the AI in BuddyBooks continuously analyzes the student's reading, showing the teacher how much time the student spent reading over the past week, how well the student read, and where they made mistakes. The teacher uses this information to better target her instruction. BuddyBooks was created under an NSF SBIR Phase 1 grant.

Capti Assess | **Brian Ash** (info@captivoice.com), Captivoice

Capti Assess (video demo) is a screening and diagnostic program of reading skills to identify students at risk, capture student growth, and inform the educator's instructional practice. Developed by Charmtech Labs LLC with an ED/IES SBIR award in 2019.

CITES | **Maggie Pickett** (mpickett@cast.org), CAST, Inc.

- CITES offers professional learning kits (with videos, guides, slide decks, materials) that share specifics on how to engage with district leaders and staff on inclusive practices for students with disabilities. Developed by CAST with funding from OSEP.

Classroom Pivotal Response Teaching (CPRT) Learning Module and Individualization Tool **| Wendy Morgan** (wendy.morgan@unc.edu) , University of North Carolina at Chapel Hill

- CPRT is a naturalistic, behavioral intervention for students with autism. Designed to be used in the classroom, CPRT has now undergone over 15 years of research which has demonstrated improvement in student goal progress and student engagement, reduction in autism-related social approach and withdrawal characteristics, and high teacher satisfaction with the intervention. The basis of CPRT is the implementation of a package containing 10 components or teaching strategies. The CPRT Learning Module contains two parts: a comprehensive reference with detailed information about CPRT and a hands-on, interactive lesson allowing (virtual) first-hand practice of CPRT. The CPRT Individualization Tool provides specific recommendations about the best way to utilize CPRT that are personalized to the needs of each individual student. CPRT is funded in part by a 2020 grant from the Institute of Education Sciences to San Diego State University, Principal Investigator Jessica Suhrheinrich.

Clusive **| Mia Gross** (mgross@cast.org), CAST,Inc.

- Clusive (video demo) is a free, customizable flexible and adaptive digital learning environment to support middle school students in building and expanding their reading skills. The tool adapts over time, making recommendations and adjustments based on the activity and choices learners make. Developed by CAST, SRI International, and International Development Research Center through ED/OSEP.

Cognitopia Platform for Self-Determination **|** Tom Keating (tkeating@cognitopia.com)

- The Cognitopia Platform for Self-Determination (Video Trailer) is a suite of web-based self-management tools including MyLife for IEP Self-Direction, Routines for multimedia task analysis, and GoalGuide. The tools are for use in kindergarten to grade twelve special education, postsecondary programs, and for independent living, employment, and health self-management curricula. Developed through HHS/NIDILRR and IES/NSCER.

ConnectIT | **Marcia Barnes** (marcia.barnes@vanderbilt.edu), Vanderbilt University

- Connect-IT is a computer-based inference-making intervention for middle school students with or at-risk for reading disabilities. The tool teaches four types of inferences across 26 lessons using instructional routines and content based on research on inferential processing as well as cognitive learning principles such as retrieval practice including interleaved practice and feedback. The technology was developed and tested with grants from IES (2016 grant, 2020 grant).

Corgi
Co-organize your learning

Corgi | **Sherri Wilcauskas** (swilcauskas@cast.org), CAST: Until learning has no limits®

- Corgi is an easy-to use suite of graphic organizers that supports students to develop content-specific practices and habits of mind. By engaging with Corgi, students develop patterns of thinking and reasoning in a format that is accessible for all. Corgi took what's already great about graphic organizers and made them more flexible and accessible, by bringing them online and adding additional built-in tools and supports. Funded by Office of Special Education Programs under a 2019 Stepping-Up Technology Implementation grant.

DeafVerse | **Kent Turner** (kent@nationaldeafcenter.org), National Deaf Center (funded by OSERS)

- Deafverse is a choose-your-own-adventure online game created just for deaf teenagers, where they can learn important skills for success in high school and beyond. Players get to make their own choices, stand up for themselves, and build confidence and skills they can use in real life. The skills learned in Deafverse align with important transition planning milestones and are further supported by additional resources for the classroom. View this trailer for a video demo. Development is done by the National Deaf Center, a technical assistance and dissemination center funded by the Office of Special Education Programs.

Described and Captioned Media Program **|Jason Stark** (jstark@dcmp.org) and **Kyle Sisk** (ksisk@dcmp.org)

- The Described and Captioned Media Program (DCMP)'s Accessible Media Platform is a niche VOD platform designed for PreK-12th grade students with sensory disabilities. Comprised of over 13,000 educational videos from hundreds of the world's leading producers and made accessible via captions, audio description, and ASL. Through a unique accessibility-for-licensing exchange model, DCMP adds approximately 1,500 videos (500+ hours) of content per year. In addition to DCMP's accessible VOD platform, producers also publish this newly created accessibility across their main distribution channels, including broadcast, streaming, and physical distribution. DCMP operates entirely through grants provided by Office of Special Education Programs EdTechM2.

EdMod **| Melissa Corto** (melissa@educationmodified.com)

- EdMod is a special education platform to support the implementation of IEPs and 504s in the classroom; providing K–12 educators with instant access to their student's learning needs classification information, research based instructional strategies, and progress monitoring workflow tools. Developed by Education Modified with a 2018 ED/IES SBIR award and 2019 ED/IES SBIR award.

E Portfolio **| Tara Courchaine** (tcourchaine@cast.org), CAST: Until learning has no limits®

- E Portfolio is universally designed to support young people to build foundational knowledge, demonstrate learning, explore and engage in potential STEM career pathways of interest. The goal is to help increase access for underserved populations, including SWD, to STEM career pathways. In the folio application, learners can respond to challenges aligned with specific learning objectives and then collect the artifacts in the folio. The learners can then share the folio data with potential hiring managers. Developed by CAST with funding from NSF and DOL.

Future Quest Island-Explorations | **Lori Cooney** (lori.cooney@umb.edu) and **Meg Grigal** (meg.grigal@umb.edu), Institute for Community Inclusion at University of Massachusetts, Boston

- Future Quest Island-Explorations is an online accessible college & career awareness curriculum that uses gaming strategies to motivate and support improved self-concept, social and emotional competence, and early college and career awareness for upper elementary students with and without disability in grades 3-5 using the evidenced-based "Possible Selves" framework and features standards-based lesson plans (aligned with ELA (English Language Arts), ISTE (International Society for Technology Educators), ASCA (American School Counselors Association), and Possible Selves constructs). Funded by Office of Special Education Programs under a 2017 Stepping-Up Technology Implementation grant

GALLAUDET UNIVERSITY

Gallaudet University's Center for Artificial Intelligence, Accessibility and Sign Language | **Dr. Matthew Seita** (matthew.seita@gallaudet.edu), Gallaudet University

- Gallaudet University and SignAll have formed a partnership to develop an automatic sign language translation software (video demo). Gallaudet University is the world's only liberal arts university for deaf and hard of hearing students. SignAll is a research and development start-up company from Budapest, Hungary. For this project, Gallaudet is providing American Sign Language (ASL) and telecommunications accessibility expertise, and SignAll is providing sign language translation technology services for spoken languages. Faculty from Gallaudet's Department of Interpretation and Translation are giving professional consultation services while students are involved as ASL models to provide sign language data and they also are serving as operators of the recording technology. The project is supported in part by the Office of Special Education and Rehabilitation Services.

GOAL SETTING CHALLENGE

Goal Setting Challenge App | **Karrie Shogren** (shogren@ku.edu), The Kansas University Center on Developmental Disabilities

- Goal Setting Challenge App (Video Demo) is a technology driven means for teachers to engage secondary students with disabilities in setting and attaining goals targeting academic, behavior, and transition-related goals. The GSC App builds on the evidence-based Self-Determined Learning Model of Instruction and includes three instructional phases aligned with the SDLMI delivered via 14 web-based lessons, including: (a) Phase 1: Set a Goal; focused on the process of setting short- and long-term goals; (b) Phase 2: Make a Plan; focused on the process of developing an action plan to achieve short- and long-term goals; and (c) Phase 3: Adjust Your Goal. Preliminary research suggests usability of the GSC App by students with disabilities during transition services and impacts on goal attainment outcomes after a semester of instruction. It was developed through a 2018 grant from IES.

ibestt | **Scott Spaulding** (scott2@uw.edu), University of Washington

- ibestt (Integrating Behavior Support and Team Technology; video demo) is an online coaching and collaboration system that guides school-based teams in the implementation of individual-student behavior support strategies in elementary and early childhood settings. Using a web-based system, teams of coaches, teachers, and parents move through the steps of the behavior planning process—from assessment, planning, intervention, and progress monitoring. It was developed and tested in part through a 2018 IES grant.

Inference Galaxy | **Panayiota Kendeou** (kend0040@umn.edu) and Kristen McMaster mcmas004@umn.edu), University of Minnesota

- Inference Galaxy (Video Demo) is a fully automated, web-based platform that includes tools (MIA, ELCII, and TeLCI) designed to assess and support K-2 students' inference-making skills in a non-reading context. MIA, ELCII, and TeLCI draw on the Science of Reading and have initial evidence for efficacy in improving language and reading comprehension It is available for a laptop, iPad, or tablet. It was developed and tested through multiple IES grants (2016 grant, 2017 grant, 2022 grant)

MARCS: Facilitating Math Learning with Adaptive Reading Supports | **Jess Gropen (**jgropen@cast.org), CAST: Until learning has no limits®

- CAST and Carnegie Learning are developing and evaluating a set of individualized reading supports, called MARCS (Trailer), embedded in MATHia--Carnegie Learning's adaptive mathematics learning system--for middle school students with reading difficulties. Currently developed features include text-to-speech, vocabulary supports, and a focus tool. Text-to-speech reduces the barrier of decoding words by allowing students to have the problem read to them on their computers or tablets. Students can follow along with the text as it is read or focus on listening to the text. Easy access to vocabulary definitions minimizes this barrier so that students can learn unfamiliar words. Additionally, glossary definitions in MATHia provide the definition of the term, as well as examples, which may help activate students' prior knowledge. Large blocks of text can create a barrier for students if they are visually overwhelmed by the task of reading, even before they begin the task of solving a math problem. The focus tool allows students to move a visual overlay across their screen to modify the amount of text they see. MARCS is being developed through a 2021 grant from IES.

My STEM Adventure | **Wendy Sapp** (wsapp@bridgemultimedia.com) and **Matt Kaplowitz** (mkaplowitz@bridgemultimedia.com), Bridge Multimedia; **Chih-Ing Lim**, chih-ing.lim@unc.edu and **Megan Vinh**, megan.vinh@unc.edu, University of North Carolina at Chapel Hill

- In this accessible mobile app for android and iOS, (English Video Demo, Spanish Video Demo) join Leila Diaz as she guides young children and their families or other caregivers to explore the world of STEM both indoors and outdoors and create a storybook that details their investigation! As part of each of the 10 adventures, families and other caregivers are also able to learn about why the STEM concepts are important, what the children are learning, and receive tips on how to guide children as they embark on the adventure together. The app is accessible for children and parents with and without disabilities. Development is currently funded through EdTechM2 grants provided by Office of Special Education Programs. Bridge Multimedia: H327C210003 and STEMIE (University of North Carolina and Chapel Hill): H327G180006.

RIT National Technical Institute for the Deaf

NTID Center on Access Technology |**Spencer Montan** (stmcat@rit.edu)

- The NTID **Center on Access Technology** investigates, evaluates and reports on the most effective and efficient use of access technologies and train individuals in their use in order to accelerate the widespread implementation of best practices within deaf education at the post-secondary level. This Center creates a collaborative network of individuals from RIT and other universities, as well as from industry and professional organizations, to promote research and development of access technologies that will positively impact post-secondary educational experiences for deaf and hard-of-hearing individuals. Popsign is an app designed to educate parents with Deaf/hard-of-hearing children in American Sign Language (ASL), but it is open to anyone who wants to learn sign language and fingerspelling. Video Game Accessibility Research within the gaming space to evaluate, review and contribute to making games more accessible. The project is supported in part by the Office of Special Education and Rehabilitation Services.

RIT
National Technical Institute for the Deaf
Regional STEM Center

NTID Regional STEM Center (NRSC) **| Jason Roop and Denise Kavin** (roop.jason@aidb.org and dskpen@ntid.rit.edu)

- The Alabama Institute for the Deaf and Blind (AIDB) has collaborated with the National Technical Institute for the Deaf (NTID) to form the NTID Regional STEM Center (NRSC), which is housed on the campus of AIDB in Talladega, AL. The mission of the NRSC is to promote STEM educational initiatives and career awareness for students who are deaf or hard of hearing in primary and secondary grades. The NRSC has four nationwide programs - Cybersecurity, English & Reading Literacy, M.E.L.D., and Robotics. The NSRC develops partnerships with STEM-related businesses and industry partners to promote accessibility to technologies for individuals who are deaf and hard of hearing. The project is supported in part by the Office of Special Education and Rehabilitation Services.

Numbershire **|Nancy Nelson** (njnelson@bu.edu) and **Sam Choo** (schoo@umn.edu), Boston University, University of Minnesota, & Center on Teaching and Learning (CTL) at University of Oregon

- NumberShire™ (Video demo) is an internet-based, educational game with an intensive focus on critical whole number concepts and skills for students with or at risk for mathematics difficulties in kindergarten through second grade. NumberShire was developed with funding from the U.S. Department of Education through the Institute of Education Sciences, Small Business Innovation Research Programs (SBIR 2011), (SBIR 2012), (SBIR 2013); grants from the National Center on Special Education (2012 grant) and (2016 grant); and a grant from the Office of Special Education Programs Stepping-Up Technology Implementation Program (2016). Numbershire is available through the Apple App Store for classroom or home use. Additional information is available at the CTL Marketplace.

PRESENCE

Presence **| Megan Scavuzzo** (megan.scavuzzo@presencelearning.com), Presence Learning

Presence is a teletherapy platform for children with diverse needs that provides connections for speech language pathologists, occupational therapists, behavior and mental health specialists, school psychologists, and diagnosticians to thousands of schools, districts, and organizations nationwide for

teletherapy and teleassessment delivery and management. Developed in part with a 2010 ED/IES SBIR award.

Sing and Speak for Kids **| David Sonnenschein** (david@iqsonics.com), IQSonics

Sing and Speak for Kids (video trailer) is a fun online musical game for children ages 2 to 7 with speech-language delays and disorders (autism, Downs, stutterers, English Language Learners, etc.), who engage in song and then transition to natural speaking in daily life, facilitated by teacher and/or parent. Developed by IQSonics with funding from ED/IES SBIR.

SNUDLE | Tracey Hall (thall@cast.org), CAST, Inc.

CAST has developed a digital Science Notebook in a Universal Design for Learning Environment (SNUDLE), which focuses on the science inquiry process and is grounded in the framework of UDL. SNUDLE supports students to build sensemaking skills by breaking down the process into manageable components, providing multiple access features and supports as the design. This tool also supports teachers to customize content right in the tool to meet student needs, particularly students with disabilities, by providing a rich teacher's guide built into the tool and the capability to edit questions and supports in the science notebook investigations. To support sustainability and continued dissemination, CAST is now developing OASIS (Opening Access to Supports in Science). Implementation of OASIS with SNUDLE further advances an effective, scalable strategy to support all learners, especially students with disabilities, to engage in active science learning, by building the capacity of effective and locally available expert coaches to provide ongoing training and support to teachers.

SmartMobilty **| Abhishek Datta (**adatta@soterixmedical.com)

- SmartMobility is a smart belt cane that collects IMU data and prescribes an individualized AI-based curriculum on the companion tablet app. Developed by Soterix Medical with an ED/IES SBIR award.

T3 Games **| Steve Landeau** (sl@touchgraphics.com)

- T3 Games challenges players to solve increasingly-difficult puzzles and navigate mazes entirely through the senses of touch and hearing. Playing T3 Games even for a half hour while

blindfolded often results in dramatic improvements in players' ability to identify raised-line figures. Developed by Touch Graphics through NIDILRR. Contact: Steve Landeau (sl@touchgraphics.com)

Virtual Reality Opportunities to Implement Social Skills (VOISS) **| Sean Smith** seanj@ku.edu and **Amber Rowland** amber.rowland@ku.edu, University of Kansas

- VOISS (Video Demo) is a virtual reality experience that uses social situations and scenarios to effectively teach social skills. With 140 scenarios, covering 183 skills, VOISS was designed for middle school students with Autism and learning disabilities who struggle with social skills. VOISS can be downloaded from the Apple and Google Play stores, as well as Oculus/Meta. Funded by Office of Special Education Programs under a 2017 Stepping-Up Technology Implementation grant.

We Are Friends **| A**ndrea Johnson (andrea@teachingitright.com)

- We Are Friends (video trailer) is an app that teaches social-emotional skills, self-esteem, sensory integration, and social interactions and relationships to children who are developmentally 3 to 10 years old, with a special focus for children with autism. This 10-minute a day program integrates people the child knows and teaches skills through music, video modeling, and interactive practice. Developed by Teaching It Right through NSF SBIR.

WEGO-RITE Technology-Based Graphic Organizer **| Anya Evmenova** (aevmenov@gmu.edu), Kelley Regan (kregan@gmu.edu), Roba Hrisseh (rhrisseh@gmu.edu), Reagan Mergen (rmergen@gmu.edu) George Mason University

- WEGO-RIITE (Video demo) aims to promote an effective integration of a technology-based graphic organizer (TBGO) with embedded evidence-based strategies and UDL supports, video models, and opportunities for data-driven decision making in order to improve the quantity and quality of persuasive essay writing by students with and without high-incidence disabilities struggling with writing in elementary, middle, and high school grades. Developing and testing is currently funded by Office of Special Education Programs under a 2018 Stepping-Up Technology Implementation grant.

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