

# Fostering Communities and Professional Learning In Assistive Technology

## The opportunity for case-specific discussions to increase provider knowledge and application of AT practices

Appropriate Assistive Technology (AT) can provide tools to improve educational outcomes for students with disabilities (Edyburn, 2013). According to clinical practices and AT research, AT can grant greater access to curriculum for children with disabilities. Additionally, students can use AT in the acquisition and expression of their knowledge (Copley and Zivani, 2004; Lewis (1998); Pell, Gillies, and Marjorie (1999); Priest and May (2001); Seymour (2005). However, only 3-5% of students with disabilities have AT written into their Individualized Education Program (IEP). (Edyburn, 2008, 2004)

To increase access to the general education curriculum offered to students through the use of AT, teachers and other

education professionals need up-to-date knowledge and evidence-based strategies to integrate AT into their daily activities. (Koehler, et.al, 2014) However, release time for professional development and collaboration with colleagues is an ongoing struggle in schools, with many competing priorities for available professional development time.

In an effort to address this problem, and be responsive to the needs of the educational community, the Wyoming Institute for Disabilities (WIND) adapted a successful model, ECHO®, to increase the capacity of educators to identify, select and use assistive technology for students with disabilities. (Root-Elledge and Hardesty 2015); Root- Elledge and Hardesty, 2015-2016)

The novel ECHO model was adapted for use in education to increase the implementation of AT for students in school. ECHO also facilitates the development of communities of professionals who can share their expertise and learn from the collaborative coaching model offered by ECHO. (Arora et al, 2011)

WIND is part of a national network of 67 University Centers for Excellence in Developmental Disabilities and, in 2004, was designated as the state Assistive Technology Act program. The AT Act supports state efforts to improve the provision of assistive technology by providing funding to support state level activities, such as demonstrations, loans, reutilization and financing for devices.



**Canyon Hardesty** MS, CHES, Coordinator, Community Education, UW ECHO Project Manager, Wyoming Institute for Disabilities.



**Wendy Warren**, BA, UW ECHO, Project Coordinator, Senior, Wyoming Institute for Disabilities.



**Felicia Arce**, M.Ed., AT Program Specialist, Wyoming Institute for Disabilities.



**Gayl Bowser**, M.S.Ed., Independent Consultant, AT Collaborations, Wyoming Institute for Disabilities.

Also included in the AT Act are state leadership activities including training, public awareness, information, and assistance. These activities are designed to meet the assistive technology needs of agencies, natural supports, and, most importantly, individuals with disabilities across the lifespan. To effectively address these responsibilities, WIND searched for a strategy that would meet the unique demographic and geographic characteristics of Wyoming yet remain flexible enough to help local education systems learn about the ever-evolving field of assistive technology. The desired model would need to provide educators with readily available and applicable strategies to increase the consideration and implementation of AT with students.

In 2014, as the lead agency for Wyoming's Assistive Technology Act

program, WIND launched a virtual professional learning community, UW ECHO in Assistive Technology (AT).

### THE ECHO® MODEL

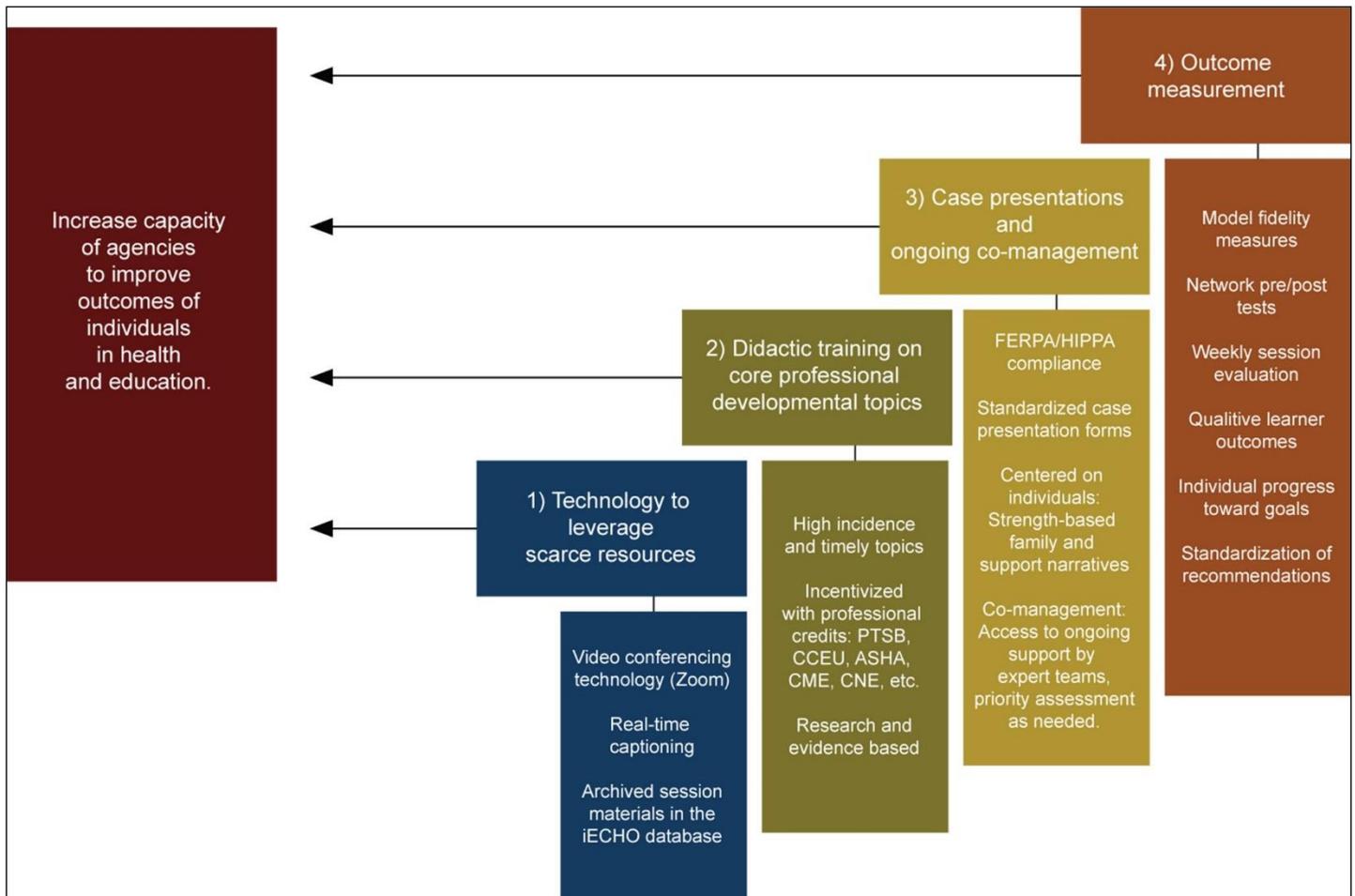
Project ECHO® was developed by Dr. Sanjeev Arora at the University of New Mexico, for building professional capacity to meet underserved health care needs and provide best-practice treatment to reduce disparities in care. (Arora et al., 2011)

UW ECHO in AT is a translation of this model from healthcare to education. The model provides the innovation, structure and flexibility WIND required (Hardesty & Root-Elledge, 2015; Hardesty & Root-Elledge, 2015-2016.) The goal of UW ECHO in AT is to provide lifelong learning and guided practice opportunities that support and exponentially increase the workforce.

UW ECHO provides weekly professional development, peer coaching, and case co-

management. Co-management is defined as ongoing assistance provided to ECHO participants from interdisciplinary teams. Educators have an opportunity to discuss case recommendations and brainstorm additional strategies with the staff from the Wyoming Assistive Technology Resources, as well as state and national practitioners.

The UW ECHO networks' hub-and-spoke model is a knowledge-sharing community linking the "hub"- inter-professional specialists- with educators, administrators, and service providers- the "spokes"- for regularly scheduled video conference training and mentoring based on case discussions. By utilizing a video conferencing system, UW ECHO in AT offers weekly sessions which include a 30-minute professional development training on topics identified as relevant to the students served by the members of the ECHO community.



The ECHO® Model Core Component

Following each professional development presentation, ECHO participants engage in case presentations based on student or district level problems of practice. Case presentations, identified for each session, offer discussion and coaching opportunities from an interdisciplinary group of highly skilled educators and professionals as a way to build capacity in the application of effective practices supporting classroom, school, district and student outcomes.

The interactive nature of this modality for training and coaching in remote areas is increasingly in demand as organizations look for mechanisms to provide high-quality, responsive and timely professional development in a period of reduced budgets and limited time. Previous [Closing the Gap](#) articles (Hardesty & Root-Elledge, 2015; Hardesty & Root-Elledge, 2015-2016) have described the translation of the original ECHO model as well as professional development implications for education professionals.

This article will explain the process for case presentations and co-management as well as how ongoing mentorship is increasing provider knowledge and application of AT within local education agencies.

## PROCESS FOR CASE CONSULTATION

In order to provide consistency and structure to the case presentation portion of weekly ECHO sessions, a series of case presentation forms were created to provide the interdisciplinary hub team information related to specific areas of concern. The case presentation forms, adapted from the Wisconsin Assistive Technology Initiative (WATI) assessment profile ([wati.org](http://wati.org)), are similar to more traditional referral forms with some exceptions: the student, school, and other confidential information are not identified. Also, the UW ECHO in AT case presentation forms were developed to allow for the collection of both individual and aggregate data about the outcome of the ECHO peer coaching and co-management activities.

Professionals are asked to select and complete a case presentation form, or Student Information Guide (SIG), based on an area of concern which determines the SIG to use. There are six different SIGs to choose from: Communication, Reading, Motor Aspects of Writing, Composition of Written Material, Mathematics, and Organization. ([www.uwyo.edu/wind/echo/assistive-technology/index.html](http://www.uwyo.edu/wind/echo/assistive-technology/index.html)) After a case has been presented, community members are encouraged to ask clarifying additional questions and then share their ideas about actions and AT solutions that might help the case presenter further address the area of concern for the student. Following each weekly session, recommendations are recorded and emailed directly to the case presenter to be shared with additional team members and families.

Six to eight weeks after the initial case presentation, the professional(s) are contacted via email and sent a follow-up document to complete. During this contact, case presenters are asked to report whether or not any of the recommendation(s) provided during the ECHO session were implemented or considered. In addition to tracking student success for individuals, follow-up data is compiled to test the effectiveness of this model as applied to education as a whole and for analysis to target future areas of improvement. **(See Table 1.)**

The two-part approach to data collection and analysis demonstrates the value of the University of Wyoming's Project ECHO in AT. Initial results indicate that individuals who present cases get valuable suggestions and ideas about ways to approach the use of AT with individual students. At the same time, evidence indicates that other ECHO community members experience benefits from hearing the ideas shared during the case presentations which can be generalized and applied to other students.

Participants learn from each other and gain new insights from experts during the

question and discussion phase of each UW ECHO in AT session.

## SESSION AND CASE RESULTS

During the 2015-2016 UW ECHO in AT sessions, over 416 individuals attended 27 sessions for more than 40 hours of ongoing professional development. Participants represented service providers, educators, case managers and administrators from both education and employment agencies. Every session included experienced professionals to guide conversation including certified AT specialists, occupational therapists, speech-language pathologists, general and special educators and frequently vision and hearing specialists from the Wyoming Department of Education.

Eleven cases were presented throughout the 2015-2016 academic year. All the professionals involved in those cases were contacted for a follow-up discussion. Nine responses were recorded. Of these responses, eight experts had continued contact with the student about whom they presented (Table 1). Of the provided recommendations, a total of 12 were implemented, and eight were considered. The majority of implemented recommendations were described as simply implemented without further explanation related to outcomes of students using the assistive technology.

In addition to the collection of information about case presentation outcomes, all participants attending the UW ECHO in AT sessions were asked about the utility of the discussion and recommendations during routine session evaluations and network posttests. Results from these assessments suggest that participants are learning from the case discussions and applying the knowledge to individual students as well as schools and agencies that they serve.

Participant post-network evaluation from 2015-2016 indicated that by attending sessions, participants increased their knowledge, skills, and abilities to support access to assistive technology for professionals, educators, students and community members.

Case ID #	Educator Responded to request for follow-up	Student Information Guide (SIG)	# of Rec.	Implemented Rec.	Considered Rec.	Ongoing relationship with student
1726	NO	SIG 1 Communication	5	N/A	0	Contact with student not maintained
1620	YES	SIG 1 Communication	3	2 out of 3	0	Continued
5211	YES	SIG 1 Communication	4	1 out of 4	2	Continued
2327	NO	SIG 1 Communication	7	N/A	0	Contact with student not maintained
3889	YES	SIG 2 Reading	3	2 out of 3	2	Continued
6772	YES	SIG 2 Reading	8	3 out of 8	2	Continued
6132	NO	SIG 2 Reading	8	N/A	0	Contact with student not maintained
8268	YES	SIG 3 Motor Aspects of Writing	10	1 out of 10	1	Continued
2179	YES	SIG 4 Comp of Written Material	5	N/A	0	Information was provided to the educator, unsure of the number of AT recommendations that were implemented or considered.
3013	YES	SIG 6 Organization	6	3 out of 9	3	Student continued to work with the university's student support services for students with disabilities
9697	YES	NO SIG	10	N/A	0	Soon after the case presentation, the student had a medical setback that severely impacted their previous condition. The recommendations that had been provided were no longer appropriate and the team was waiting for the student's condition to stabilize.

Table 1: AT Case presentation outcomes (September 2015-May 2016).

Additionally, 46% of individuals who completed the 2015-2016 posttest reported their primary reason for participating in an ECHO session was to learn from the case presentations. Furthermore, 77% of participants reported they implemented assistive technology practices as a result of their attendance during an ECHO session.

AT faculty and staff report that their attendance and guiding of practice within UW ECHO in AT has increased their capacity to provide training and technical assistance. For example, an incoming freshman and his mother came in seeking information on different devices and services to support the student's academic success. AT staff members were able to apply the information from this meeting for a case presentation and received several ideas related to different technologies the student could consider and trial. After the session, the WATR staff

member met with the student and provided training on an ECHO Smart Pen and the digital library resource, [Bookshare](#). The student also began working with the University Disabilities Support Services (UDSS) office at the University of Wyoming, and they helped the student access some of the assistive technology mentioned during the ECHO case presentation recommendation. After the session, the student continued working with UDSS for academic supports and guidance.

Additionally, a special education teacher from a rural town in Wyoming was interested in learning about new Augmentative Alternative Communication applications to be used on the iPad. During the professional development portion of an ECHO session, participants learned about a new app to address this concern. The educator was able to borrow an iPad from the state AT Act Program with the app downloaded for a trial. The

opportunity to trial the equipment with the student allowed the educator to determine the potential of the technology to support the student's needs.

Quote from the school district after trialing the app: *"We were able to work with the parents and teachers and after experimenting with the AT, came up with one app that is meeting our student's needs. Thank you!"*

These results suggest participants are gaining knowledge and confidence in implementing new strategies and recommendations. Individuals report they are generalizing the information received during the session to their students, classrooms, and districts. UW ECHO faculty and staff are continuing to identify the extent of implementation of recommendations throughout communities in Wyoming as well as specific outcomes for students. We hope to report on these outcomes in late 2017.

Participants from the UW ECHO in AT network report that professional benefits of case presentations include:

- Hearing about cases outside of district.
- Receiving a broad spectrum of perspectives.
- Access to a larger community to help brainstorm solutions.
- Knowing there are others to help with situations.
- Networking and relating to other districts struggles and successes.
- Cost effective professional development opportunities.
- Ongoing discussions with individuals about AT.
- Increase understanding of how AT can improve outcomes.
- Building connections with UW ECHO staff.
- Confidence in considering and implementation AT for students.
- Excitement for profession

(UW ECHO in AT evaluation data, 2016)

## DISCUSSION

This platform challenges professionals, both internal and external to the State AT Act program, to seek learning opportunities beyond their current areas of knowledge. UW ECHO in AT participants are implementing strategies gained during the sessions to increase access to AT devices and services in their classrooms, schools, and districts. Attending UW ECHO in AT sessions and participating in case discussions has increased participant's ability to support and implement technology for educators, professionals, students and community members across the state of Wyoming. Preliminary results suggest strategies for AT use and implementation are being applied, but additional support and follow-up may be required to facilitate successful and long-term results.

If individuals or agencies are interested in the ECHO Model® for use in Education or with students with disabilities, please visit our website at <http://www.uwyo.edu/wind/echo/> or contact [projectecho@uwyo.edu](mailto:projectecho@uwyo.edu).

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