

# Demonstrating the Possibilities:

## University of Wyoming ECHO in Assistive Technology is Building Capacity and Showing Positive Outcomes in Wyoming and Beyond

In the last issue of Closing the Gap Solutions, we described University of Wyoming ECHO in Assistive Technology (UW ECHO in AT), an innovative approach to building professional capacity in assistive technology in order to improve student outcomes. UW ECHO in AT employs a novel approach to professional development and capacity building by creating a virtual knowledge-sharing network of hub and spokes. We link a “hub” of multidisciplinary specialists with educator, administrator and service

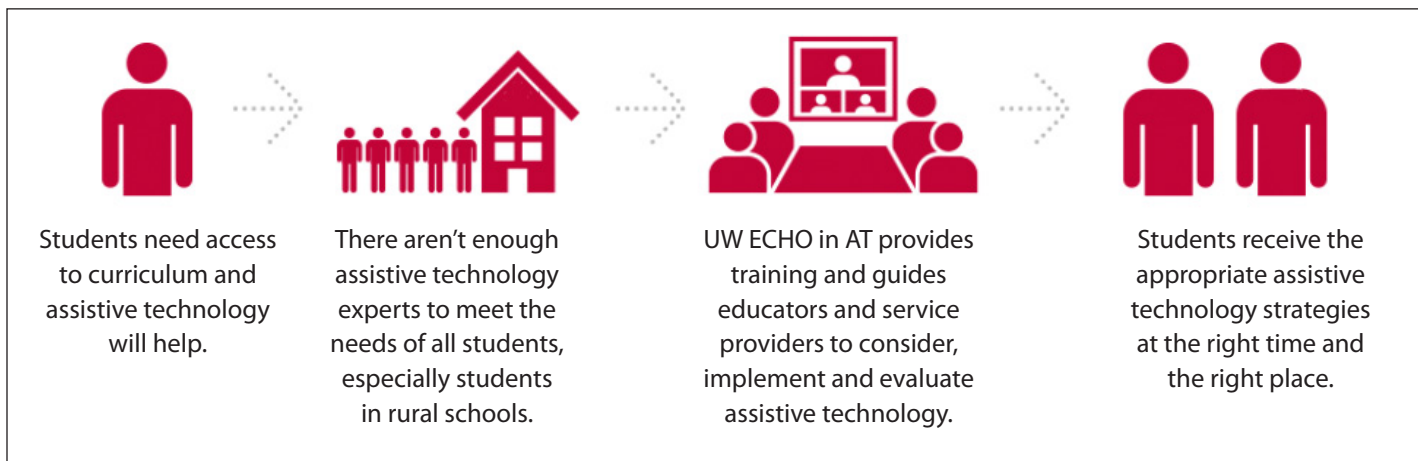
provider school “spokes” for weekly video conference mentoring through didactic training and student case discussions. This guided-practice model exponentially increases workforce capacity for providing students with assistive technology to ultimately reduce inconsistencies in student achievement.

UW ECHO in AT can be better understood, as shown in Graphic 1 below.

In this second article, we discuss our hub and spoke participants, UW ECHO in AT’s fidelity to the Project ECHO model,

the findings from the external evaluation of our year-long pilot study, the expansion of UW ECHO in AT and UW ECHO networks for other applications in education, and the growing number of our partners from within and outside Wyoming.

The UW ECHO in AT multidisciplinary hub team of experts includes faculty and staff from the University of Wyoming, as well as a number of other specialists who connect remotely from locations throughout the state and nation. This



Graphic 1: University of Wyoming ECHO in Assistive Technology model.



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**CANYON HARDESTY**, M.S. is the coordinator of community education for Wyoming Institute for Disabilities. She oversees programs, training and technical assistance related to health, education, early intervention, vision and assistive technology and has over 10 years of experience training in health and education.

core team includes assistive technology professionals, an audiologist, speech language pathologists, occupational therapists, physical therapists, an orientation and mobility specialist and vision and hearing specialists, along with nationally-renowned trainers and experts in assistive technology. The hub team members of this knowledge-sharing tele-mentoring network provide evidence-based assistive technology information within didactic training and student case discussions. Educators, administrators, service providers and, in some cases, the student and parents, learn in their local communities where they know and understand the school and resources. They receive mentoring to implement the case discussion recommendations that they want to try. While outcomes are measured, there is no expectation for participants to implement the recommendations offered by the hub team. However, for every case presented to date, recommendations have been implemented.

Participation in the project begins with an initial orientation session hosted by UW ECHO network faculty and staff. This initial session provides a virtual introduction to the core components of UW ECHO in AT, including video-conference and communications technology, an overview of the academic year's didactic training schedule, case presentation and co-management forms and an understanding of the outcomes measurements for both participants and students. After having completed an orientation, participants can join weekly sessions offered throughout the academic year.

Experts, along with educators located at spoke sites, interact weekly to learn and share new and ever-evolving promising practices in assistive technology. Educators are provided with suggestions and guidance to apply new strategies for assistive technology assessments, interventions and evaluations. The multi-disciplinary hub team members do not assume responsibility for interventions with the students. Educators, through a guided practice model, retain responsi-

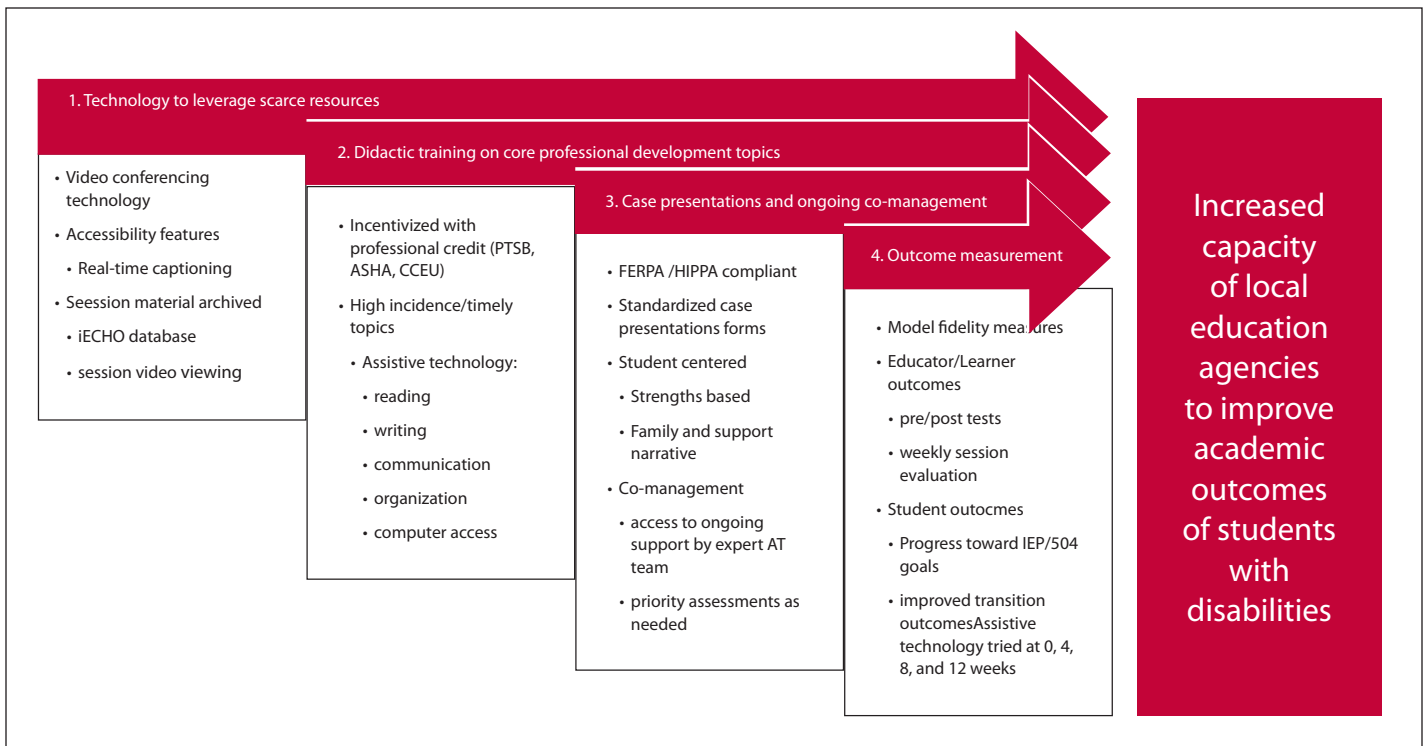
bility for implementing the recommendations and strategies with students in their home schools and communities.

A secure, centralized database archives training and case presentation materials and allows continued learning for participants who are unable to attend every session. The database assists in monitoring UW ECHO in AT outcomes.

## OUTPUTS AND OUTCOMES

Wyoming Institute for Disabilities applied the four core components of the Project ECHO model during the year-long study of UW ECHO in AT. During the pilot study, September 2014 through May 2015, UW ECHO in AT:

- Conducted 26 sessions for 186 registered participants
- Facilitated discussions of 28 new and 8 follow-up student case presentations during the sessions
- Provided 26 didactic trainings delivered by 13 different trainers
- Awarded 46.5 hours of continuing education credits



Graphic 2: ECHO model components translated for use in education and for assistive technology.

Based upon the measures of the ECHO™ model identified by the University of New Mexico and through an evaluation of recorded sessions, we translated the model with fidelity. See Table 1 below.

An external evaluation of UW ECHO in AT was conducted by Data Drive Enterprises and a discussion of the results of that evaluation follows.

In June 2015, those individuals who had participated in UW ECHO in AT during the 2014-15 school year were asked to complete an online survey about their experiences with the project. Participants were sent multiple emails to encourage their response to this online survey. Of the 186 UW ECHO in AT registrants, 39 (21%) completed the evaluation survey.

This survey asked participants about their current job and assistive technology experiences, their assistive technology training needs and the impact UW ECHO in AT had on their knowledge and skills.

Participants were asked to indicate their current assistive technology knowledge and skills (after having participated in UW ECHO in AT – the post-test measures) and were then asked to think back to before their participation in UW ECHO in AT (the pre-test measures) and rate their knowledge and skills as of that time. (Note: in the 2015-16 school year, participants will be asked about their skills and knowledge (pre-test) before they participate in UW ECHO in AT, and responses on the pre-test measure will be required before a participant gains access to the recorded sessions and archived material housed in the UW ECHO in AT database, iECHO).

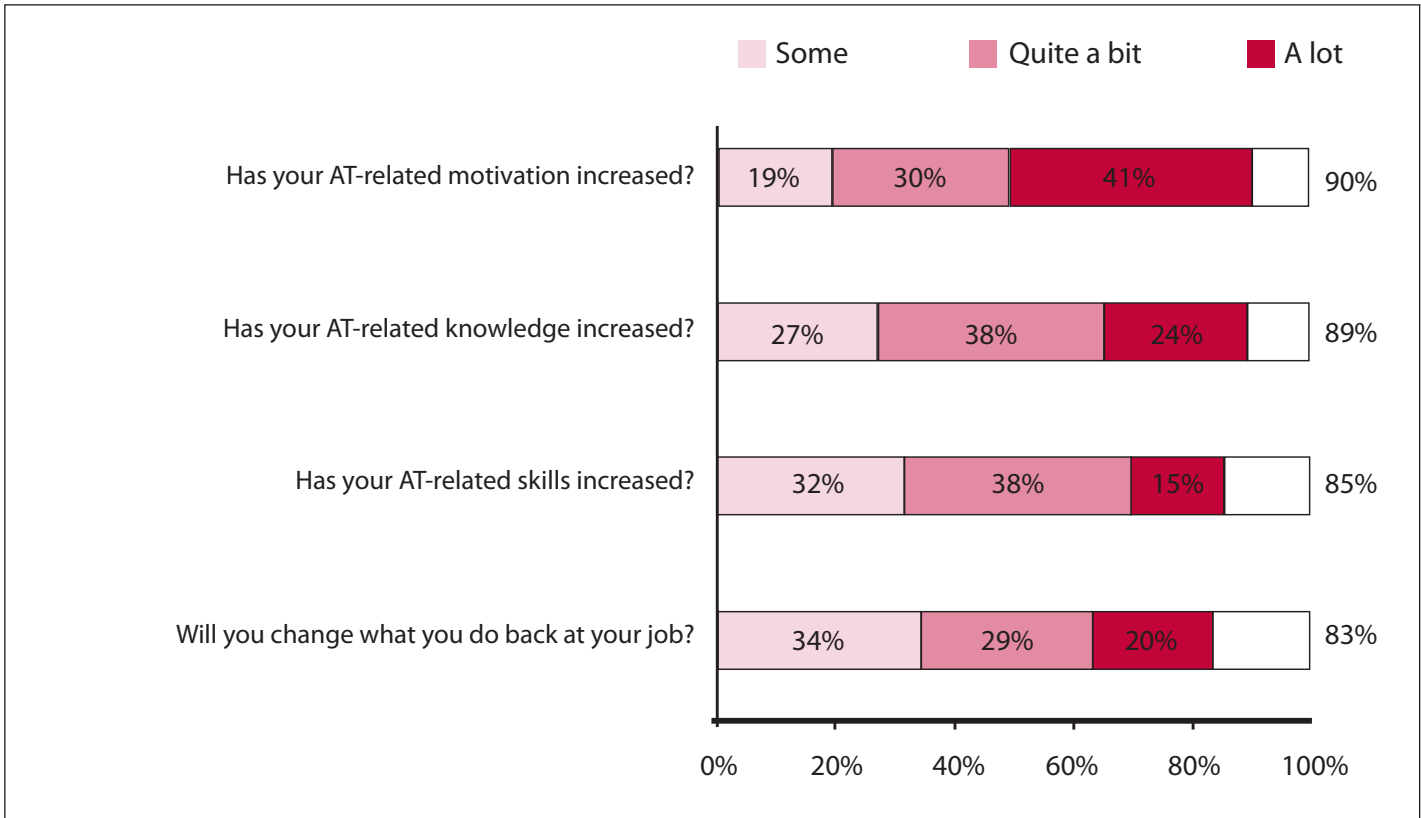
Results indicated that respondents had a favorable review of the UW ECHO in AT project. Eighty-nine percent (89%) indicated that their assistive technology-related knowledge increased at least some; 85% said that their assistive technology-related skills increased at least some; and 83% stated that they would

change what they did back on the job as a result of their participation in UW ECHO in AT.

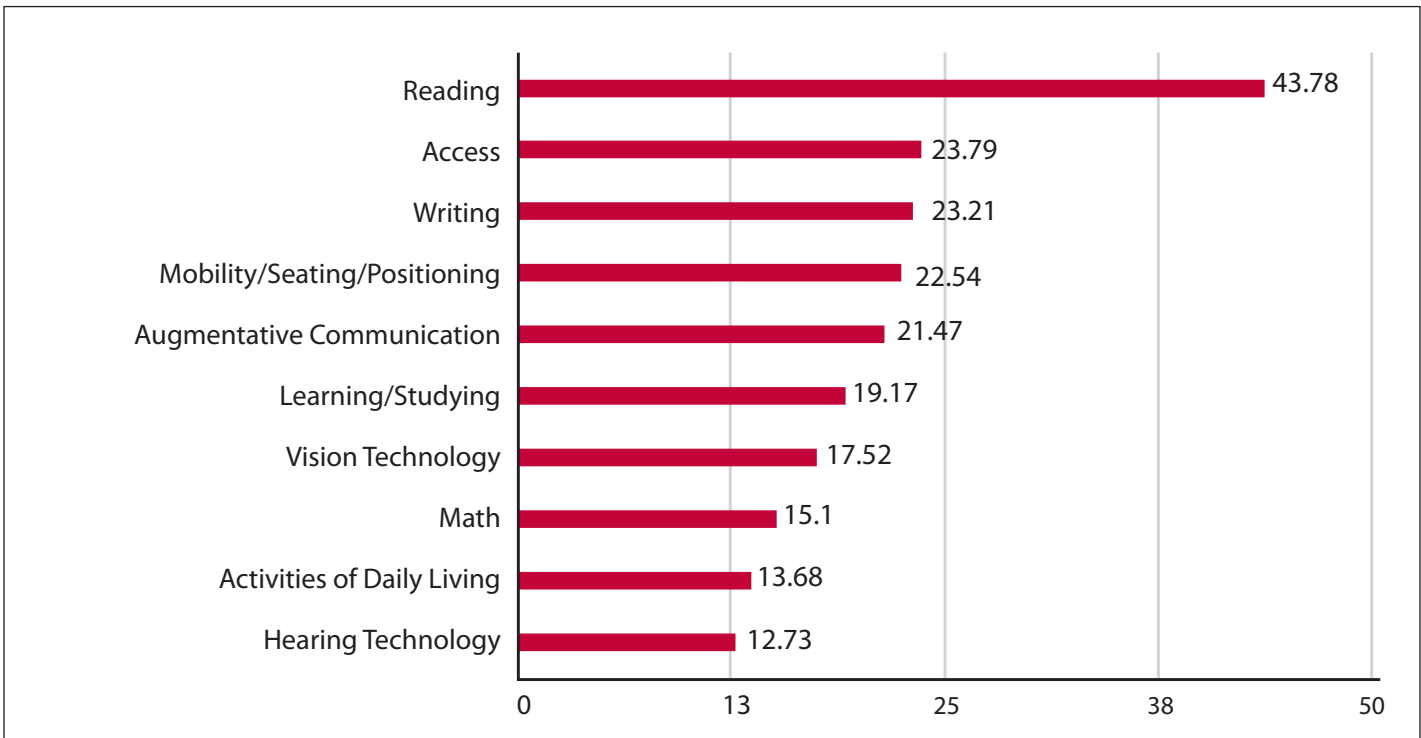
An analysis of respondents' post-test ratings compared to their pre-test ratings on 10 specific skill areas also showed favorable results; on all skill items within these skill areas, post-test ratings were higher than pre-test ratings. With this analysis, the percentage of respondents who rated their skills as "Beginning Application," "Advanced Application" or "Mastery" on the pre-test items (before UW ECHO in AT participation) was compared to the percentage who chose these options on the post-test items (after UW ECHO in AT participation). Some of the largest increases in skills occurred on assistive technology skill area of reading. For example, 31% of respondents said that prior to their participation in UW ECHO in AT, they had at least the Beginning Application level of skill on the item "create and use

Core Component	Elements	UW ECHO in AT Translation
Using technology to leverage scarce resources	Inter-professional hub and spokes Best available technology Synchronous Leveraging scarce resources Many 'experts' for one professional for one student to many	✓
Sharing best practices	Didactic curriculum	✓
Case-based learning, guided practice	Voluntary case-based presentations Use of templates for consistent case presentations Mentorship Regular, ongoing and frequent sessions Opportunity to develop long-term, community relationships	✓
Rigorous outcomes measurement	Use of the iECHO database to consistently track data HIPPA compliant measures FERPA compliant measures Use of a data feedback loop for ongoing improvement	✓

Table 1: Measures of fidelity for translating or replicating the ECHO model.



Graph 1: Participant reported increases in assistive technology motivation, knowledge, skills and intent to change what they will do in their job as a result of their participation in UW ECHO in AT.



Graph 2: Average reported gains in mastery of 10 assistive technology skill areas resulting from participation in UW ECHO in AT.

pictures with text to support reading”; whereas 77% stated they had at least a “Beginning Application” of this skill after their participation in UW ECHO in AT.

Another skill area that showed large increases from pre- to post- was writing. An example item from this skill area is “Understand and use tools to augment writing skills, such as word-prediction, macros and electronic word wall.” On this item, 31% of respondents said they had at least a Beginning Application of this skill before their participation in UW ECHO in AT; 56% stated they had at least a Beginning Application of this skill after their participation in UW ECHO in AT. The following graph shows the average gain from pre- to post-test items based on the 10 skill areas.

## NEXT STEPS: SUPERHUB AND ADDITIONAL HUBS

The newest chapter of Project ECHO involves the creation of “superhubs,” which will play a critical role in increasing the number of regional hub centers. The University of Wyoming, Wyoming Institute for Disabilities was identified as one of just four initial superhubs – along with the American Academy of Pediatrics ECHO, ECHO Northern Ireland and ECHO India. The superhubs will launch projects creating access to address additional issues that range from specialized pediatric care to learning disabilities to mental health to palliative care. “We want to move knowledge, not patients, to bring more care to more people, where they live,” said Sanjeev Arora, M.D., creator of the ECHO model and director of the ECHO Institute at the University of New Mexico Health and Sciences Center (UNMHSC) in Albuquerque. Together, we want to change the world, fast.” The goal of Project ECHO is to touch one billion lives by 2025.

The UW ECHO in AT hub at the University of Wyoming is expanding its reach to include new participants from within and outside Wyoming. Currently, WIND is orienting assistive technology profes-

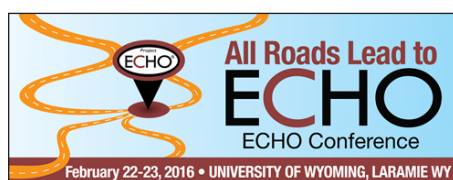
sionals and teams in four additional states to be part of the University of Wyoming ECHO in AT during the 2015-2016 academic year.

University of Wyoming ECHO is replicating the project for use with school district superintendents and educational leaders to increase and educate communities. The school leaders’ project is a collaboration with the University of Wyoming College of Education, Wyoming Center for Educational Leadership and the John P. Ellbogen Foundation. Planning began in August 2015 and weekly sessions will start on January 12, 2016. In partnership with the Wyoming Department of Education, we are planning UW ECHO networks for educators in autism, early literacy, early childhood transition, positive behavioral interventions and post-secondary transition.

With the superhub designation, we will be offering training and technical assistance to other agencies interested in replicating the UW ECHO in AT model. We are receiving requests for guidance on how to replicate the assistive technology model in other states and for support to develop ECHO networks for other topics in education or related to disabilities.

Canyon Hardesty, UW ECHO in AT Project Manager, reports, “We are excited about the possibilities of the ECHO model to transform the way that we conduct meaningful and sustainable professional development to ensure highly-qualified and skilled professionals in our schools and educational communities.”

For more information, to contact us, or for more information about our February 22, 23 “All Roads Lead to ECHO” conference, please see <http://www.uwyo.edu/wind/echo/> or email [projectecho@uwyo.edu](mailto:projectecho@uwyo.edu). ■



Gayl Bowser

*As a national special education consultant, I see daily evidence of the way that teamwork makes for better educational plans, better interventions and better outcomes for students with disabilities. It's especially important to have a team when the educational question is focused on specialty areas like assistive technology. However, it's sometimes hard to find a team with which to work.*

*Virtual teamwork is one of the aspects of the UW ECHO in AT project that I value the most. I love the fact that I can ask a question and get help from a variety of members of the UW ECHO in AT community. Even though we live in many towns and several different states, the UW in ECHO in AT community is becoming a very real and vibrant community of professionals. As we learn to collaborate at a distance, our collective knowledge and experience increases exponentially.*

*Research shows that when teachers collaborate, student achievement increases. UW ECHO in AT has made it possible to collaborate virtually and in new ways to improve outcomes for students with disabilities.*

**GAYL BOWSER**, UW ECHO in AT Lead Trainer and nationally recognized expert in the field of assistive technology.