

Technology

AT in Inclusive Classrooms: *Voices* What Problem Are We Trying to Solve?



As inclusive classrooms proliferate nationwide and as schools and families become ever more accepting of, knowledgeable about and proficient in the use of assistive and other technology, familiarity is breeding a new approach but not necessarily sound approach to technology use by all parties, according to one prominent inclusion consultant and teacher, Paula Kluth.

“Especially, but not exclusively, in the autism realm, schools and families have become almost ‘too familiar’ with the technology and immediately want to acquire a certain device,” Dr. Kluth declares. “I hear this often from schools: ‘We already have a Lite-Writer’ or a TouchTalker or a DynaVox. Or they tell me, ‘Don’t worry, we’re getting an iPad for the student.’ Or parents will ask me, ‘Can you help us to advocate because we really need this specific device?’ In disability it’s no longer an issue of getting people interested or engaged around assistive technology; the challenge is reminding them to answer the core question, ‘What problem are we trying to solve?’”

With AT and inclusion becoming ubiquitous in many school districts, the challenge for families,

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IEP teams and technology experts, she points out, is problem identification and determining how technology can be best utilized to create entry points for students in curriculum instruction and assessment. Referring specifically to augmentative communication but including other relevant technology as well, Dr. Kluth says, “Our responsibility is to counsel all parties that AT can do far more than assess a child or help kids greet their peers or make choices; it represents the child’s access to the general curriculum and, hopefully, to his or her own voice. The right technology for the individual child enables all of us to see that child differently.”

Most stakeholders in a child’s education, Dr. Kluth concedes, recognize the need to identify the core problem to be addressed before selecting the appropriate technology. What is sometimes more difficult, she notes, is convincing stakeholders, many of whom are enthusiastic about AT use, to continuously return to problem identification. Too often, she adds, “when we introduce a piece of technology, even a simple switch, some stakeholders say, ‘That’s great. The child can now participate; he can raise his hand’ or ‘she was able to share a fact of the day!’ But that’s just the beginning of the process, not the end. It’s at that point that I ask families and educators, ‘If that worked well, what’s the next question? Let’s continue returning to the well.’”

Paula Kluth, Ph.D., Speaks

Dr. Kluth earned her undergraduate and Ph.D. degrees from the University of Wisconsin and her M.Ed. in Educational Policy from the Harvard Graduate School of Education. Although not an assistive technology specialist, she has always incorporated AT in her roles as a teacher, inclusive education consultant and advocate.

She says was inspired to enter the field after attending a high school in the 1980s that today would not

necessarily be considered inclusive but definitely was progressive in some ways. “There were many kids in my high school with significant disabilities who had transitioned from an institutional or more self-contained setting.” For the students with disabilities and, ultimately for her, such a transition might have amounted only to a just a change in placement had it not been for the efforts of one teacher. “She reached out for the best kind of technology – human contact – and began talking to the kids, forging strong relationships with them. She’d ask if some of us, including me, wanted to assist in her classroom or if we wanted to learn more about adaptive equipment.” Her teacher, she recalls fondly, “became very savvy about how to get kids connected.”

Although Dr. Kluth attended college intending to major in occupational therapy, “I was drawn to teaching and to replicating what I’d seen and experienced in my high school.” Today, she concludes, “many more children with disabilities are included in their neighborhood public schools. Many of those classrooms are inclusive educational environments in which AT and other technologies have a high profile because it not only helps us to reach and teach diverse learners but it helps us support all students more effectively. For instance, speech-to-text software was once used just for a few students with learning disabilities, now teachers are experimenting with it for kids who are simply reluctant writers. These tools are helping us not only teach students with disabilities more effectively but rethink instruction in the classroom, in general.”

We invite you to share Dr. Kluth’s insights with your colleagues and the families you serve. Following our lead article, you’ll find selected resources that relate to this month’s theme and an introduction to a number of organizations in the FCTD network.

Inclusion and AT: “Universal Access to the Curriculum Will Change Everything”

An interview with Paula Kluth, Ph.D., inclusive schooling consultant, author and teacher.

It wasn't love at first sight. At the outset, according to inclusive schooling consultant Paula Kluth, inclusion and the universal access to the general curriculum it promised were not concepts that were accepted and embraced with unanimity by educators. “Inclusion skeptics said of children with disabilities, ‘Their classroom materials are so different from the materials used by the general education students; the children with disabilities are reading their own books while their classmates read another book.’ Or they would insist, ‘Their dignity is at risk because students with disabilities are nowhere near their classmates in ability and they should not be allowed to be embarrassed in front of their peers.’”



Paula Kluth, Ph.D.

“We resisted those arguments by referring to inclusive schooling as an approach designed to create a context in which all students can learn together while pursuing individual objectives.” Assistive technology, Dr. Kluth emphasizes, “makes this approach easy to implement.”

Today, she notes, “One student in a class may be working on the computer and engaging primarily in a literacy lesson while another student is gathering facts and information and another child is reading his/her own blog. Even a few years ago students cer-

tainly did not have the opportunity to learn in this fashion.” Therefore, Dr. Kluth declares, AT-supported inclusion is not only changing the landscape and removing arguments about the differences between students with and without disabilities, it is helping us provide individualized education to students who a decade ago we didn't believe needed individualization.”

In short, she predicts, “universal access to the general curriculum will change everything for students with disabilities.” As an example, she cites a recent visit to an inclusive classroom. “The teacher was utilizing a “stations and centers” model with technology involved in every aspect. Years ago we would have had to think about ways to create materials to accommodate kids' disabilities. In a spelling lesson, for example, we'd have to determine how to include a child who lacked the movement skills necessary to move the letters on the magnetic board or to copy his words on a dry-erase board. Now many of the students are utilizing iPod Touches and apps. Some kids are actually using technology as a tool for collaboration; they're working on the SMARTBoard together and they are using Twitter and Skype to learn from and get support from students who are not even in the classroom. Every student is learning in a different way. This is just a taste of what is to come. Twenty years from now much of the instruction will be thoughtfully personalized for each child, whereas now we're personalizing for a small percentage of children.”

Cool Technology = Collaboration: Making Different Ordinary

“Technology has made classroom interactions between students easier because it's cool,” Dr. Kluth remarks. Students without disabilities now seek out their peers with disabilities because of their technology. When this occurs and kids show that natural interest, it's the teacher's responsibility to exploit that

interest. That's where we as teachers sometimes fall short. Kids will naturally be interested in other kids' technology. Hopefully, teachers will say to the students without disabilities, 'Not only will I show you how to use this device, but there are some cool games we can play together. Would you like to try it out?' Occasionally, however, teachers can be hampered by their own sensibilities, Dr. Kluth asserts. "On the one hand there's this notion that says, 'Don't hang on anyone's wheelchair.' In other words, don't tap someone else's technology because that technology is an individual's body and voice. On the other hand, if the child and the teacher invite the peer in, this is one of the best ways to teach augmentative communication."

Categorized as immersion, this approach is popularized by University of New Hampshire Institute on Disabilities inclusion experts Rae Sonnenmeier, Michael McSheehan and Cheryl Jorgensen, Dr. Kluth notes. "They state often that one of the best ways for a child with disabilities to learn his/her AT device is to have him/her witness others using the device. For instance, if a child walks into the classroom and hits a switch to say 'good morning' every student in that classroom should hit that same switch to say 'good morning' in reply."

This, she says, "represents a marked change from prior practice, which was to have students respond vocally to the initial 'good morning.' But now we want everyone in the class to use the device. We know from experience that the most effective way to learn a foreign language is to have that language spoken in return. Before you learn to read you see thousands of people reading, and before you learn to write you see thousands of people writing, but before a student learns to use AT that student likely has never seen a person use that device effectively, if at all.

"Children need to see other kids using these systems.

Simple picture symbols should be made visible by the teacher in the classroom as she refers to them. So, if the child has science vocabulary symbols on her device, these same symbols should be clearly visible in the classroom so the teacher can use them in his lessons and other students can become familiar with them as well. This simple adaptation makes it easier for the child to learn them as he or she isn't seeing those icons in a single environment."

Another example of immersion comes from Dr. Kluth's own days in the classroom. She recalls, "a child had a LiteWriter that was used when the general education teacher taught poems for two voices. All the kids, with the student's permission, used the LiteWriter as one of the voices; we read poems for two voices using the LiteWriter. That was a great way to make different ordinary. The communication system was cool; kids had fun programming it – and interest was created in the device of a student with a disability. This was ironic because one would have assumed the child was already invested, but until he saw these different uses, and saw those uses connected to curriculum and instruction in such a rich way, he hadn't seemed to have much of an investment. "

"I Can Do That!" Modeling Is Key

Exploiting children's natural curiosity about a student's AT device is possible only if teachers are versed in AT and/or have an interest in today's technology, according



to Dr. Kluth. Although technophobia among teachers is waning, she says, holdouts remain. A solution, she states, is effective modeling.

"Like co-teaching or active learning, modeling technology use is better than explaining it; showing is

always better than telling, as long as the modeler is techno savvy. I can't begin to count how often I've suggested a technique for integrating AAC or AT and that technique was not implemented – until I performed basic modeling showing how a device can be used to support a child's communication or how assistive technology could help a student participate in an activity. After teachers see it a time or two their enthusiasm soon matches that of the students and the special education teams."

She cites an example. "I asked a general education classroom teacher if she could include a child in a read-aloud by providing the student with a device that would enable the child to contribute to the activity by using his switch to read a repetitive part of the text. Several times during the reading the child had the opportunity to use his switch. The teacher followed this routine several times but didn't seem attached to the idea. Yet after I saw the child was able to perform the task I suggested that the teacher involve other students to improve the fluency of the child using the switch. I recommended that the teacher pass the device around so that all the children had the opportunity to use the switch and say, 'Brown bear, brown bear what do you see?' When I modeled this scenario the look on the teacher's her face said, 'Oh, I get it now; I can do that!'"

Dr. Kluth explains that she has suggested simple procedures like programming a student's device to share a fact of the day so that the student immediately has a standards-related reason to get their communication system out, set it up and start learning and interacting with others. "The student can fire up the device so that students without disabilities are able to share it. When I modeled it, that's when I saw the most carry-through. Many individuals, including teachers, are intimidated by having to learn new technology. We've all experienced that intimidation. How many times have each of us been advised, 'Just install Sky-

pe.' Our instinctive reaction is, 'That sounds great but I'll never do it.' Then Skype is modeled for us and we say, 'That's it? That's all I have to do?'"

Students Are Experts in Their Own Lives

Discussions about a child's behavior often stall, Dr. Kluth asserts, "because one of the most crucial questions in the problem-solving process is not asked: 'Does this child



have a voice?'" If a child lacks a voice, she says, "we are solving the wrong problem, because there will always be struggles around human behavior and interaction when an individual has no way to be in the world or to make a contribution to that world." Children, she emphasizes, "need to be experts in their own lives. To be an expert means they must have a voice. Making sure that the child has a voice, and then listening to it, should be the start of any conversation about a child's behavior."

Even if children with disabilities are unable to articulate their life expertise, Dr. Kluth says, "they can show us what works for them, which will in turn show professionals what's needed in terms of technology supports and adaptation." Those tech supports, she notes, do not always have to be high-tech. "I've seen kids who might need a picture schedule, which is very helpful for them. When a picture schedule is developed for them behavior issues often decrease. Technology, however, can help us make an appropriate support even more effective. That is, technology can help us personalize something like a picture schedule. Once we know it works, we can make it more portable, easily change icons or pictures, adapt the text, and even make it 'speak' to the child."

The voices of families should also be heeded, Dr.

Kluth advises. “As professionals we should seek out the opinion of family members. Even when a device may not appear to us to make a critical difference to a child, a family member may see a benefit that’s not readily apparent to our professional eye. Does a device bring more ease and/or joy to a child’s life and to his/her parents? Parents can answer that question. Fortunately, technology makes it easier for us to access those perspectives.”



The truth, she declares, is that families often bring more knowledge about their children’s disabilities to school than teachers possess. “For example the family of a child with Prader-Willy syndrome or Fragile X syndrome will likely know more about those conditions than their child’s teacher, who may never have seen a child with those conditions. This has always been the case. On the other hand, though, teachers are experts in the curriculum and instruction.”

Parents “are often quite knowledgeable about the best adaptations, especially if those adaptations or supports are used in the home. The iPad, for instance, is being used by so many children as a learning tool but also as a way to communicate with family members, to create movies or other products, and to play games. Because the parents have spent a lot of time with this type of technology (not only with their children with disabilities but with their other children as well), they know which literacy apps work best and they have seen how easy or difficult different games are which may mean that the parents may be familiar with the best way to engage their child in learning phonics or studying new vocabulary. This is a reminder that parents will have seen their kids use technology across a wider range of experiences, contexts and environments than we have as profession-

als. Because parents come to us with lots of useful knowledge, it will be more important than ever for us not only to share their knowledge but also to ask them, ‘Can you show us what you mean?’ This process of sharing makes parents collaborative partners with professionals, which can be a new experience for those at schools who view themselves as the experts.”

Fortunately, says Dr. Kluth, most schools are now receptive to AT and to recommendations that result in a more welcoming environment for students with disabilities and assistive technology. “Some schools say to families or professionals, ‘Tell us what device you recommend,’ while other schools that take a more cautious approach say, ‘Let’s not be too wedded to a specific device, like an iPad or a Tango!, for example. Let’s talk about what the student needs.’”

But there are some schools that remain reticent, Dr. Kluth adds. “They may have had only minimal exposure to AT. Administrators and teachers at such schools may have come through the system without having access to or using much AT. As professionals we’re obligated to boil these issues down and ask, ‘Are you resistant to progress, or are you saying, ‘Let’s take a closer look at the student’s needs before we talk about the appropriate materials.’ Sometimes that latter approach can appear resistant but fingers should not be pointed too quickly.”

Dr. Kluth conducts interactive workshops to help ease educators and others through this process. “I ask participants to move, talk, and share – to interact. I prefer them to view these seminars not only as opportunities to acquire information but also to share what they know with others. I do not make a point of recommending specific devices. I might provide an example of how a specific device is used in a literacy lesson, for example, but would then ask the group to provide examples of technology they’ve used that

accomplishes the tasks under discussion. I then ask, ‘How would you help students access knowledge and information and make contributions in the same lesson?’”

Video Modeling Updated

To make certain a child’s voice is heard in a school setting she supports a practice that is gaining traction nationwide: student driven IEP meetings. “I encourage students whenever possible to have



teams go the next step – and use technology when necessary – to tell their stories to their teachers. For example, I had some high school students with disabilities who felt as if they weren’t being heard in their school. My response to them was, ‘Have you ever considered blogging?’ Sometimes when a child’s voice becomes public teachers will heed it because it’s accessible to them. In a grant with which she was associated, she recalls, “we had a child with learning disabilities, a child with Asperger’s and another child with physical disabilities. We created a short movie of them talking about the supports they needed most. We used this as a training tool for educators.”

Currently, she explains, “we’re using video to help kids depict their highs and lows of the day, to demonstrate their skill set or to show their achievements over the course of a year – anything to expose teachers and stakeholders to students’ voices. Early in my career I urged students to employ paper, scissors and glue to prepare and maintain a scrapbook in which they could show the adaptations they needed or their best work products. Now we can do that by creating an online scrapbook, by making a movie on Animoto or by producing a “Glog” about their needs to share with others.

Kluth also discussed using video modeling as another effective way to use movie-making in the classroom. For a decade video has been utilized in schools to model specific student behavior, such as proceeding through a cafeteria line, ordering a sandwich or playing a game. Children with autism or other disabilities would watch the video and become more fluid in those movements and therefore become more confident as they saw themselves competently performing a task.

Teachers approve of video modeling, Dr. Kluth reports. “It’s loved for the same reason any advance is loved: it works. It’s not unlike athletes who watch their best moments on ESPN in order to improve and/or to repeat the behavior or skill that has proved successful for them. As a bonus, it’s much easier to use video modeling now than 10 years ago. Back then we had to haul out a lot of equipment. Now teachers can use their phone to shoot a few minutes of a child walking down the hall or greeting his peers. They can edit very quickly using the tools on their school computers to produce a product to show the child a few minutes later or during the same day. Teachers like this because they can use it to help kids with and without disabilities. Video modeling, Kluth maintains, can be employed to teach any classroom skill or activity and should not just be used to teach a few students. For instance, teachers can use video modeling to teach appropriate bus behavior, science lab set up, recess games, peer editing, reciprocal teaching, and more.

“What’s neat about the new editing technology is that it is so fast, especially compared to the bad old days when we had to use two tape decks for editing. Now editing is completed in minutes.” One of the popular video modeling techniques, she says, is to edit out the pieces of the video in which a student is not easily or fluidly performing. “For instance, if a child is conversing with someone and is mired in his/

her speech, that piece can be edited out. Or if a child is playing ball and is not picking up on his cues, those moments of hesitation or uncertainty can be edited out to present an image in which the child appears to be performing more strongly, with more confidence.”

Three Game-Changing Revolutions

During her career, Dr. Kluth says, she has experienced three game-changing revolutions in her field that have positively impacted the opportunities available to individuals with disabilities to express themselves.

For her, the first revolution was epitomized by the theory of movement differences espoused by Martha Leary and Anne Donnellan (<http://dsq-sds.org/article/view/1060/1225>) which taught her that behavioral issues demonstrated especially by children with autism were often body-related. The second revolution, in the form of autobiographical works by individuals with disabilities who had heretofore been deemed non-communicative, taught her “that individuals were more than their bodies.” Those works included *The Diving Bell and the Butterfly*, the 1997 memoir by Elle editor Jean-Dominique Bauby about his recovery from a massive stroke and *My Left Foot*, the 1954 autobiography by Irish poet/painter Christy Brown who suffered from cerebral palsy and was able to write or type only with the toes of his left foot. “Those stories were few and far between only a few years ago.” Today and tomorrow? “Get ready for the avalanche,” she predicts.

The third revolution, she says, is the unanticipated impact of the iPad on the communication abilities of children with disabilities. “No single device has leveled the playing field for kids with disabilities in an inclusive classroom setting like



the iPad. It’s a democratic device in that so many people in so many categories of ability have access to it. It’s not just that kids can learn differently with the iPad, nor is it just that students and others can practice skills across several environments; it’s that the device helps us see that individuals are not who we assumed they were and that they are far more complex than we assumed.”

The growing universality of the iPad, she notes, “is a paradigm shift whose ramifications for all of us, especially students with disabilities and their families and teachers, is not yet clear. What I am certain of is this: we’ll look back 10 years and say, ‘Remember when everything changed with the iPad.’”

The global popularity of social media may represent a fourth game changing revolution, she says. “I could not live without it, not because it helps me get the word out about my own work but instead because someone will ask a question in India, for example, and the question is answered by someone in Racine, Wisconsin. Someone else chimes in and perhaps shares a photo or an image.”

As a writer, she adds, “I love it because a week after a book comes out commentary on how the information in the book can be implemented is available. In addition to being democratic, social media is an accelerant for change because it facilitates the use of a wider range of tools. We can integrate video. We can see into a teacher’s classroom, for example, and the teacher can show us instead of tell us why her methods are successful.” For individuals with autism, she observes, “Facebook has provided encouragement to contribute by sharing their views and to engage in ways that feel less risky, less personal.”

Reading List for Technology Learners: “We Don’t Always Know What We Don’t Know

An admitted technology learner, Paula Kluth ac-

knowledges that she is not an AT expert. “I’m always gathering technology-oriented resources. I like Amy Benjamin’s 2008 book, *Differentiated Instruction Using Technology: a Guide for Middle and High School Teachers*. I just purchased *The Universally Designed Classroom: Accessible Curriculum and Digital Technologies*, written in 2005 by David Rose, Anne Meyer and Chuck Hitchcock (<http://www.hepg.org/hepg/book/51>) which covers digital technologies.”

Autobiographical literature, she says, “has hooked me in a personal way into this world of AT because I appreciate the accounts of individuals who have used technology to bring their voices forward.” One of her favorite books is *Look up for Yes* (http://books.google.com/books/about/Look_up_for_yes.html?id=PC6AHAAACAAJ), about Julia Tavalaro “who for years was in a hospital and nobody knew that she was able to communicate. I assigned this book to all of my graduate students who were planning to become general education teachers. I’d say, ‘Someone like Julia is probably not going to be in your classroom, but not understanding that someone is present, communicating and capable translates to every student you will ever teach.’ I used *Diving Bell and the Butterfly*, *My Left Foot* and *Lucy’s Story: Autism and Other Adventures*, by Lucy Blackman (<http://www.jkp.com/catalogue/book/9781843100423>), a girl with autism who learned to communicate by typing.” She also recommends *Carley’s Voice* by Arthur Fleischmann and Carley Fleischmann, a new book about a non-verbal teenager who not only found her “voice” via computer keyboard after years of silence but became a staunch advocate for people with autism.

“To me these books serve as examples that technology doesn’t exist only to enable a child to select a snack at 10 AM. It exists to support our students, to help them, to surprise us and to aid them in accessing the curriculum and instruction – and to help remind

us that we don’t always know what we don’t know.” Dr. Kluth’s most recent book, *From Tutor Scripts to Talking Sticks: 100 Ways to Differentiate Instruction in K-12 Inclusive Classrooms* (<http://www.brookespublishing.com/store/books/kluth-70809/index.htm>) features low-tech approaches to inclusion. “Writing it represented a transition,” she says, “from a problem/solution-based format to a more visual approach in which I highlighted 100 photographs of items that can be used immediately in a classroom. I call it ‘dollar-store differentiation’. Small talking sticks can be made so that kids who cannot independently formulate getting-to-know-you questions can pick a card out of a bag or a stick out of a jar, to use as low-tech props.”

Her book also features adapted board games. “We wanted to be very clear; although nearly any commercial game can be played with an iPad, our goal was to demonstrate that basic low-tech AT solutions are sometimes as appropriate and even sometimes more appropriate than their high-tech cousins – because low-tech solutions can be fun, novel, or easier to use at times. For instance, if a child can’t manipulate the dice in a math game, you might use electronic dice or you could simply let him roll a few big fuzzy dice (think of the type hung on rearview mirrors) instead. Word games also lend themselves to low-tech supports. You can certainly play games like Scrabble online or you can try an off-line adaptation where students wear letter t-shirts and arrange themselves into words and short sentences.

Her articles on inclusive schooling also include AT components – with a caveat. “For some students talking about a book in class is impossible if they lack reliable speech.” In such circumstances, she comments, “we look at the recommendations and instead of suggesting a specific device we ask how technology can help engage a child. For example, can we use a software drawing program if a child can’t reliably draw

on his/her own? If a child can't talk to discuss a page in a book or a chapter, can we then utilize a lower- or higher-tech AAC solution? The recommendations still stand but technology can be inserted into the solution."

In her trainings Dr. Kluth uses two process-themed articles, entitled Twenty Ways to Adapt the Read-Aloud (<http://www.paulakluth.com/readings/literacy/20-ways-to-adapt-the-read-aloud/>) and Twenty Ways to Adapt the Science Lab (<http://www.paulakluth.com/readings/differentiating-instruction/20-ways-to-adapt-the-science-lab/>), to push participants toward an emphasis on student goal attainment over materials. "Look at the options; don't be wedded to any specific piece of technology – use the technology to help achieve the desired solution." To encourage the participation of young students in read-alouds she specifically recommends the use of a BIGmack switch (<http://www.mayer-johnson.com/bigmack-communicator/?gclid=COSViZ-sya4CFYXe4AodAA5WAw>). In a science lab scenario she suggests that teachers can reach diverse learners by putting mini-lectures or lab demonstrations up on Teacher Tube or You Tube for students to access at home. "The articles offer specific situations in which a child might use a digital camera to take log notes if he/she is unable to take notes in the traditional manner. The questions for the reader to answer in a classroom environment are: What technology is available? What makes the most sense for each individual?"

AT and Inclusion: the Present and Future; IEPs for All

The AT Dr. Kluth favors for inclusion purposes depends on a child's current movement and communication needs and how those needs may change. "We want a student to have access to a system that's as sophisticated as possible. One of our failings in inclusion is that students sometimes lack consistent

access to their communication and technology. It's not so much that we aren't using certain devices often enough, it's that we aren't using those devices broadly enough. For example, some kids still work with paper-based systems who should be using technology and some learners only use assistive technology or augmentative and alternative communication in one or two classes but not in others."



For the present, Dr. Kluth says she will continue to strive to build up her technology knowledge base and "to accumulate more tools for my toolbox – and I intend to use all of them. I'm trying harder and harder to provide specific suggestions and examples about the best uses for technology." For instance, she says, "there are kids whom I know who have the most sophisticated communication device equipped with every possible bell and whistle, but when they are in the car and communicating in a confined space and all their material is packed in a book bag, they have a dashboard paper communication system duct-taped to the seat and they are able to communicate 'yes' and 'no' and do simple spelling with mom and dad in that context. This is an example of the full range of supports that can be used."

In the foreseeable future, she does not expect the emphasis on AT to change. "We will continue to answer the following key question: How do we provide scaffolding and support to allow children to engage in ways they could not without that scaffolding?" The response to that question, she declares, "might involve bells, whistles and cords – and it might not. That has never changed. What's changed from the past is the intensity with which we attempt to keep

pace with technological advances and provide as many rich examples as possible of appropriate technology use as more possibilities emerge.”

Further out, she says, “it will be so easy to have an IEP for every student, which will continue to change the way we view students with disabilities. When I started in this field, the statistic that was the most popular was that 75% of people with autism had an intellectual disability. That number has changed over the years; in some publications, it had already dropped to 50% when I returned to grad school. Today, that digit is still changing and being challenged and a lot of that is due to advances in technology. Technology has not necessarily made learners with disabilities smarter, of course. Rather, we have become more enlightened in our assessment of those with communication differences. The more sophisticated our technology becomes, the more opportunities people have to show us their complexity. The way we see individuals with disabilities changes and evolves with the technology. The challenge will be to better understand the complexity of individuals even before there is evidence-based reason to do so.”

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RESOURCES

ARTICLES

This Time It’s Personal

By Jennifer Demski

The Journal: Transforming Education through Technology (January 4, 2012)

According to the author, the National Education Technology Plan, the U.S. Department of Education’s Office of Educational Technology describes personalized learning as “an instructional approach that encompasses both differentiation and individualization, but is also sufficiently flexible in content or theme to match the specific interests and prior experiences of learners.” Writes Ms. Demski: “student-centered – personalized – learning cannot be truly implemented without the appropriate technology to drive it.” Educators, she notes, “have looked to technology for customizable solutions, implementing 1-1 laptop programs, utilizing data-driven decision-making tools and setting up learning management systems to access digital content.” However, she contends, schools have incorporated these 21st century instructional techniques and tools as add-ons to the teacher-centric 19th century classroom structure, in which much of the curriculum is textbook-based. The result, she points out, is that despite good intentions most students learn the same material the same way at the same time.

Technology-supported personalized learning, however, “is a student-centered teaching and learning model that acknowledges and accommodates the range of abilities, prior experiences, needs, and interests of each student in order to move every student to a higher standard of achievement.” By marrying the principles of personalized learning with technology tools, some educators, she asserts, believe that they have an opportunity to create a customized learning environment that can break schools out of the industrial-age model of educa-

tion. Ideally, Ms. Demski notes, technology-driven personalization combines the best of individualized learning – self-paced and diagnostic-driven – with the ability to adapt to a student’s specific learning styles, interests and background. Personalization, she insists, “might consist of students compensating for any gaps in their pre-existing knowledge by allowing them to unobtrusively Google unknown terms during group instruction rather than raising their hand, or by entering information about themselves into software that selects digital content based on the their interests and skill levels.” In addition to 1-to-1 laptop initiatives, learning management systems, access to online search tools and remedial coursework, the author cites social networking and Netflix as 21st century technology tools that can help implement personalized learning.

<http://www.fctd.info/resources/5304>

7 Things You Should Know About...iPad Apps for Learning

Educause (2011)

This information sheet addresses the following seven questions, the responses to which provide basic but necessary information to families and schools considering iPad purchases:

1. What is an I-Pad?
2. How does an iPad operate?
3. Where is the iPad being employed in a learning environment?
4. Why is the iPad a significant learning aid?
5. What are the downsides to iPad use?
6. What are the iPad’s potential uses as a learning tool?
7. What are implications for iPad classroom use?

<http://www.fctd.info/resources/5200>

WEBSITES

YouTube Teachers

YouTube EDU is a website designed for educator-created videos that support the teaching of difficult

concepts in a classroom setting. Educator-created and uploaded videos may be viewed in a teacher’s classroom or remotely by students with YouTube EDU access. The concept has proven especially successful in teaching math and science concepts to visual learners with learning disabilities. <http://www.fctd.info/resources/5280>

Martha Forest Centre: Inclusion Press International; Inclusion Network

Founded in 1989, the Martha Forest Centre fosters inclusive environments by producing relevant programs, materials and research. The Centre houses Inclusion Press International and the Inclusion Network under the banner of www.inclusion.com. Inclusion Press creates person-centered resource materials for public schools, community colleges, universities, human service agencies, health organizations, government agencies, families and First Nations organizations around the world. Materials include books, DVDs, CD-ROMs and video resources. The resources are grouped by categories, including: staff development, inclusive schools, life stories, MAPS, PATH, Circle of Friends (Circle of Support), diversity support and inclusive communities.

The Inclusion Network provides training, consulting and networking facilitators. The Network sponsors a Toronto summer institute, workshops and trainings. <http://www.fctd.info/resources/5241>

Spectronics Inclusive Learning Technologies

Spectronics is an Australian company that provides assistive technology products, assessments and consulting services. Of interest to U.S. online visitors are the site’s free software offerings and a free Universal Design for Learning classroom toolkit. The website also includes online demonstrations of common devices and software and a library of product reviews and informational articles for parents,

teachers and AT professionals. The Spectronics Activity Exchange offers free customizable downloads for BoardMaker, IntelliKeys, and DynaVox activities.

<http://www.fctd.info/resources/5089>

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The following information comes from the website of the Nevada Partnership for Inclusive Education - <http://nvpic.org/inclusive.html> More information about the history of inclusive education and specific classroom practices to encourage it can be found on their website.

Is inclusion the same as mainstreaming?

No. Proponents of mainstreaming hold that students with special needs be placed in the general education setting solely when they can meet traditional academic expectations with minimal assistance. Yet, simply placing students with special needs in the regular classroom is not enough to impact learning. Teachers in inclusive schools are asked to vary their teaching styles to meet the diverse learning styles of a diverse population of students. Only then can the individual needs of all our students be met. Schools of the future need to ensure that each student receives the individual attention, accommodations, and supports that will result in meaningful learning.

Will the learning of students without special needs suffer because of inclusion?

Studies have shown no slowdown in the learning of children without special needs in inclusive classrooms. Surveys conducted with parents and teachers involved in inclusive settings show that they see no harm to the children without special needs and that they have positive opinions about inclusion.

KNOWLEDGE NETWORK MEMBERS

Institute for Community Inclusion (ICI)

ICI consists of practitioners, researchers and teachers who advocate for individuals with disabilities, promote inclusion and develop supports for families of individuals with disabilities. ICI programs provide training, consultation, research and dissemination. ICI inclusion-related projects and programs involve local, state and national agencies, schools, institutes of higher education, national service programs, rehabilitation providers, multicultural organizations and employers.



For further information, contact:

Institute for Community Inclusion

UMass Boston

100 Morrissey Blvd.

Boston, MA 2125

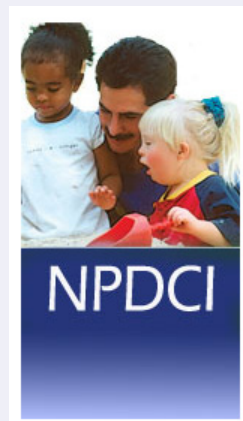
Phone: (617) 287-4300 (617) 287-4350 (TTY)

Fax: (617) 287-4352

<http://www.fctd.info/organizations/9874>

National Professional Development Center on Inclusion (NPDCI)

NPDCI collaborates with states to create a system of high-quality, cross-agency, accessible professional development for early childhood personnel. While NPDCI serves as a resource to all states, the center identifies certain states for more intense collaboration.



For more information contact:

National Professional Development Center on In-

clusion

The University of North Carolina at Chapel Hill;
FPG Child Development Institute;

Campus Box 8185

Chapel Hill, NC 27599-8185

Phone: (919) 843-5418

Fax: (919) 843-5764

Contact: Pam Winton, Senior Scientist

Email: winton@mail.fpg.unc.edu

<http://www.fctd.info/organizations/11431>

Institute on Disability Studies (IDS)

Housed
at the
Univer-



sity of Southern Mississippi, the Institute for Disability Studies (IDS) is Mississippi's Center for Excellence in Developmental Disabilities Education, Research and Service. In striving to fulfill its federal mission to enhance quality of life across the life span for individuals with disabilities, IDS promotes inclusion at home, school, work and recreational settings. Supportive efforts include interdisciplinary preservice training; community service activities that involve outreach training, technical assistance and model service demonstration; and dissemination of state-of-the-art practices based on applied research.

For more information, contact:

Institute on Disability Studies

118 College Drive # 5163

Hattiesburg, MS 39406-0001

Phone: (601) 266-5163 1-(888) 671-0051 (TTY)

Contact: Jane Z. Siders, Executive Director

Email: Jane.Siders@usm.edu

<http://www.fctd.info/organizations/7903>

The Center for Community Inclusion and Disability Studies (CCIDS)

Affiliated with the
University of Maine,



CCIDS provides edu-

cation, research, and

service. The center offers interdisciplinary undergraduate and graduate education in disability studies as well as a graduate study program in early intervention. The organization conducts applied research, policy analysis and facilitates scholarly dissemination. The center offers community education, technical assistance and information dissemination.

For additional information, contact:

The Center for Community Inclusion and Disability Studies

5717 Corbett Hall, Room 114

University of Maine

Orono, ME 04469-5717

Phone: (207) 581-1084 (800) 203-6957

Fax: (207) 581-1231

Contact: Lu Zeph, Director

Email: ccidsmail@umit.maine.edu

<http://www.fctd.info/organizations/8955>

National Arts and Disability Center (NADC)

NADC is a national
information dissemination,
technical assistance and referral
center special-



izing in the field of arts and disability. The center promotes the full inclusion of children and adults with disabilities into the visual-, performing-, media-, and literary-arts communities.

For additional information, contact:

National Arts and Disability Center

Tarjan Center for Developmental Disabilities
300 UCLA Medical Plaza Suite #3310
Los Angeles, CA 90095
Phone: (310) 794-1141
Fax: (310) 794-1143
Contact: Dr. Olivia Raynor, Director
Email: oraynor@mednet.ucla.edu
<http://www.fctd.info/organizations/444>

Institute on Community Integration (ICI)

Institute on Community Integration University Center for Excellence in Developmental Disabilities

Housed at the University of Minnesota, the ICI is a federally designated University Center for Excellence in Developmental Disabilities (UCEDD), part of a national network of similar programs in major universities and teaching hospitals nationwide. The institute supports inclusion by conducting research and offering professional training, technical assistance, and publishing activities, in collaboration with UCEDD organizations nationwide and overseas.

For further information, contact:
Institute on Community Integration
102 Pattee Hall, 150 Pillsbury Drive SE
Minneapolis, MN 55455
Phone: (612) 624-6300
Fax: (612) 624-9344
Contact: David R. Johnson, Ph.D., Director
Email: ici@umn.edu
<http://www.fctd.info/organizations/386>

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For an interesting and informative personal perspective on inclusive teaching, read Gayle Hernandez's blog post, **"Forming Inclusive Classrooms"** on the website of the National Dissemination Center for Children with Disabilities (NICHCY) at: <http://nichcy.org/forming-inclusive-classrooms>

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