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DID YOU KNOW?

1 IN 5 PEOPLE IN THE U.S. LIVES WITH A DISABILITY

Assistive Technology Partners envisions a world where all persons with cognitive, sensory and/or physical disabilities are engaged in life at home, school, work and play, without barriers and without boundaries.

To receive the communicATor e-newsletter or to request a hard copy, contact us: generalinfo@at-partners.org or call 303-315-1280.

Alternate formats available upon request.

SWAAAC Summer Symposium 2014: Assistive Technology for Inclusive Literacy Instruction

The Colorado Department of Education’s SWAAAC program and Assistive Technology Partners (ATP) are proud to announce open registration for the 2014 SWAAAC Summer Symposium. Six exciting, full-day workshops featuring nationally renowned educators, will explore instructional strategies and assistive technology (AT) interventions to support literacy learning for students with low and high incidence disabilities. In addition to the workshops, participants will enjoy a state-of-the-art exhibit hall, lunch and awards ceremony, professional networking and an opportunity to earn graduate credit through Adams State College.

This year’s symposium takes place June 9th and 10th at the Conference Center at Adams 12, Thornton, Colorado. Looking for ways to build team capacity? For every 5 full day workshop presentations registrations you recruit, you will receive 1 free full day registration. Register 10, get your full 2 day Symposium registration free!

Monday, June 9

• Teaching Language and Literacy to Students with AAC Needs in the Context of the General Curriculum: Evidence-Based Strategies - Gloria Soto, PhD & Michele Boruta, MS
• From Struggling Reader to Strategic and Multimodal Reader - Bridget Dalton, EdD
• Supporting Literacy in Low-Incidence Populations: Assistive Technology Tools to Support Reading - Lauren Enders, MA, CCC-SLP

Tuesday, June 10

• Visual Response Systems: Meaningful Participation in Today’s Classroom - Sue Loeffler, MA, CCC-SLP & Marcia Blum, PT, MEd
• From Struggling Writer to Strategic Writer and Multimodal Composer - Bridget Dalton, EdD
• Supporting Literacy in Low-Incidence Populations: Assistive Technology Tools to Support Writing - Lauren Enders, MA, CCC-SLP

For more information on the workshops, presenters or registration, please visit the SWAAAC website at www.swaaac.com. Register today! Registration closes May 23!

ATP

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So, What is Terry Doing Now?

AT can help individuals seek and maintain employment. There are many AT solutions that can assist with work tasks from simple things like electric staplers and hands free phones to sophisticated communication and transportation options. Terry Brown is one successful example of the benefit of AT for employment.

In the Summer 2013 communicATor we featured a story about Terry and the work being done at ATP to improve his communication. Great things have happened in the past year and we would love to give you an update.

Terry has been coming to ATP for training to use his communication device for years. These days, when you meet Terry, you might notice that he is tall - it’s hard not to, he’s 6 feet or more - and it’s clear that he has an athletic past. Terry will look you directly in the eyes and smile, say hello and ask you how you’re doing. If you don’t know Terry, you most likely will not understand his speech. But whether you know him or not, Terry wants you to understand him and he wants you to feel comfortable while you are speaking with him. To help you, he will present you with a professionally designed business card (See below) which he uses as a strategy to introduce himself. Terry composed this message on his Vantage Lite communication device as part of his therapy, with Aleaza Goldberg, MA, CCC-SLP, at ATP.

In August of 2013, Terry began to work with the Division of Vocational Rehabilitation (DVR) with the ultimate goal of facilitating training for employment. Terry had jobs in the past at fast food restaurants, pizza joints and at an athletic gym. He is very clear that he wants to work. He described himself as honest, prompt and reliable. He emphasized that he pays close attention to the work he does and likes to meet new people.

To prepare for job interviews, Terry participated in creating pre-programmed responses to likely questions that might be asked during an interview. He practiced by doing mock interviews with his speech therapist, his family and his job coach. With each mock interview, they talked about what characteristics Terry wanted the other person to see in him. He had a clear wish to be seen as a capable, reliable and honest person who could independently serve a role in a place of employment. He even emphasized his hope to be hired for a position in which he might be given more responsibility than he has in the past.

When it came time for the real interviews, Terry was nervous but ready. Joe Molumby, Terry’s job coach from Laradon, was happy to report that Terry used his AAC communication device efficiently, gave meaningful answers and did not require much, if any, assistance or interpretation during the interviews. Terry had several interviews before he found the perfect position at a Chili’s restaurant. With a smile, Terry describes his new supervisor as “nice”. He reports that his co-workers are patient and are learning to communicate with him successfully with and without the communication device. His next goal is to become independent with scheduling his own transportation using his communication device and a cell phone.

The last time Terry visited ATP, his mother, Elva, was with him during the session. Terry reviewed some vocabulary he had been practicing at home and he generated “She thinks”. He was then asked, “What does your mother think?” To which he responded, “She is proud”.

In our first article about Terry, Elva described a noticeable change in her son from a “carefree bundle of joy” to a “guarded and quiet person” as his communication impairment isolated him socially and emotionally from his family and his peers. Well, it seems, most recently, Terry has changed again. He is a tall man - true - but he is walking much taller with head held high and a ready smile on his face. The power of communication and his hard work have opened doors to greater independence and dignity. Terry said his mother was proud, but it is clear he is as well.

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Terry A. Brown

My speech is not that easy to understand. I want to help you understand me better. I use my device to talk to you. It takes me a little while to talk with my communication device. Please wait, I understand you. Thank you for helping me talk to you.
Enhancing Touch Screen Usability for People Who are Aging

iPads and other touch screen devices are increasingly popular, not just for tech-savvy kids and adults, but for the aging population who find such devices convenient and accessible for reading and for communicating with others through texting and email.

ATP’s Greg McGrew completed a project last year in which he evaluated the usability of an iPad when used as a tool for voters to mark their ballot during an election. During the study, he came across some interesting results highlighting problems experienced by elderly users of touchscreen technology.

The goal of the project was to identify usability and human factors aspects of the iPad that would enhance or hinder ballot marking, and to suggest strategies and methods for making the iPad more usable for these people for marking their ballot. Among other things, the study showed that many people experienced problems getting the iPad to react appropriately to touching and swiping the screen.

When participants attempted to tap (select) an intended target such as an icon, onscreen button, or form field, the iPad would often not initiate any action, would slide the image slightly, or would open a copy window for the space around the item. Over three-quarters of participants experienced at least some problem with touch screen response during testing. Several reasons were identified:

- Dry skin can insulate fingers from touch screen capacitance.
- Even mild fine motor control impairment causes finger to slide along touch screen surface during touch initiation, and/or increase finger dwell time on the screen.
- Finger nails (insulating) would hit the touch screen rather than the skin on their finger (conductive).
- Participants would miss the touch screen target (icon, button or box they intended to touch).

While these issues can cause people to have problems using a touch screen device, there are some steps you can take to reduce their impact. If you might be thinking of purchasing such a device for an elderly family member, the following suggestions may help ensure that their touch screen experience is a good one.

- Applying skin moisturizer to the hands can go a long way in helping prevent non-response of the touch screen when tapping or swiping.
- Ensuring the iPad is sitting on a stable, non-skid surface, versus on a lap or being held by the other hand will help reduce the miss-hits experienced by people with mild hand tremors.
- Trimmed nails will help avoid touch screen non-response experienced by people making contact with the tip of the finger.
- Clear instruction on the necessity of touching the screen in only the intended location, and not leaning the hand on the screen will be important to avoid unintended responses by the iPad.
- If avoiding resting hand contact is not possible, the user could rest the hand on a piece of cloth while touching the screen with his/her fingers. A glove with the tips of the fingers cut out can work well for this purpose.

Touch screen devices like the iPad can be an excellent tool for accessing news and entertainment, and for communicating with others through the internet. And because of their adaptability they can be configured to provide these services in ways that are accessible to people with disabilities associated with aging. And while this population may have more difficulties with effective use of the touch screen, these problems can be addressed with some simple but effective strategies.
Chancellor’s Development Committee Visits ATP

In April, ATP was honored by a visit from the University of Colorado Chancellor's Development Committee. The volunteer committee is comprised of significant supporters of the University of Colorado. The mission of the group is to raise awareness of initiatives at CU and help foster community support. The committee hosts its regular meetings at a different location within the CU system each time, in order to learn more about CU programs and projects and to partner in supporting important work.

During the April meeting, Cathy Bodine, Executive Director of ATP, shared an engaging tour and presentation explaining the growing challenges of disability and the subsequent needs for AT. She pointed out that one in four Americans will have a disability at some point in their life and most of us know a friend or family member with a disability now. She noted that over a billion people, about 15% of the world’s population, have some form of disability. The rates of disability are increasing worldwide due to an aging population and increases in chronic health conditions presenting significant needs for AT devices and services.

In particular, there is a need for increased federal recognition of the role technology must play to reduce healthcare costs, improve healthcare and health outcomes worldwide; a need to increase the number of higher education professionals available nationally to train current allied health and bioengineering students, and a need to increase technology-related research funding - including applied clinical research and outcomes measurement.

At ATP, we are working to address these needs. Within the educational program, we are seeking to support student scholarships and faculty time. In the clinical program there continues to be a need for client scholarships and equipment support. In the research program, needs focus on lab and equipment support.

If you want to learn more about how you can help make a difference, visit the ATP website’s Contribute page.

www.assistivetechnologypartners.org

VOLUNTEER CORNER

Redhwan Nour

There are many generous volunteers who contribute their time and talent to ATP each week. To thank and honor them, we include this volunteer corner as a regular section in our quarterly newsletter.

In this issue, we would like to thank Redhwan Nour, a PhD candidate in computer science at University of Colorado Boulder. He is working with our product usability testing team and the “Morae” system to evaluate the usage of different products by people with cognitive disabilities. Redhwan has been invaluable in helping the Product Testing Lab organize the large amount of information and data collected during product testing. On a related project, Redhwan is using his skills in website development to set up a user-friendly site for consumers to see and use information from test results and suggestions for consumers to consider when choosing products for people with cognitive disabilities. Finally, Redhwan is creating various user interfaces on iPad using NetIO application for ATP. The characteristics and the functionality of these interfaces will be tested by people with cognitive disabilities to determine what types of interface characteristics (such as text font, contrast, button size, etc.) are most usable for this population. This is groundbreaking work in product usability for people with cognitive disabilities. Redhwan’s willingness to volunteer his time and skills to this project have been essential in allowing ATP to move forward with this work.

We so appreciate all Redhwan does for ATP. His dedication and countless hours of work have truly touched the hearts of the ATP team. ATP would like to thank Redhwan for his time and expertise and invaluable support and generosity.

Say Hello to Our New Student

ATP is home to some great student employees and interns. Our most recent edition is Christian Garcia. Christian is an undergraduate student majoring in Political Science with a minor in Pre-Law at Colorado Christian University. After completing his undergraduate degree, Christian plans to attend law school. His goal is to focus his law practice on software and intellectual property issues. Christian came to ATP to share his software background to both help the program and learn from engineers who currently work at ATP. He currently works with the Colorado Department of Education’s SWAAAC projects loan bank.

www.assistivetechnologypartners.org
Assitive Technology & Evidence Based Practice to Support Literacy Outcomes

UC Denver and ATP has trained over 500 AT professionals since 1998 through Advanced Personnel Preparation Programs and AT certificate programs. Many of those professionals are practicing in Colorado’s public schools and are having a profound impact on the lives of students with disabilities. This past fall the SWAAAC program launched new coursework designed to promote Evidence Based Practice and effectively capture literacy outcomes related to the implementation of AT interventions.

Between September 2013 and April 2014, 14 public school service providers investigated current and best research on selected topics. They subsequently designed AT interventions, implemented programs, and collected data to measure student performance/change/impact. The following paragraphs summarize and highlight the outstanding work of three class participants.

One 3rd grade student in Aurora Public Schools received explicit instruction targeting core vocabulary from AT/AAC Specialist Rhonda Johns, SLP. This student with complex communication needs had experienced minimal progress in the area of reading fluency over the past three years. Prior to initiating intervention, the student was only able to accurately read 11 core vocabulary words. Three months later, sight word recognition for the targeted core vocabulary (available on his AAC device) had increased to 35 words. In addition, reading fluency increased by 1 level in the same time period. For those specific skills, that equates to more progress in three months than was made in the three years previous.

Barbara Kelly, MEd, ATP, with Mountain BOCES, took on the daunting task of determining reading accommodations for two middle school students, both English Language Learners with learning disabilities. One of those students also carried a diagnosis of severe hearing impairment, and the other, severe vision impairment. Her research, diagnostic interventions, and data collection revealed previously unrecognized student learning needs, areas requiring further assessment, and previously untapped student strengths. As a result, both students are expected to experience meaningful, data-driven changes to their instructional and assessment accommodations.

AT Specialist Erika Brandstatter, MA, Ed, from Boulder Valley School District implemented the literacy support software, Co:Writer, with three, fifth grade students, all with specific learning disabilities. Instructional sessions occurred between January 29th and April 16th and included direct instruction in the use of word prediction and text readers. Erika’s direct intervention yielded an average of 68% increase in spelling accuracy, and 80% increase in the legibility of independent written work.

Kudos to all the professionals who participated in the classes! What a wonderful demonstration of the talent and dedication in Colorado public schools.

ICOST 2014
Advances in Cognitive Technologies
25-27 June, Denver, CO, USA

After eleven very successful conferences held in France (2003), Singapore (2004), Canada (2005), Northern Ireland (2006), Japan (2007), USA (2008), France (2009), Korea (2010), Canada (2011), Italy (2012), and Singapore (2013), the 12th International Conference on Smart Homes, Assistive Technologies, Robotics and Health Telematics will be hosted in Denver from June 25 to 27, 2014.

ICOST provides a premier venue for the presentation and discussion of research in the design, development, deployment and evaluation of Smart Environments, Assistive Technologies, Robotics and Health Telematics systems. ICOST brings together stakeholders from clinical, academic and industrial perspectives, along with end users and family caregivers to explore how to utilize technologies to foster independent living and offer an enhanced quality of life. ICOST 2014 invites participants to present and discuss their experiences in design, development, deployment and evaluation. The conference features a dynamic program incorporating a range of technical, clinical and industrial related keynote speakers, oral and poster presentations along with demonstrations and technical exhibits.

If you are interested in attending or learning more, please visit the ICOST website for more information on keynote speakers, presentations, events and registration - www.icostconference.org
Focus on Funding
If you are looking for low-cost assistive technology equipment, you should check out ATP's AT Finder, an online tool that simultaneously searches four online classifieds and/or auction sites (Craigslist, eBay, eBay Classifieds and Oodle). A recent search for a Stair Lifter resulted in 34 products ranging in price from $600 - $3,995. AT Finder can be accessed at www.colorado.atfinder.org.

If you are short of funds, ATP's AT Funding Sources is a searchable online database and has over 2,000 agencies that provide funding for different types of assistive technology devices and services for all ages. Searches are based on your county of residence, diagnosis as it relates to the need for AT, age, area of need, and type of device. We just recently added several organizations that provide funding for iDevices. A recent search for a 2 year old child with developmental delays living in El Paso county needing an iPad for therapy resulted in 36 agencies that could assist. Agencies varied from Public and Private Agencies (Apps for Children with Special Needs, Babies with iPads, Joni and Friends, The Maggie Welby Foundation, Variety of Colorado - Tent 37), Grants and Trust Funds (Colorado Fund for People with Disabilities, Friends of Man, The Good Shepherd Fund), Community Service Organizations (Elks, Kiwanis, Lions, Rotary) and Low Interest Loans (American Association of People with Disabilities/Digital Credit Union, PFS Patient Financing). AT Funding Sources can be accessed at www.at-partners.org/ATFunding.

If you have questions about either of these services, please contact Julia Beems at julia.beems@ucdenver.edu or 303.315.1284.

The Colorado AT Network
An alternative for agencies who want to provide product demonstrations to their clientele is the Colorado AT Network. The Colorado AT Network supports Coloradans in learning about and acquiring assistive technology devices or tools to assist in maintaining or increasing functional capabilities, independence, and safety at home, work or in the community. The AT Network provides FREE monthly webinars on specific AT topics that expand the ability of an agency or organization to provide information about AT devices and services to their consumers; FREE Demonstration Kit loans that allow individuals to learn about and try a piece of equipment before purchase; and FREE access to the AT needs assessment to help identify individual AT needs. If you are interested in learning more about, or joining the AT Network, please contact Julia Beems at 303.315.1284 or julia.beems@ucdenver.edu.

Assistive Technology & Colorado Legislation
Two pieces of legislation have recently passed through the 2014 Colorado legislature and are on their way to the Governor for final passage. A summary of each bill is below with links to the full text on the bill.

• **HB 14-1211** - Ensuring Access to Quality Complex Rehabilitation Technology in the Medicaid Program, and, in Connection Therewith, Making and Reducing Appropriations. Sponsored by Representative Young and Senator Tochtrop. [Link to full text.]

  This bill requires the Department of Health Care Policy and Financing (HCDF) to recognize complex rehabilitation technology as a specific need of persons with complex diagnoses or medical conditions that result in significant physical or functional needs. HCDF must designate appropriate billing codes as complex rehabilitation technology and establish supplier quality standards for complex rehabilitation technology suppliers. Additionally, they must require evaluation of complex needs patients by qualified professionals for purposes of identifying appropriate complex rehabilitation technology. Further, the department must develop pricing policies for complex rehabilitation technology.

• **HB 14-1369** - Requiring Licensure for Durable Medical Equipment Suppliers, and, in Connection Therewith, Making an Appropriation. Sponsored by Representative Young and Senators Crowder and Jahn. [Link to full text.]

  This bill requires durable medical equipment suppliers that currently bill or plan to bill the Medicare program for services or products to have a licensure with the Secretary of State. The licensee must be physically located within the state or within 50 miles of the state, have sufficient inventory and staff to do business, and be accredited by an organization recognized and accepted by the centers for Medicare and Medicaid services.