



## IN THIS ISSUE....

### **AT and Inclusion: A Design for Better Learning**

For years, parents, school officials, therapists and teachers have sought ways to achieve large-scale inclusion of special needs students in general education classrooms. Success so far has been spotty but often dramatic, and many barriers remain to be surmounted by individuals of goodwill. Assistive Technology (AT), with its equalizer role, has often played a pivotal part in inclusion success stories. AT's increasingly widespread use and acceptance may pave the way for a world of inclusion based on the principles of universal design, where *all* students benefit from the technology conceived for the betterment of a few. That world may not be achieved for years or even decades but progress toward its realization is made daily in classrooms nationwide by general education and special education teachers, therapists and paraprofessionals who recognize the value of an interdisciplinary team approach to inclusion, one child, one class, at a time.

This issue examines inclusion and the role of assistive technology in helping achieve a universal design environment that may make inclusion a reality.

### **Joni Nygard Speaks**

A child of teachers, Joni Nygard attended an elementary school that housed her town's special education program. Often she asked her parents why there were some students who always had to stay at one end of the hall in just one or two classrooms, why they

rode a separate bus, why did the kids in those two classrooms "have pizza today while we had math class" and why was it reported that one of the boys in those classes had pushed another child to the pavement at recess that day? Her parents' advice: Ask those students about what goes on in their classes – and ask their teachers too. "And that's exactly what I did. I thought those kids needed friends just like I needed friends. I volunteered to help out in those classrooms as often as I could or whenever the opportunity arose."

Ultimately, Ms. Nygard grew up to spend more than a decade as the Director of the Trace Research and Development Center's Communication Aids and Systems Clinic housed within the University of Wisconsin's Waisman Center in Madison, WI. A speech and language therapist specializing in augmentative alternative communication (AAC) and AT, she is currently Director of Speech and Language Product Development at the Attainment Company, Verona, WI. The company serves the AT needs of teenagers and young adults with multiple and cognitive disabilities. Attainment Company "is one of the few companies in this niche that provides age appropriate materials." One of the company's goals Joni explains, "is to put AT devices – the tools of learning – into the hands of families and school districts at a reasonable price."

Ms. Nygard is a past president of the Wisconsin Society for Augmentative Alternative Communication and Assistive Technology (WISAAC). She presents internationally and nationwide on AAC/AT and related topics. The following quotation from 19<sup>th</sup> century legislator and famed orator

Daniel Webster, forms the bedrock for her work with individuals at both extremes of the life cycle, who either do not possess or have lost their ability to speak:

*"...if all my possessions were taken from me with one exception, I would choose to keep the power of communication, for by it I would soon regain all the rest."*

Supporting our interview with Ms. Nygard are resources to assist parents and others in furthering their children's AT-supported inclusion. We also feature members of our **Knowledge Network**. The members spotlighted this month focus on various aspects of inclusion aided by the use of assistive technology. We invite you to contact these organizations for further information.

Please share this newsletter with other organizations, families and professionals who may benefit from it. We invite you to contact us at <http://www.fctd.info>. We welcome feedback, new members and all who contribute to our growing knowledge base.



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## **AT and Inclusion: A Child Cannot *Not* Communicate**

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*An Interview with Joni Nygard, Alternative Augmentative Communication Specialist, Speech and language Therapist*

In her Wisconsin home, AAC expert Joni Nygard keeps a framed quotation displayed prominently. The quotation, supplied years ago by a colleague, reads: "A child cannot *not* communicate." The key to successful inclusion, she believes, is communication, aided by assistive technology in a classroom marked by universal design (UD). This is what she has worked toward for two decades.

The barriers to achieving her dream are well known: insufficient teacher training; unavoidable budgetary constraints imposed on school districts; the effort, time and expertise necessary to create general education-special education-paraprofessional-therapist classroom teams. Most barriers can be folded underneath the banner of the "Three As:" access, availability and attitude.

She again emphasizes the importance of universal design. "As we talk more and more about universally designed classrooms, [we have to look at] the benefits when all the kids in the class are using an AlphaSmart, not just the kids with disabilities."

Recognizing the reality of budget constraints, she adds, "If it's not practical at first to equip an entire class with AlphaSmart devices, maybe it's possible to equip small groups of students with the devices. Maybe these groups don't have to all use the same tool. Instead, maybe they use different tools."

However they're utilized, AT tools, she exclaims, ought not to be viewed as classroom add-ons. "We need to rethink how we're incorporating AT. Maybe we ought to call AT something else – like a 'learning tool,' for example."

### **Redesign for Coolness**

Another barrier, however, is more subtle but also important: creating "cool" AT that makes kids who use it stand out in a positive way, that makes classmates want to try the devices as well. Universal Design is useful here too, she explains.

Product redesign may be in order, she says, at least for AAC devices. She asks, "As a product development person, how can I look at an AAC system if we recognize up front that the student for whom the system is designed won't be communicating verbally the same as other students? How can I design that system so that the system is viewed as 'cool?' Should it look more like a

cell phone? Should it perhaps be designed to look more like a Game Boy, for instance, or a high-tech gadget?"

According to Ms. Nygard, "We need to examine the feasibility of not only putting different tools in the hands of different students, but also revisit the design of those tools and look for ways to make them as integrative as possible."

Her prototype for such an approach is the curb cut, a universal design concept intended for wheelchairs but conducive to other uses by non-disabled individuals.

Ms. Nygard advocates a universal design that will promote all learning, "which will help all kids, especially those with disabilities to participate and feel involved in their social world." Many students benefit from AT, she comments, not only those with disabilities. "There are many software programs that are beneficial to general education students. To have all students in a classroom using similar tools and similar software is a great aspiration."

### **Making Their Own Choices**

"I'm a firm believer in choices when integrating students with special needs into an inclusion class," Ms. Nygard declares. Students should be able to choose between several types of AT. "You ask the child, 'What's your goal?' Depending upon the child's answer, you might say, 'Here are three tools. Which one do you think would be most effective in helping you solve your problem? Which strategy do you prefer?' Let the kids be a partner in choosing the tool that works best for them."

For students, who do not want to be the only one in the class tapping on a keyboard, a different strategy might be best. "Maybe the student can use a tape recorder and then, later, take their notes from the tape recorder. Maybe the student can use a peer's notes. Maybe a student types the notes for the class on the laptop one day and another student on another day, on a rotating basis,

so that it's not just the one kid with the disabilities who is doing all the typing and thereby standing out in a way that's not desirable for that student." Such a flexible approach, she adds, "certainly reflects the universal design concept because every class member is contributing and there is equal access for all."

As a speech therapist, she is often asked by a student about a device or a program that will work in, for example, 11<sup>th</sup> grade biology class to provide the needed vocabulary. "It's been awhile since I was in 11<sup>th</sup> grade biology," she chortled. A better solution, she explains, is for a peer sitting next to the student to program the AAC device during the few minutes available after the conclusion of a test or at the beginning or end of a unit. "The peer can set up the first page of the student's communication device so that the student with disabilities can participate in upcoming lectures."

### **Use All the Tools**

"The field of AT has tools," she states, "just like teachers have books and paper and pencils. For inclusion to work, we need to use all the tools we have available." The bottom line, she continues, "is that we have to be creative in how we utilize the available tools."

Parents, teachers and administrators – therapists, too – are better off in their quest for inclusion if they view AT, not as *the* answer, but instead as a tool that encourages and facilitates learning for all students, she insists.

### **Find Peer Tutors**

The first step in a classroom is to gather all the available AT tools for learning. Next, inclusion team members must consider what their peer groups can do. Ms. Nygard advises teachers, "As you struggle with implementation of inclusion, find a way to utilize the resources available to you. For example, is there another student in the class who excels, who finishes projects early

and who can then work alongside a student with a disability. For teachers, my advice is: Find those peer tutors in your own classroom.”

At the school district level, she asks, “Is there a high school program that has a need for a class credit where individuals can come into your elementary school or middle school and provide assistance? Perhaps an older student is taking a computer programming class at the high school level? How might that individual aid in integrating that middle schooler? Use what’s available.”

### **Training and Scheduling**

As an AAC specialist, Ms. Nygard has encountered barriers when she tries to include children in general regular education classrooms who are using complex communication systems. Training and scheduling are familiar culprits.

Paraprofessional training needs improvement. Paraprofessionals, she points out, spend more time with special needs students than do the general education or special education teachers and need AT resources readily available and training on how to use those resources.

Training and scheduling issues often collide with the time constraints of the workday. “We all have our responsibilities that need to be met during a given school day. In a classroom situation, teachers need to teach or to meet with a requisite number of children, hold a certain number of classes or dedicate a certain number of minutes to reading,” she says. “We need to re-examine how we schedule our resources. The people on our team are our support structure, and I find that we often don’t have much flexibility as professionals. Perhaps if I weren’t meeting face-to-face with each of those children each day, I might have some flexibility to go in when Susie is doing her reading session so I can make some language adaptations; often this is very difficult to do. Every inclusion team member,

not to mention parents and administrators, faces similar dilemmas.”

### **The Age-Old Barrier: Attitude**

Inclusion must be approached with a positive attitude, she warns, because there are so many obstacles that must be confronted and overcome. Sometimes, an individual’s pre-conceived ideas about inclusion can interfere with programming. “For example, a child has a certain behavior that’s going to occur which may disrupt a teacher’s classroom. In an effort to avoid that behavior, we lose a potential positive contribution on the part of the child that might have occurred during the classroom period.”

Preconceived attitudes can set a student up for failure. “We say, ‘I don’t think Johnny can make it in a sophomore English class. How could this ever work? I don’t see it happening.’ And it doesn’t happen.”

While attitude remains the number one barrier to inclusion implementation, Ms. Nygard believes that we’re beginning to move beyond the attitude issue, especially as we gain more and more insight on how best to train the newer teachers.”

Administration can also act as a barrier, based on funding policies, she states. “As an augmentative communication professional, I’m very familiar with funding crises that pit a school’s budgetary restraints against a family’s desires.” The idea, she says, is to find ways for families and school officials to find common ground, not to find fault among professionals who are doing their best in a situation that imposes hardships on all parties.

### **Access and Availability**

Access and availability are two more barriers. Scheduling, she says, doesn’t just involve people resources; it also involves material resources – the logistics of making equipment available where it’s needed when it’s needed. In other words, she says, “I can’t use the same device for four different

kids if they all need it during the same hour."

She hopes that the inclusion process will be accelerated as more and more general education teachers advocate the use of AT in IEPs. Employing an interdisciplinary approach to inclusion should result in increasing general ed support for AT in IEPs, she hopes.

Achieving such an approach, however, may be easier said than done, she cautions. The reality, she explains, is that general ed and special ed teachers have been separate for too long in training and coursework. "Too often we find ourselves – as special ed professionals or as general ed professionals – talking to ourselves but not to each other as a group."

For example, she says, on a given AT or inclusion issue, "I may be talking to a special ed or augmentative communication specialist, both of whom 'speak the same language' as I do. Where I really need to be spending my time is with general educators who might not have knowledge of the concept in question."

That interdisciplinary approach needs to be inculcated at the university level, during pre-service training, she says. "We also need to take that approach in our continuing education, making it more a sharing of information than a potentially adversarial arrangement. We have to work more closely together toward a common objective."

Where there's a reluctance to recognize AT's benefits, she remarks, short video vignettes would have positive impact at a staff meeting. "Maybe one principal's staff meeting a month could focus on inclusion and success stories."

Learning from inclusion successes can help melt reluctance to see AT's benefits, she notes, but the most surefire way to reduce resistance is one relationship at a time. "My advice to administrators is to look at your whole team, focus first on those who are

excited about change and are looking to make things work. Build a few successes and then begin to bring those who are more reluctant on board. I don't think there's a silver bullet that would make AT-supported inclusion gain general acceptance overnight. That acceptance has to be built, gradually."

### **The Power of AT: Communication as the Cornerstone**

AT's power to expedite inclusion was twice dramatically demonstrated to Ms. Nygard in two incidents she witnessed. The first incident occurred several years ago when a student of hers was entering kindergarten. "I was deciding how to create an alternative communication system for her. She was a child who was severely physically challenged. She had visual challenges and cognitive challenges. We asked ourselves, 'How are we going to include her in first grade and make this work?'"

Communication was the cornerstone of the eventual solution. "Communication," she commented, "is how all children interact." The goal was to help her kindergarten classmates understand how she communicated as well as how they might interact with her and employ integrative strategies. "We often see children with complex communication needs partnering only with adults. We have a responsibility to train other partners, her peers, in addition to adults, to utilize those communication tools," she explains.

In the first week of school the girl's classmates identified their individual likes and differences. "During that week I took the opportunity, as a speech therapist and as a friend of this girl, to bring a communication device to the classroom. There was more than one system. There were single messages. Opportunities existed for her to make two or three choices. We allowed the other children to touch each AAC system, to feel them, to record on them, to ask questions. I think this approach was ever so important in getting the other children on board." The girl, Ms. Nygard recalls, "had a

whole classroom of friends ready to help her communicate." When the teacher wasn't readily available, there was another communication partner eager to help.

During this process, Ms. Nygard recalls thinking, "These kids are really the ticket; they may be the answer to how we can include her across various activities." If the girl's device was not programmed with just the right phrase or the right message for her to actively participate, who then is best to quickly adapt that? The child sitting next to her, of course.

"I realized that there was a lot of power in peer programming and in students buying into the inclusion process and perhaps gaining a little insight on what this child wants and why she wants it. I let her choose what she wanted to say. Kids naturally pick up on much of this, which helps to break down yet another barrier to inclusion."

Understandably, there is often trepidation on the part of teachers and staff about how much AT costs for kindergartners and pre-schoolers, Ms. Nygard observes. "We have to help them overcome their trepidation," she declares. "The issue is not whether the equipment is a \$5 book or a \$2,000 device. The reality is that we need to learn to let children learn in their own style using appropriate tools. It was important for this girl's classmates to understand that they should always ask her permission if they could touch her learning tools, and that it was OK to do that if she said yes."

### **No Substitute for Exposure**

There's no substitute for modeling, she declares. "In a school setting, teachers and administrators and general ed kids ought to be exposed to kids with disabilities." Some parents disagree, however. They may be reluctant to include their child in a classroom with an autistic classmate, for instance. "I can't and won't fault parents for that initial hesitation. As a potential parent, I feel it

myself. I also wonder how an inclusion would work for my child and how I'd feel about it."

She believes deeply, however, "that we as non-disabled individuals have as much to learn from children with disabilities as they have to learn from individuals without a diagnosed disability." She continues, "We all have disabilities and abilities throughout our lives, and they continue to change and evolve as we age. Inclusion can only be a benefit because all of us need role models. All of us need someone we can look up to. That person may possess abilities similar to ours or abilities that are very different."

She works with a young man who has Down syndrome. "He's a typical boy. His parents worked very hard throughout his education to keep him fully included. They felt that he was going to learn better behaviors, better language skills and would be in the heart of the action rather than off on the sidelines as a passive onlooker." Today this young man holds a black belt in karate.

"He has been fully included and there have been benefits for him. Are his reading and math levels at the age appropriate level? Perhaps not, but he offered skills and benefits to other students who went through the process with him. He learned from them. They learned from him."

### **The Play's the Thing**

Another dramatic inclusion moment occurred very recently in a nearby high school and involved a young woman who is autistic and who was included in a general ed sophomore English class. The class was studying Macbeth and gothic tales the day Ms. Nygard visited to observe the inclusion team.

"She was a non-speaking individual, who has a very difficult time making eye contact." As an introduction to the review before a test, the general ed teacher asked, "Why doesn't the speech therapist help program some information about the gothic tales into the [young woman's] communication device so

she can present that information to the class as their test review?"

Explains Ms. Nygard, "The young lady may take a modified test and perhaps won't know every detail, but what she was learning was the interaction skill of standing up before people, learning to make eye contact, and realizing that can communicate messages to her classmates that have significance within the context of the classwork."

Ms. Nygard looked on as the young woman stood before the class and provided nine details about information relevant to the class's test review. The class applauded as she returned to her seat. She made eye contact throughout. The teacher then stood up and reiterated the information the student had provided. No mention was made that the student had disabilities. She was part of the class.

"It was fantastic to see this general ed teacher use that information as the basis for the class discussion without making a fuss about who or how it had been provided." Later in the class, Ms. Nygard recalls, another student supplied a wrong answer. The teacher then called on the student with disabilities and asked her to review the information for her classmate. The student went to the young woman's desk and was shown the correct answer on her AT device. The teacher had given her a non-verbal prompt to activate her device.

The general ed teacher had never before had an individual with a diagnosed disability in her class. "She was game to give it a try." But the teacher wasn't left alone to implement the inclusion. The young lady had a one-to-one assistant for her general ed classes. The inclusion team – a general ed teacher, a special ed teacher, a speech-language therapist and the paraprofessional -- met once a week, in the morning, for 15 minutes to identify the class activity that week, as well as the activity in which the general ed teacher felt her student might best participate. The general ed teacher took the responsibility to inform the team about

the information she thought the young lady could share with the class and what modifications were necessary to include her in a peer group.

The same class then opted to use picture symbols when profiling the characters in Macbeth as test preparation. The general ed teacher formed a peer group of four students, including the classmate with autism, who had the picture symbols on her desk. The peers, as they reviewed their worksheet, helped her match character to sample test question.

"She was providing and pasting the symbols onto the worksheet for her peer group," Ms. Nygard recalls. "When it came time for her group to share, another peer shared the information, but the group used the paper with the picture symbols that had been in the presence of that child with the disability."

### **"It Was a Huge Beginning"**

I asked the team, "Does this happen every week? Is she always this successful?"

The team members replied, "Truth is, we can't adapt every idea or every activity to her needs because time doesn't allow for that. We don't always have the materials available that she needs." Obviously, this was not going to be a daily event, Ms. Nygard notes, "but it was a huge beginning for her just to come and go from this class."

Initially, she remembers, the goal was for the young woman to meet a peer in the library just before the sophomore English class. The peer would walk with her into class. "That's how they got the young woman to transition into the classroom. She met the peer in the library, had a couple of minutes of social interaction with her. Then they'd walk to class together, take their seats and class would proceed. The team members had to keep redefining their success."

Success in such an effort, Ms. Nygard observes, "can be defined just by mere presence in a classroom, by passive participation, by active participation. The team has to think about all the parts that comprise inclusion and what parts are most successful."

If the young woman "was making noises and disrupting the class, then that would be one of those moments when she would have to be asked to leave the class. It's not that other students aren't leaving class for various reasons, because they are. She'd be given a pass by her paraprofessional when she started to behave inappropriately in the classroom."

Says Ms. Nygard, "The neat part of this experience was that it involved a paraprofessional who knew when to back off and when to step in. During that class, the paraprofessional had other tasks to perform beyond that autistic student. The paraprofessional's involvement was not 100% required in every movement. It's neither necessary nor desirable to have an adult staff person one-on-one with a student 100% of the time in order to make inclusion work."

### **"Just One of My Students"**

What made this effort a success, Ms. Nygard says, "is that a facilitator was available to get things started. Then the peers would take over and the young woman herself would rise to the occasion by emulating her classmates. If the other students are sitting quietly, then the included student would want to imitate them because she wanted to remain in that classroom."

"If teachers can be shown that something -- in this case, inclusion -- can actually make their day easier, or that their time will be saved in the long run by adaptations, they will be supportive." That's not to say, she cautions, that the exact adaptations might work for every student wanting to take that Macbeth course, "but certainly some of those adaptations would apply across time."

"I told her general ed teacher, 'You're really making a difference here.' She replied, 'I regard her as just another one of my students.'"

The general ed teacher, Ms. Nygard explains, directly interacts with her student. "That's an area where special educators sometimes get in the way. Our goal should be to help the general educator, not to get in the way of that interaction." The speech therapist, for example, "can't always be there to program the student's AT device to make it work in a specific situation. Maybe after the speech therapist demonstrates it one or two times, the paraprofessional can make it work the next time, or maybe the general ed teacher can quickly program it, or maybe a peer will say, 'I remember how we did that the last time for gothic tales; let's do that again.' The peer then takes responsibility."

Taking ownership of this process is a key component at all levels in an inclusion classroom, Ms. Nygard commented. Another component is revolving responsibility and role changing. "Everything can't be on the shoulders of just one person. It takes a team."

### **Special Ed's Pivotal Role**

Special ed teachers have a crucial role to play in the inclusion process, she explains. "Their skills can best be applied in an inclusion environment. They've attended the special workshops and understand the various adaptations and the special tools that are needed and available. The key for a special ed teacher is to know what your strengths are and to be confident of your own ability to make inclusion work."

In other words, she adds, "special educators will become facilitators as well as teachers. They'll assume the role of a consultant, as the repository of additional ideas and strategies." A consultant, she explains, must work hard to be a member of a team. "Consultants shouldn't dictate. They have to

discover what works for all the parties and build on that.”

Even if there is reluctance in the classroom about implementing an inclusion, “a consultant has to find the one tool, the one time of day, when inclusion worked well for that student and expand on that. Maybe that student is not successfully included, depending on how one defines success, during all seven periods of a school day. But maybe there are one or two periods of that school day that are really powerful environments for inclusion success for both student and teacher.”

### **Success Breeds Success**

The more successes a teacher can have, the more success the teacher sees in the included student, the more willing the general ed teacher may be to expand the variety of AT employed and the time in which they include students, Ms. Nygard claims. Sometimes, inclusion in small increments is the most practical approach. “The point is to build on what is available.”

While there are models for inclusion success, one size does not fit all, she warns. “The same team that made this sophomore English class so successful had the opposite experience earlier. One of the team members told me, ‘We tried the same approach for a sophomore history class last semester and it just did not work. It wasn’t the best topic, the student wasn’t interested, the peer role models weren’t the same, the parties surrounding that class’s inclusion structure weren’t the same.’” Instead of throwing up their hands and admitting defeat, she adds, the team chose another classroom, another environment, and another topic and succeeded. The team also came to define success differently, she says.

### **A Style That Was So Exciting**

Ms. Nygard recently monitored an elementary school art class room where she was unfamiliar with which students were diagnosed with disabilities and which

weren’t. “But it didn’t take long to discern which children had special needs or special issues to address. The art teacher had the kids using regular sketchbooks with pencils and paper. There were a couple of students in there who obviously were unable to use sketchbooks and pencils.”

What she viewed next was “an inclusive teaching style that was so exciting for me to see.” The teacher suggested that the children having difficulty with sketchbooks use computers that day instead. So the students drew on the computer. Some were sitting in clusters. Two children with special needs were using a computer. The teacher asked a student who did not have disabilities to join them there after he’d finished working with his sketchbook, providing them with a peer role model. “It was a very natural interaction,” Ms. Nygard observes.

The teacher later told Ms. Nygard that she had a student who was tactilely defensive, who wouldn’t touch clay, specifically earthenware clay, perhaps because it was too sticky. She wasn’t sure how to help that student get comfortable.

“I asked the teacher if she had tried giving the student a choice. There must be other materials that are similar to this clay that the student won’t find objectionable. Later, she told me, ‘It worked. I gave this child plastic clay, air drying clay and earthenware clay and he picked one.’ He picked the plastic clay first and started to mold. Then another student came over and showed him how he was molding his clay pot. Pretty soon, the boy who was tactilely defensive was touching the other boy’s wet and sticky clay. She said, ‘Now I know to give that boy some choices,’ the teacher told me.”

### **The Future Is a Long Way Off**

“We have a long way to go before we achieve universal inclusion,” Ms. Nygard predicts. Resistance is not the only reason. Equally important is the time required for implementation. “We spend so much time in these IEP meetings. We have to find a way

to make goal setting more efficient. Often, we have goals committed to paper but we are unable to achieve them. We have a distance to go in creating ways to save time on the development of implementation strategies."

Her fear for inclusion is that "we are going to revert from general ed inclusion to the segregated model. I don't want to see that happen. We need to find the right balance between the two approaches. Maybe it's three or four class periods out of the day when inclusion is appropriate. In the other class periods, the resource room might be more appropriate so that children with disabilities can focus on development of specific skills."

She'd like inclusion to be effective for more families, not just those who advocate strongly for it. "I worry about those students who have parents who are not as literate or as well versed in system issues. How do they help their youngsters gain access to AT and to learning? I hope that universal design will help answer that question."

As the nation becomes more diverse culturally, as the children of immigrants continue to pour into the school system, inclusion and universal design – supported by AT -- may help to absorb them as well as children with disabilities. "Inclusion really is the American Dream for so many children and their families," she concludes, "and AT has a major role to play in making that dream come true in our classrooms."



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## RESOURCES

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### ***Addressing Technology Pros and Cons***

By Miriam Struck, ATR/L, ATP  
Advance for Occupational Therapy  
Practitioners  
Merlon Publications, Inc. 2003

The article addresses the role of the occupational therapist (OT) in the school system. The author, Miriam Struck, writes that OTs are needed in school systems because they contribute to the learning and development of children by addressing motor needs. OTs help students function in inclusive settings and support their participation in required activities, such as standardized testing. The article calls for occupational therapists to do more than examine motor access when working in the schools. Ms. Struck says OTs should think of ways that technology can be used to meet the needs of students with disabilities. The article can be viewed at:

<http://occupational-therapy.advanceweb.com/common/editorial/editorial.aspx?CC=13845>

### ***Postsecondary Options for Students with Disabilities***

By Meg Grigal, Debra A. Neubert, M. Sherril Moon  
Council for Exceptional Children 2002

Providing educational services in the postsecondary setting has proven to be a difficult task for students with significant disabilities. These students are served in a high school setting until they are 21, three years longer than their peers who do not have significant disabilities. True inclusion would provide ongoing support at a college or community college. This article defines the problem and poses a plausible solution.

The solution presented in the article requires individual-centered planning by the student, the school, community personnel, and family. Several post-secondary options are listed with benefits and challenges presented for each. A sample post-secondary schedule is given and several models of successful

programs are described. A needs assessment matrix, developed by the University of Maryland, is included. The process outlined in the article may assist many families in developing a positive and successful plan for older students. The article provides a list of helpful resources including a source for the complete needs assessment survey.

This article is especially valuable for parents of students with disabilities who are nearing the chronological age of graduation but will perhaps not receive diplomas and who are looking for an alternative to three more years of high school special education. [http://journals.sped.org/EC/Archive\\_Articles/VOL.35NO.2NOVDEC2002\\_TEC\\_Article%2010.pdf](http://journals.sped.org/EC/Archive_Articles/VOL.35NO.2NOVDEC2002_TEC_Article%2010.pdf)

### ***I've Got a Palm in My Pocket: Using Handheld Computers in an Inclusive Classroom***

By Anne M. Bauer, Mary E, Ulrich  
Council for Exceptional Children 2002

Bauer and Ulrich describe the first phase of their program to introduce handheld computers into students' daily lives and then document the results. The authors were astounded, and at first skeptical, of the increased success that the 28 sixth graders experienced as the students soon outpaced the investigators and began to use the handhelds to increase their efficiency, organize work, and to support each other in the true spirit of an "inclusive" environment.

Bauer and Ulrich discuss their results and the implications for increased use of handhelds as student tools, the need for teachers to monitor and manage their students' use of the technology, and the difference between the educator's handheld learning curve and the student's handheld experience. [http://journals.sped.org/EC/Archive\\_Articles/VOL.35NO.2NOVDEC2002\\_TEC\\_Article%2020.pdf](http://journals.sped.org/EC/Archive_Articles/VOL.35NO.2NOVDEC2002_TEC_Article%2020.pdf)

### ***Get SETT for Successful Inclusion and Transition***

By Joy Smiley Zabala, M.Ed., ATP  
LD Online Newsletter 2004

Created by Ms. Zabala, the SETT Framework supports a thorough, simple approach to AT assessment and intervention. She writes, "When data is gathered and organized with simplicity, a team's ability to effectively generate a range of tools which may be tried with the student is greatly enhanced." It is much more likely, she adds, that the selected system of tools will enhance the student's abilities to address the tasks in which he/she is expected to build competency, thus making the tool more valuable. Equally, she notes, it is more likely that the people supporting the student will see the relevancy of the technology as the student grows in competence, confidence, and independence and thus be more active in encouraging and supporting the student's achievement through its use.

Using the SETT Framework as a guide, she concludes, "it is possible, from the start, to address and overcome many of the obstacles which lead to device abandonment." When the environment and the tasks are fully explored and considered, the lament, "Well, the device is here, now what do I do with it?" should never be heard, she notes.

The acronym "SETT" stands for: Student, Environments, Tasks, and Tools. The "Framework" offers users guided questions to pose and issues to consider within each of these aspects of AT assessment and implementation.

[http://www.ldonline.org/ld\\_indepth/technology/zabalaSETT1.html](http://www.ldonline.org/ld_indepth/technology/zabalaSETT1.html)

### ***Inclusion Bill of Rights for Parents*** LD Newsletter Online February 1999

Reprinted frequently since 1999, the complete text of the Inclusion Bill of Rights for Parents is reproduced below:

**1.** The right to participate and receive accommodations in a full range of school programs and activities, available to all students, including academic, vocational education, transition services and job training and placement opportunities and articulated school-college programs.

**2.** The right to needed related, or support, services in general education classes for your child, including: guidance and counseling, career counseling, peer support and medication services, assistance with application to colleges or post-secondary placement, health services and counseling and other supportive services.

**3.** The right to participate in the full range of school extra-curricular activities generally available, including: student clubs, sports as appropriate, drama and theatrical productions, chorus, debate teams, trade-related clubs, student governance organizations, booster clubs, student fundraising activities and other extracurricular opportunities.

**4.** The right to participate in the technology-related opportunities generally available, including: access to libraries, information centers and technology laboratories, school-based weather stations, and accommodations in such centers, adaptations to equipment that may be necessary for use of the technology, participation in student group activities using technology.

**5.** The right of the child to participate in his/her own IEP (to the extent possible for student with severe cognitive disabilities) and the right to be present and participate in the IEP placement meetings prior to placement to discuss and learn about needs and available accommodations.

**6.** The right to advanced notice about your child's placement and to participate in an IEP meeting to discuss any changes in that placement.

**7.** The right to know that emergency management procedures and policies for the school are clearly defined, and written down, in order to guide teachers and other school personnel actions in the event of a behavioral, medical or natural emergency involving your child.

**8.** The right to supplemental supports in the classroom in regards to materials, equipment or personnel that are deemed necessary to ensure that your child benefits from the educational and social program in the classroom, including, but not limited to physical assistive devices or equipment, technology adaptations (computer adaptations), physical adaptations to the classroom, personal or classroom aides, instructional materials, interpreters, recording devices or other equipment.

**9.** The right to advanced knowledge about classroom accommodations and the availability of supplemental materials and equipment so that you as the parent may support or augment your child's orientation or training on the use of needed equipment and materials in advance of their placement into the classroom.

**10.** The right to access the IEP. The right to access and review of the IEP of your child placed into the classroom and the right to frequent communication with teachers and administrators about the progress of your child, or changes in the curriculum or program for your child that may be related to adjustments to the inclusive classroom.

**11.** The right to communicate problems. The right to a fair and accessible process in which your child's placement and progress, and to request consultation or assistance in problem solving, seeking additional support or suggestions on how the home environment may support the problem-solving process.

**12.** The right to have trained personnel. The right to have your child taught by teachers and support personnel who are adequately

trained for educating children in inclusive classrooms.

**13.** The right to have a comprehensive vocational assessment as part of the transition services required under IDEA, and to have an interpretation of the meaning of the results in terms of your child's future program, services or home enrichment.

**14.** The right to trained personnel in career-vocational education. The right to adequate and preparation of direct support service and instructional staff to ensure access to the range of educational, career-vocational, technical and technology-related, and transition services.

**15.** The right to participate in school-to-work opportunities. The right to have the needs of children such as yours addressed in a coherent school-based plan for career-vocational services and school-to-work opportunities and which explicitly describes services, activities and resources to support your child's participation in these opportunities.

**16.** The right to inclusion in school reform opportunities. The right to have the needs of children such as yours addressed in a coherent school-based Goals 2000 and school reform plan.

[http://www.idonline.org/ld\\_indepth/legal\\_legislative/inclusion\\_bill\\_of\\_rights.html](http://www.idonline.org/ld_indepth/legal_legislative/inclusion_bill_of_rights.html)

### ***Assistive Technology and Inclusion***

By Caren Sax, Ian Pumpian and Doug Fisher  
Interwork Institute  
San Diego State University Consortium on  
Inclusive Schooling Practices 2003

The study demonstrates how teachers and advocates became familiar with AT. The authors use a case study of "Joey" to illustrate how AT can provide opportunities for children with physical disabilities. Identified as "deaf-blind with cognitive disabilities, Joey spent the first years of his school life in a special day class largely

confined to a beanbag chair. He possessed no consistent method of communication other than screaming or crying. Even the peer helpers refused to assist him, the authors write.

When he was eight years old, AT was introduced into Joey's life with dramatically positive results. The authors illustrate the importance of employing the full spectrum of available services, including AT, to implement educational inclusion. By using the right combination of adaptations, teachers and advocates positively impacted Joey's education and his peer interaction. The article details the changes that occurred in Joey's life as he began to use customized adaptations and commercially available products to support his inclusion into general education. The authors provide useful AT resources.

<http://www.newhorizons.org/spneeds/inclusion/teaching/sax.htm>

## **WEBSITES**

### **Inclusion**

Webliography 2005  
Family-to-Family

This website provides access to a multiplicity of web-based inclusion resources that spotlight AT implementation.

<http://www.familytofamilynetwork.org/f2fWeblinks13INCLUSION.html>

### **Virtual Library**

*National Library of Virtual Manipulatives for Interactive Mathematics*  
Utah State University 2005

Supported by the National Science Foundation, the National Library of Virtual Manipulatives for Interactive Mathematics is a collection of Java applets used as virtual classroom tools to encourage students to connect concepts, build applications, and integrate mathematics into the usable numerical and spatial relationships that they will need beyond the classroom.

The NLVM is a strong supporter of mathematics as an inclusive, truly interactive

discipline, and the use of Java programming makes these tools highly web-accessible. Although some concern has been raised in the past that the site and the tools may not be as approachable for students or instructors with visual and physical disabilities, all graphics and buttons are labeled and captioned for screen readers and hyperlinks are labeled. The site offers a bi-directional index where users can select from tools by discipline or by grade level.

For example, when users click on a virtual tool, a separate workspace opens. In addition to the typical navigation page bars, the workspace includes zoom buttons and mathematical choices related to the current exercise. The workspace offers side-by-side explanations, a menu for exercise instructions, parent or teacher lesson plans, related activities and educational standards for each individual exercise. CD-ROM costs vary widely. Both website addresses below provide information about these tools.

[http://www.mattimath.com/browse\\_dept\\_items.asp/categ\\_id/3/parent\\_ids/0/Name/bNLV\\_M\\_CDb](http://www.mattimath.com/browse_dept_items.asp/categ_id/3/parent_ids/0/Name/bNLV_M_CDb)  
<http://nlvm.usu.edu/en/nav/index.html>



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## KNOWLEDGE NETWORK MEMBERS

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### The Inclusion Network



The Inclusion Network was formed when discussions with individuals and organizations,

initiated by The Mayerson Foundation, identified the need for an umbrella group that would help raise awareness of inclusion, recognize exemplary inclusive efforts, provide technical assistance and link individuals with and without disabilities. The

Inclusion Network is a non-profit organization whose staff and volunteers partner to promote inclusion of people with disabilities in the Greater Cincinnati community. To accomplish this, the Network holds the Inclusion Awards, which is an annual event that recognizes businesses and organizations that demonstrate the best inclusive practices. The Network also has an information line for anyone who wants to learn more about inclusion. The Network sends staff and volunteers out into the community to talk to groups about inclusion. Finally, the Network provides a support service and a quarterly newsletter for the community about inclusion. The Inclusion Network hopes to establish a community that recognizes and supports all members participating together.

For further information on the Inclusion Network, please contact:

312 Walnut Street, Suite 1160  
Cincinnati, OH 45202  
Phone: (513) 345-1330  
TTY: (513)345-1336  
Fax: (513) 345-1337

<http://www.inclusion.org/inclusion/htdocs/index2.html>

Email: [info@inclusion.org](mailto:info@inclusion.org)

### Maryland Coalition for Inclusive Education

MARYLAND COALITION FOR  
**M·C·I·E**  
INCLUSIVE EDUCATION

The Maryland Coalition for Inclusive Education Inc. (MCIE) is a statewide nonprofit organization

dedicated to the inclusion of students with disabilities in their neighborhood schools. Founded in 1988, MCIE provides a variety of services to families and schools. Their mission is to be the catalyst for meaningful and successful participation of all students in their neighborhood schools, through partnerships, advocacy, professional development, and public education. They offer many Professional Development Services. One of these services is Inclusive School Development, which implemented a 3-year building based approach with school action planning teams to restructure special

education service delivery to bring all students back their neighborhood school and increase inclusive practices within the school. For further information on MCIE, please contact:

7484 Candlewood Road, Suite R  
Hanover, MD 21076  
Phone: (410) 859-5400  
Toll-free: 1-(800) 899-8837  
Fax: (410) 859-1509  
<http://www.mcie.org/>  
Contact: Carol Quirk, Director Professional Development Services or Selene Almazan, Director Advocacy Services  
Email: [selene@mcie.org](mailto:selene@mcie.org) or [cquirk@mcie.org](mailto:cquirk@mcie.org)

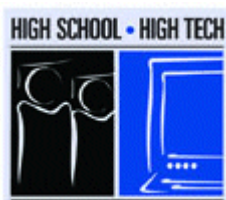


### **World Institute on Disability**

The World Institute on Disability (WID) is a nonprofit research, public policy and advocacy center dedicated to promoting the civil rights and full societal inclusion of people with disabilities. WID's work focuses on four areas: employment and economic development; accessible health care and Personal Assistance Services; inclusive technology design; and international disability and development. Some of the programs WID offers include: the California Work Incentives Initiative, Access to Assets, the Equity E-newsletter, Health Access and Long Term Services, International Disability and Development, Proyecto Vision, and a Technology Policy. For further information on WID, please contact:

510 16th Street, Suite 100  
Oakland, CA 94612  
Phone: (510) 763-4100  
TTY: (510) 208-9496  
Fax: (510) 763-4109  
<http://www.wid.org>  
Email: [wid@wid.org](mailto:wid@wid.org)

### **Ability Center of Greater Toledo: High School High Tech**



The Ability Center is a non-profit independent

living center in Northwest Ohio. The Center initiated a High School/High Tech program in that area to improve transition outcomes and inclusion for youth with disabilities. Through this program, a collaborative partnership has been formed that includes state and local education agencies, colleges, and universities, workforce, development organizations, community-based organizations and other public and private sector community resources to ensure that youth with disabilities are familiar with working with technology. The program improved education outcomes for students with disabilities by helping them become independent, productive members of the technology driven workforce. They currently provide a lab that offers voice activated software, mouse-free access, screen readers, adapted and alternative keyboards and switches. Students can visit the lab to get experience with the AT. The High School/High Tech program believes that when working toward a more inclusive environment, technology is very important. For further information on High School/ High Technology, please contact:  
Ability Center of Greater Toledo  
5605 Monroe Street  
Sylvania, Ohio 43560  
Phone: (419) 885-5733  
Fax: (419)882-4813  
Contact: Kim Dittman  
<http://gcpd.ohio.gov/hsht/index.asp>  
Email: [kdittman@abilitycenter.org](mailto:kdittman@abilitycenter.org)

### **Special Kids Daycare**



Special Kids' purpose is to offer exceptional childcare to children who are developmentally, physically or medically challenged. At Special Kids they believe that access to safe and appropriate childcare will empower families and will create opportunities for families and children to participate fully within the community. They advocate the principle of inclusion - that children with and without special needs are better served by growing, learning, and playing together.

Special Kids offers additional programs such as evening respite, advocacy to school age children, support group meetings, referrals and “push in” services (on-site therapy by rehabilitation specialists). The Special Kids program is the only non-profit, inclusive day care facility in the Tulsa area.

For more information, please contact:

Oklahoma Life Skills Organization 4717 E  
2nd St  
Tulsa, OK 74112-1315  
Phone: (918) 835-0579  
<http://www.specialkidscare.org/>  
Email: [specialkidscare@sbcglobal.net](mailto:specialkidscare@sbcglobal.net)

## TASH

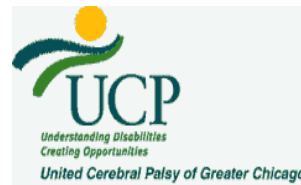
 TASH is an international association of people with disabilities, their family members, advocates, and professionals fighting for a society in which inclusion of all people in all aspects of society is the norm.

TASH supports a vision of high expectations for all students and a commitment to a set of learning goals or standards that are strong, clear, understood, and put into practice. TASH values and supports diversity, and recognizes both the legal right to and the reciprocal benefits of inclusive education. The TASH website includes a variety of resources on the topic.

For more information on TASH, please contact:

29 W. Susquehanna Ave, Suite 210  
Baltimore, MD 21204  
Phone: (410) 828-8274  
Fax: (410) 828-6706  
<http://www.tash.org>  
Contact: Nancy Weiss, Executive Director  
Email: [info@tash.org](mailto:info@tash.org)

## UCP of Greater Chicago



The mission of United Cerebral Palsy is to advance the independence of people with disabilities, enrich their lives, provide support for their families, and advocate for their inclusion in every facet of community life. UCP of Greater Chicago provides services for: Information and Learning Opportunities, Assistive Technology, Adult Services, Child & Family Support Services, and Fund Development.

They operate a program called Infinitec, which means “Infinite potential through technology.” It has grown in 8 years from providing AT equipment to school district members across Illinois to now providing training online and access to technology experts. They currently serve over 1,600 schools in Illinois and over 400 school districts. They have provided to all schools in Illinois free refurbished computers through their ATEN project, as well as access to free durable medical equipment through their DME Program. They also make and sell AT training videos. All of these programs are geared toward achieving their ultimate goal of an inclusive world.

For more information on UCP of Greater Chicago, please contact:

325 N. Wells Street  
Chicago, IL 60606-1601  
Phone: (312) 368-0380  
TTY: (312) 368-0179  
Fax: (312) 368-0018  
<http://www.ucpnet.org/>  
Email: [info@ucpnet.org](mailto:info@ucpnet.org)

## Institute for Community Inclusion



The Institute for Community Inclusion supports the rights of children and adults with disabilities to participate in all aspects of the community. As practitioners,

researchers, and teachers, they form partnerships with individuals, families, and communities. Together they advocate for personal choice, self-determination, and social and economic justice. One of their key interest areas includes promoting technology that aids participation in school, community, and work activities. They have three programs that promote technology in education and the workforce to aid people with disabilities. Project MEET provides training in AT so that children and parents know how to incorporate it into the child's classroom. The Family SupportNet Project helps individuals and families of diverse ethnic and cultural backgrounds to access Internet resources and support services. Finally, the Assistive Technology Project at University of Massachusetts, Boston is a professional development program designed to provide teams of K-12 educators with the basic skills necessary to become assistive technology evaluators. This training in the schools helps the faculty understand how to include technology and people with disabilities in their classrooms.

For more information on the Institute for Community Inclusion, please contact:

UMass Boston  
100 Morrissey Blvd.  
Boston, Massachusetts 02125  
Phone: (617) 287-4300  
Fax: (617) 287-4352  
TTY: (617) 287-4350  
<http://www.communityinclusion.org/index.html>  
Email: [ici@umb.edu](mailto:ici@umb.edu)

Newsletter Editor:	Thomas H. Allen
Electronic Formatting And Distribution:	Ana-Maria Gutierrez

## Joni's Inclusion Tips for Teachers and Families

- **Use AT products as tools for learning** just like books, paper and pencils
- **Establish rapport with inclusion team members**; communicate and share ideas while working together in best interests of the students
- **Peers can play important roles in inclusion**—maybe even save teacher time by accessing peers to program specialized tools or devices
- To paraphrase the old TV commercial, **"Try it—you might like it"**
- **Use an AT tool in a different way**—for example a typical voice output communication device could be your best tool for teaching receptive language or curriculum concepts
- **Define each included student's goals**
- **Be positive and patient**
- **Build on what works** or individual's strengths versus spending time on the negative side
- **Be careful not to plant 'pre-conceived' ideas or thoughts in team members' minds**; be open to change
- **Use computers and software to level the playing field for all students** (use modifications or adaptations for student's as needed; there may be other students who benefit from these tools too. This approach may not be IEP-mandated but would certainly help students them to learn IEP-mandated concepts
- **Be creative**—if you can imagine it, you can achieve it!