



**Family Center on  
Technology  
and Disability**

**FCTD Conference Series:  
AT in Supports of Learning Disabilities**  
April 12– May 12, 2004

# AT in Supports of Learning Disabilities

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## EXPERT'S CORNER

### Introduction

Learning disabilities (some prefer "learning differences") are considered one of the "invisible disabilities". Generally you can't look at a child and know that s/he has problems processing and retaining information the way other children do. It's also a spectrum disability, with degrees that range from mild problems to very serious ones.

It was not long ago that the education community was not well acquainted with learning disabilities. Often children were punished and isolated as behavior problems, while the real problem went unaddressed.

In recent years we've learned quite a bit about this field. However, much remains to be learned and many educators still are not sufficiently trained in how to best help these students. In this discussion, we offer you access to two leading experts in the use of assistive technology to help students with learning disabilities. This is an opportunity to pose questions, to share your experiences and strategies, and to compare notes with your colleagues across the country. The discussion will last a month, which offers ample time to explore the subject in depth. Please participate actively, remembering that there is no such thing as a stupid question and that opinions are neither right nor wrong.

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### Experts' Perspectives

#### **One Person's Path to Literacy** © *Richard Wanderman*

I'm 52 years old, married, live in a nice house, have a successful career as an educational consultant, and I have a learning disability, dyslexia. My life was not always so great. I was a premature breech birth, had meningitis, polio, and every childhood illness. I was tested for everything including language problems from an early age so I was labeled "dyslexic" early. I went to a special school until 6th grade where I had plenty of extra help and remediation. Still, I had to

repeat 6th grade at that school. I suffered the rest of my school days in public schools where I did poorly.

When I went to college my life improved markedly because this is where I discovered art. The art world gave me a chance to express myself without words, so I took a lot of art courses. I got good at making things with clay and I learned my first important lesson about my language disability: I could be smart and articulate with clay and still have a language disability which made it hard to be smart and articulate with words.

My next big life lesson happened a few years later. I drove Volkswagens because they were the only cars I could afford. I knew little about cars and had never even changed the oil in one. One day the engine in my VW bus seized up and I didn't have the money to have it fixed. I bought the book *How to Fix Your Volkswagen for the Complete Idiot*. I started reading, slowly. I bought a few metric tools, pulled the engine, and dragged it into the backyard where I took it apart. Two weeks later when I got the engine into the car and it started I learned that when you feel good about yourself and are willing to take risks you can transfer confidence from one domain to another. I knew nothing about engines but took the confidence I'd gotten with art into a totally new domain.

My next domain was rock climbing. Hey, I don't bungi jump; I'm not crazy. I got into climbing because it was a fun thing to do with friends. We all got into it at the same time and were all chicken from the start. However, we noticed that the more we did it the easier it was to take "exposure." So we did it more. And the more I did it the better I got. It wasn't a talent thing, it was practice. After about five years of climbing I found myself in Yosemite Valley on a big wall. What had I learned? I'd learned that if you enjoy something and do it all the time you get better at it. Practice makes better.

Later I took that idea into a very scary place. I decided to see if I could actually learn how to read and write by practicing. I read and wrote every day for two years. This may seem obvious to you but it wasn't to me; I had no idea that most people read things every day. I had avoided reading things as much as possible and avoided writing completely. Nevertheless, for two years I took my prior experiences and mapped them into learning how to read and write, and at the end of two years I'd learned a lot. Most importantly, I was literate.

Then came the dawn of personal computers. Once I used one, and then bought one, my writing and then my reading improved at a rapid clip.

Here's the point: had I been given a computer as a child in school I doubt I'd have been mature enough to take full advantage of it and I doubt the school would have allowed me to use it in a way that would have been meaningful to me. I needed to go through the long, messy process that I went through with art, cars, climbing, and reading and writing to get to a place in my life where I knew I was smart enough to dive into an area that was totally unknown, hard, but interesting.

For me growing up was particularly painful and messy. My father used to tell me the bumps would build character and I would roll my eyes. Well, he was right. And even though I wouldn't want to go through it all again I have plenty of character because of it all. And I can read and write.

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## **Assistive Technology & Special Education**

by Brian Friedlander, PhD.

While many of us are empowered by the use of computer technology in our own personal lives this has not always been the case for children who have been identified with special learning needs. It is unfortunate that for too many years the computer needs of children who could most benefit from Family Center on Technology and Disability AT in Support of High Incidence Disabilities– Online Discussion Transcript 3

it, were often over looked. As the advances in the computer industry race ahead so can be said for the advances being made in the area of assistive computer technology. It is clear that as the speed of computers increase, great advances are being made in the field of assistive computer technology which will benefit all who need access to this technology. It therefore becomes increasingly important for professionals in the area of special education to become more knowledgeable about assistive computer technology so that appropriate recommendations and access to the appropriate tools can be made. With many students returning to the public schools and being mainstreamed in the least restrictive environment it is becoming more important for Child Study Teams to consider on an individual basis the AT needs of each and every student who is on their case load. While this may sound like a formidable task, Child Study Teams often have a great deal of information about the student, from assessments, report cards, and teacher observations.

Let's take a look at some of the steps that can be taken in considering the use of AT. First and foremost, the decision to consider the use of AT needs to start from the desire of the student to be able to perform a task which s/he is currently unable to do with the supports that are in place. For example, if the student is currently using an instructional aide as a scribe for written work, then the question that the Child Study Team may want to consider is: Could this child do his/her work more independently with the supports of assistive technology? In some cases, low tech AT supports may be just the answer. In other cases, using a tape recorder or a portable text editor such as the Alphasmart 3000 or Quickpad may be appropriate. In yet other cases, after considering all of the factors, it may be that using an instructional aide as a scribe is the most effective strategy. All these decisions need to be fully explored when making a decision to use assistive technology.

In the course of this discussion we'll be talking about many such questions and offering many examples. We'll talk about the process for getting AT included in a child's IEP. Throughout it all, I'd like you to remember that your consideration of the use of assistive technology should be driven by a need to have the student be able to do a task that he or she is currently unable to do.

I look forward to hearing from you.

Brian

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## Experts' Bios



### **Richard Wanderman**

I'm a successful adult with a learning disability (dyslexia). Part of the reason for my success is that I use a variety of tools, including computers, to organize my life and express my ideas. In fact, if I didn't write with a computer, I wouldn't be able to participate in this online discussion with you because I wouldn't be able to record, work with, and share my ideas in writing. I know, from over 20 years of personal experience, how doing these things with a computer changes the thinking and writing process for people like me.

I had a hard time with school. Most of my memories of school are nightmarish. If I carried the learning disabilities seed (my genetics), then school did a great job of watering and fertilizing it. School made the experience of having a learning disability worse than it would have been otherwise. I think for many students with learning disabilities the situation is the same today even though public law, teaching skills, curricula, and technology have improved markedly. Life is tough when you think differently.

Much of my success has come outside of school. I believe strongly in extracurricular, hands-on experience. I've been an artist, a potter, a rock climber, a car mechanic, a teacher, a software developer, and more. All of these experiences have helped me see the difference between my learning disability and my intelligence.

### **Dr. Brian S. Friedlander**



Dr. Brian S. Friedlander is a licensed and certified school psychologist with expertise in the area of assistive technology. Dr. Friedlander maintains an assistive technology practice, which provides assessments, workshops and individual training in the area of assistive computer technology. He is an adjunct faculty member at the College of St. Elizabeth and at Lesley University, where he teaches courses in educational technology. Dr. Friedlander is also the co-author of, *Engaging the Resistant Child Through Computers: A Manual to Facilitate Social Emotional Learning*, Maurice J. Elias, Ph.D., Brian S. Friedlander, Ph.D and Steven E. Tobias, Psy.D; New York: National Professional Resources, 2001. Dr. Friedlander is the Publisher of *Inclusion Times*, a nationally distributed special education newsletter which is published by AssistiveTek, LLC ([www.assistivetek.com](http://www.assistivetek.com)). He also moderates the Assistive Technology eGroup which can be accessed by going to

<http://groups.yahoo.com/group/attechnology>.

Dr. Friedlander is a frequent presenter on the topic of assistive technology at National and State Conferences. Dr. Friedlander can be reached at [brian@assistivetek.com](mailto:brian@assistivetek.com).

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## **CONFERENCE**

### **Transcript: AT in Support of Learning Disabilities**

- **AlphaSmart and Co:Writer** by **Richard Wanderman** on Apr 12, 2004  
I'm curious about how many of you have tried or use an AlphaSmart 3000 keyboard with the Co:Writer SmartApplet running on it?

I think this combo is one of the "killer apps" of AT for people with writing problems. Your thoughts?

- **Re: AlphaSmart and Co:Writer** by **Brian Friedlander** on Apr 12, 2004  
Hello Richard:

Last year I did an AT Evaluation of a very bright kindergarten student who could spell but because of Cerebral Palsy could not use a pencil and paper. Using the AS 3000 with Co:Writer applet and a key guard this student was constructing sentences like you couldn't believe. It was a real exciting moment to see the match between the tool and the student come together.

I would agree that the AS 3000 and the Co;Writer Smart applet are a 1-2 punch for students that do not need the auditory feedback. What I like most about the Co;Writer Smart applet are the various ways that you can customize it by using Collected Words and the Topic Dictionaries.

Regards  
Brian

- **Re: AlphaSmart and Co:Writer** by **Kim Moccia** on Apr 13, 2004  
My experience is that some students like it; other's don't. You never know until you try!
    - **Re: AlphaSmart and Co:Writer** by **Richard Wanderman** on Apr 14, 2004  
I'm curious, do they not like Co:Writer, the AlphaSmart, or the combination?
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- **Teacher resistance** by **Discussion Board Guest** on Apr 12, 2004  
Hello gentlemen,

I'm the mother of a middle school child with a learning disorder. What I've never been able to figure out is why teacher training colleges don't seem to teach students about the subject and about assistive technologies. I'm just glad to have the Internet, which has been a source of great information. But when I bring that information, and my son's AT devices, to the attention of his teacher every year, I get reactions ranging from "I've got 25 other kids to teach. If your son needs special attention he should be in private school" to "Yeah, sure, I'll read the material and will support his AT." When I get the second, well-meaning response I find that a month later, they've read nothing and have made no real effort to help him use his work-arounds." They seem to know little to nothing about learning disabilities and how to include kids with AT in their mainstream class. Why are universities ignoring this important subject?  
Allison G.

- **Re: Teacher resistance** by **Brian Friedlander** on Apr 12, 2004  
Hello Allison:

Thanks for your thoughtful question. I teach graduate level courses in special education and computer technology so I am aware that pre-service teachers need to have course work in assistive technology especially with the move to mainstreaming and inclusion. Teachers need to have the knowledge and build their skills so that they can take ownership of the students that are in their classrooms. Many States still have tech Acts as centers where teachers can take workshops and courses. There are lots of possibilities to learn about the technologies on the Internet as you point out. If it were up to me pre-service teachers regardless of their concentration should have to take a course in exceptionality and assistive technology. I think that we are starting to see some changes but that they are small. I was talking to the Chairperson of the Special Education department just last week and they are just now requiring all teachers to take course in special education and exceptionalities. It is time that all Education Department take a look at their courses and realign them for the realities of the public schools.

Regards  
Brian

- **Re: Teacher resistance** by **Kristen Jarmer** on Apr 15, 2004  
Allison  
I am an occupational therapist and find it disappointing the number of Teachers and OT's that really know nothing about AT. I find working with them and easing them into it is the best approach however I have had to demonstrate and at times go to the higher ups. there is a gradual inclusion of

these classes in graduate studies and hopefully it will become part of required curriculum.  
Kristen

- **Re: Teacher resistance by Richard Wanderman on Apr 12, 2004**  
Great question.

1. Not all universities are ignoring it although all have been slow to incorporate it into their curricula.
2. No matter what universities teach, it's up to school systems, schools, and individual teachers to make it real for kids in classrooms.

There are two variables here: how universities prepare teachers and how school systems incorporate new information into their existing curricula.

These two ideas do not always intersect: some new teachers know a lot about technology and find the curricula they teach in stifling. Some curricula is very modern but some teachers teaching within that modern environment are resistant.

Then there's the unnecessary pressure of programs like No Child Left Behind and various state programs that make changing things hard because of pressure to have uniform performance.

And, let's not forget some of the problematic attitudes of some students with learning issues that get in the way of learning, namely learned helplessness.

It's not just a matter of schools being clueless about AT or even individual teachers; it's a complex web of problems that together make change rather difficult.

I too have taught graduate level courses in using AT for kids with learning issues (I'm older than Brian and have been doing it longer ;) ) and many of my students are out in the field teaching. What most tell me, when they report back, is that it's very difficult to initiate new ideas in schools and districts that are stuck in old paradigms about learning and concerned with high stakes test scores and accountability to the federal government.

So, Allison, you opened a nice, juicy, can of worms. Thanks a lot!

- **Re: Teacher resistance by Kim Moccia on Apr 13, 2004**  
Great topic!

Richard, you may have hit the nail on the head when you wrote, "What most tell me, when they report back, is that it's very difficult to initiate new ideas in schools and districts that are stuck in old paradigms about learning..."

My son was diagnosed with dyslexia, dysgraphia, dyscalculia, auditory processing deficit, and ADHD when he was 8 years old. For years he struggled to get by in public schools. Mornings were plagued with stomachaches and pleas to stay home. He hated school and referred to it as, "an evil, evil place. Don't make me go there." By middle school he was almost suicidal. By high school he finally had enough and dropped out for 6 months. Although his learning disabilities played a huge role in his "feeling different" I'm pretty certain it wasn't the only variable that made him feel uncomfortable in a traditional school setting. Thankfully his story has a happy ending. He

enrolled in an alternative high school (charter) that he absolutely loves. The school has approximately 100 students with a student teacher ratio of approximately 9:1 and provides a totally different approach to teaching "at risk" kids. The teachers are open to trying something "new" and really ENJOY working with the kids. After years of no progress my son has increased his academic skills and passed all of the Grad Standard tests. He is even considering college!

Although I never found a way to overcome resistance, I had some success with changing attitudes during elementary and to some degree middle school too by asking his teachers to watch Rick Lavoie's video "How Difficult Can this Be?" (I own a copy and every year I would hand it to his teacher on the first day of school!) I still think this is one of the best videos I've ever seen on helping to increase understanding of what is commonly labeled "learning disabilities."

o **Re: Teacher resistance by Perrine Dailey** on Apr 13, 2004

Just this past weekend I had a long chat with a fifth grade teacher who teaches in a small town in southern CA. She is also my mother in law so I'm sure all the venting she did wasn't meant for public consumption, but she made some very good points about why teachers might resist that I'd like to share. She said that one third or her 30 students have special needs and she teaches without any support staff.

According to this teacher,

The school districts don't provide adequate support staff for teachers (interns often need as much training as students).

Money is always an issue (for additional staff, training, technology) and trying to get money for training/technology is a battle.

Teachers feel parents should be more responsible for their child's education at home and not expect teachers to "fix" their kids if they don't work with them at home, help with homework, read to them (what if they can't read themselves?), provide what the child needs to be a good student (food, rest, clean clothes), not rely on TV or video games to occupy the child...

Teachers who do stay late and do extra are often not recognized or rewarded (and their nights and weekends are important times for family).

What is more important, taking extra time to work with a student with a disability while the other 25 kids wait (who does this benefit?)

Some of that list may be overly negative, but it was very eye opening for me, as a staunch advocate of inclusion. I too was "mainstreamed" and floundered terribly without much help (special ed was around, but just barely) yet managed to succeed.

It seems that teachers have, over the years, become more sensitized to issues related to culture and race, and having "Black History Month" and "Women's Herstory Month" helped. I know many schools have disability awareness programs - perhaps they need to be expanded?

Just my random thoughts...

Perrine

▪ **Re: Teacher resistance by Kim Moccia** on Apr 13, 2004

Perrine, I agree with you regarding disability awareness programs.

Research performed by the Emily Hall Tremaine Foundation (November-December, 1999) showed an alarming 65% of Americans still link learning disabilities to mental retardation. Furthermore, this same study suggested that 48% of the public continues to believe that learning disabilities are sometimes the result of laziness.

It's time to dispel the myths. Discussions like this are one way. Using videos like Rick Lavoie's "How Difficult Can this Be?" is another. And then there's also entertainment, which is where many get their information. Be it a PBS documentary or a work of fiction the more the public is exposed to the truth about learning disabilities the more harmful myths can be dispelled.

- o **Re: Teacher resistance** by **Kim** on Apr 13, 2004  
Hello Allison,

That is a very good question. We too have already experienced lots of teacher negativity when it comes to our son.(age8) They have 28 other students..., they don't have the time..., If they were to spend an extra 5 minutes here then all parents would expect that..., It goes on and on.

My son is now in the resource room almost 100% of the time with a one - one para. It is sad. When he was in Kindergarten he was mainstreamed, but ever since he is just too much work. I really feel like teachers should be mandated to take a 2 hour training annually on at least some special needs training. It would be very beneficial to all students and the teacher if she took a class annually so that she was able to gain an understanding of the many differing disabilities. That combined with the fact that each child is different within their disabilities would soo help everyone to be successful.

Kim Woehl

- **Re: Teacher resistance** by **Richard Wanderman** on Apr 13, 2004  
Kim et al,

I think this is regional. Some schools do have teachers do periodic in-services to help them stay up to date with technology and classroom techniques for dealing with differences.

But, even if training is offered and is taken advantage of, all teachers and schools are different and all students are different: some student and teachers are lucky enough to find perfect fits.

I would agree, however, that more of the responsibility falls on teachers to accommodate student differences; there's not much a student can do when he or she gets a teacher who's insensitive to them except to hope for a better teacher next time.

All of us have had bad teachers. I would argue that most of us had more bad teachers than good. I certainly did. In my entire middle and high school experience (a long, long time ago) I had maybe 4 great teachers, the rest were less than good.

I feel lucky to have had the great ones and one in particular stands out to this

day (an English teacher).

Now, here's an amazing fact: there was no special ed back then and I was just tossed into regular classrooms where I floundered and did poorly. Yes, in the end, I lived through it all.

Maybe because of our underlying bias these days toward "nurture" as opposed to "nature" we're overly concerned about every little experience kids in school have. But, somehow all of us survived (if barely) school before there was so much concern.

What's the difference?

Were schools better back then? Is special ed the problem? Are we all so high strung and demanding compared with more complacency back then?

I'm not sure what the difference is but if you look at any particular skill, like writing for instance, I'm not sure we're all that much better today than we were back in the dark ages. Now we have technology and lots of specialized curricula yet the quality of writing students produce isn't any better than it was back then.

Why?

Maybe television is the problem. Television time takes away from reading and study time.

I'm just doing some very raw thinking out loud. Hope it stimulates some more discussion.

- **Re: Teacher resistance** by **Brian Friedlander** on Apr 13, 2004  
Rich et al.

Your point is well taken. To get better at a craft you have to do it and do it often with feedback. I think that with all the emphasis on reading that many of the other subjects have not gotten the attention that they need. I'm sure that there will be new studies coming out shortly that say that we are falling behind in Science, math as well as in the area of writing. Education is a political football but with real consequences for what happened in the classroom.

Just my two cents

Brian

- **Re: TV the problem?** by **Perrine Dailey** on Apr 13, 2004  
Very interesting and thought provoking post, thanks! I often wonder about the effect of television, video games and computer games on everyone (not just kids!) Lately I've bits about how TV can cause ADHD. Has anyone heard about other research? Does anyone see a solution? Do we start teaching via TV in order to get the information kids need into their heads?

Perrine

- **Re: TV the problem?** by **Kim Moccia** on Apr 13, 2004  
WOW, this discussion is full of thought provoking questions!

Hope you don't mind if I share a few personal observations/opinions!

Perrine, I heard that too. There might be some truth to it but in retrospect I doubt if I would have done anything differently. Putting on a Kid Song video was the ONLY thing that kept my son from crying! I think most schools/teachers use TV to teach and will continue to do so.

Years ago there was some talk that playing video games helped children with tracking. I can't say if this is true but there were (and still are) some benefits to "moderate" gaming: my son increased his attention to detail, increased his ability to stay with a frustrating task, increased socialization skills and increased his desire to read (he asked for every magazine on video/computer games on the market and read them cover to cover).

In middle school my son got his first home computer (we purchased it for him). Constant e-mail, instant messaging and chatting improved his ability to read and to some extent write. Having a computer has also increased his confidence (at school he's the computer geek everyone goes to with questions).

Technology will never replace teachers but it can definitely enhance any subject!

- **Re: TV the problem?** by **Richard Wanderman** on Apr 14, 2004

My question for you is this:

Give your kid a choice, read a book (or struggle to read a book) or watch anything on a TV screen, including things that involve reading.

Which will he/she choose and why?

TV tends to be a passive medium and reading is an active medium. Couple these facts with the idea that for some kids reading is harder work than for others and the passive wins almost every time.

I'm not in any way saying that one can't provide good stuff in a TV medium but one has to search for it and most people who use TV aren't as wise as you seem to be about it.

- **Re: TV the problem?** by **Perrine Dailey** on Apr 15, 2004

Maybe to increase active reading while watching TV, parents could turn on the TV's closed

captioning. I use it daily because I have a hearing loss and all modern TVs should have that feature built in. Perhaps being constantly bombarded with text during their favorite shows would increase kid's reading skills?

Perrine

- **Re: TV the problem?** by **Richard Wanderman** on Apr 15, 2004  
It's a really good idea. Captioning is a very useful way to learn how to read, especially for ESL (or other SL) adults.

- **Re: TV the problem?** by **Richard Wanderman** on Apr 14, 2004  
I doubt TV can cause ADD but it sure makes you feel like you have ADD or ADHD.

We have not watched commercial TV for close to 10 years and ever now and then I scan channels looking for something and notice all the junk that's on coupled with all of the commercials. I also notice the MTV effect on non-MTV channels: fast edits, constant motion on screen.

Two things are working together here: TV producers are looking at what holds attention to building shows for that and what holds attention is changing as generations of us grow up on their shows.

Couple this with remote controls and the ability to surf channels instantly and you have the ability to self-stoke constant stimulation. Watching some people with a remote control feels like watching a Harry Harlow experiment in psych 101.

Certainly a heavy diet of TV numbs one's brain and moves us away from reading, which requires slower processing, more active thought, and by comparison, especially for someone with a reading problem, is a lot more work.

If I couldn't read or found reading harder than I do and I had ready access to TV I'd choose TV to a book any day.

So, couple this with TV content being built to hold attention and you have a heavy addiction.

I know I sound like a luddite or like I'm very old fashioned but I think TV is a serious problem in and outside of the LD world and may be one of the single biggest reasons kids don't read well.

- **Re: Teacher resistance** by **Discussion Board Guest** on Apr 13, 2004  
Thanks Kim,

I completely agree with you about the need for mandated training. I'm afraid many teachers wouldn't sign up if it were optional. One year my son had a

teacher I liked a lot. I went to the principal and offered to pay for her to attend a workshop. It was during school hours so I offered to sub. He refused on the grounds that it would set a bad precedent. The teacher didn't want to go up against the principal, so a common sense approach was lost. So much for wanting involved parents. Sometimes the battle gets so tiring.

Allison

- **Re: Teacher resistance** by **Discussion Board Guest** on Apr 26, 2004  
Alison,  
What a great attempt on your part to improve teaching for all students who would end up getting that teacher. Foolish response on the principal's part!  
What we have done in our community is start a Technology Foundation that supports technology purchases and training. One of the things we are doing this year is sending four high school teachers to the National Educational Computing Conference (NECC) in New Orleans in June. Our expectation is that the teachers will come back energized and enthusiastic and will train their colleagues.  
Colleague interactions - now that's a subject that hasn't been mentioned in this teacher resistance discussion. Teachers are typically islands unto themselves, masters of their own domains (their classrooms) so to speak. There is very little collaboration or sharing of great ideas between teachers. They should be expected to share technology ideas that work!

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- **Text to Speech Applications** by **Brian Friedlander** on Apr 12, 2004  
I was wondering how many of you have been using scanning applications with text to speech support for students with reading disabilities? How are you and where are you using them.

Thanks  
Brian

- **Re: Text to Speech Applications** by **Richard Wanderman** on Apr 12, 2004  
When you say "scanning" are you talking about scanning in the context of single switch access or the use of a scanner and OCR software to scan books for TTS? I'm pretty sure it's the latter but I just wanted to clarify.

An example of the latter would be Kurzweil 3000, right?

- **Re: Text to Speech Applications** by **Brian Friedlander** on Apr 12, 2004  
Richard:

Yes- I am referring to programs like WYNN and Kurzweil 3000 that let individuals use scanners to bring text into the application.

Regards  
Brian

- **Re: Text to Speech Applications** by **Discussion Board Guest** on Apr 12, 2004  
My 18 year old daughter who has severe speech and physical impairments due to

cerebral palsy uses a variety of AT to access the high school curriculum. The only way she can manipulate and "read" text is if it is on the computer. We scan text, rewrite text, enlarge it and use Speaking Dynamically Pro and/or Intellitalk 2 for reading, turning pages, rereading, etc. all of which she does by means of template pages and a switch. This is also how she does written assignments. It provides her with the means to ACTIVELY learn and master content. Unfortunately, our high school doesn't provide as well for students who "only" have an LD label. Typically what is provided are books on tape, which in my mind begs the question, if a student reads on a 3rd or 4th grade level, how is listening to text on a 10th grade level going to be comprehended by the student and how will they ever get beyond the lower reading level??

- **Re: Text to Speech Applications by Mary** on Apr 12, 2004

I'd like to hear which of these programs--if either--might be applicable for a child with significant comprehension deficits--and what platform supports these.

- **Re: Text to Speech Applications by Brian Friedlander** on Apr 12, 2004

You bring up a very good point. I just got finished writing an article about this very topic. For students with significant language based difficulties there is nothing inherent in text to speech applications that automatically can accommodate for students poor comprehension skills. Again not knowing how significant your child's comprehension skills are some tools built into Kurzweil 3000 and WYNN that teachers can use to help support a student. For one there is an on-line dictionary so that students can look up word in the text and hear them read aloud. Similarly, teachers can embed notes with questions that might provide a cue for students to reflect on what they have read. There are also highlighting tools so that students can pull out important information from the text.

For students with significant language based difficulties you may be better served with abridged formatted books like Start to Finish books which can be listened to on the computer using real voices.

Regards  
Brian

- **Re: Text to Speech Applications by Richard Wanderman** on Apr 13, 2004

I'm not sure I fully agree with Brian's reply although I don't disagree either.

The questions in the last two sentences of your post are extremely important in the AT/LD world and could be the topic of a book.

There is a difference between getting access to content and getting basic reading instruction and those might not be possible at the same time with a weak reader.

Listening to text gives one access to content/meaning and bypasses the reading instruction. It keeps a child in the curriculum where spending too much time on basic skills would allow him to fall behind (in the reading curriculum).

So, both need to take place: instruction in basic skills and providing scaffolds for content so the student keeps up.

So, books on tape are fine for the content, and don't necessarily harm the basic skills.

However, another way to look at it, the way I think you might mean is this: If you give someone a computer because they have poor handwriting and they keyboard their way around the bad handwriting, they are spending no time practicing handwriting and so, the handwriting does not improve.

AT end-running problems does not always help build the skills so that the person can work independently of the AT.

I did some writing about this here:

[http://www.ldresources.com/articles/tools\\_and\\_dyslexia.html](http://www.ldresources.com/articles/tools_and_dyslexia.html)

This topic, how much AT, how much basic skills, is a complex one and when combined with brain development issues gets thorny and interesting.

- **Re: Text to Speech Applications** by **Janet Peters** on Apr 15, 2004  
We have had good success with many of the commercial products in our center. Have you or Richard used any of the free tools (ie Microsoft Reader) and to what degree of success?

Janet Peters, Coordinator  
PACER's Simon Technology Center

- **Re: Text to Speech Applications** by **Richard Wanderman** on Apr 16, 2004  
I'm a Mac user and use/demo a variety of free or inexpensive tools to read text.

In OS X all applications read system level speech so there is less need for specialized apps.

TextEdit Plus  
<http://www.tex-edit.com/>

VoiceBox  
<http://www.realmacsoftware.com/voicebox.php>

There are many more but these are quite good.

VoiceBox gives you the capability of not only reading text aloud but saving it as an AIFF sound so you can play it in itunes or burn an audio CD of it (synthetic voice but independent of speech engine on computer).

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- **Welcome** by **Richard Wanderman** on Apr 12, 2004  
It's Monday morning at about 8:00 am, EST and I just wanted to post to welcome participants to this month-long discussion about learning disabilities and technology.

Both Brian and I will be here to answer questions but most importantly, guide discussion on this and any related topics you care to discuss.

We look forward to an interesting and informative month.

Richard

- **Re: Welcome** by **Brian Friedlander** on Apr 12, 2004  
Good morning Richard and members of this on-line community. Both Richard and I are looking forward to answering your questions and dialoging about this very important topic.

Regards

Brian

- 
- **Labels and Categories** by **Richard Wanderman** on Apr 12, 2004  
I'm curious how you all feel about this:

I'm writing this on a Macintosh PowerBook. There is no special software or anything on this machine; it's a generic, 800 mhz TiBook running OS X.3, Safari, etc.

In other words, it is not what we all might call "assistive technology."

Now here's the catch: I'm dyslexic and dysgraphic. Does my use of this tool make it AT?

If the answer is yes, then what do we call the very same tool used by someone who is not dyslexic and dysgraphic?

Do you see what I'm getting at here? The AT label is problematic in the LD world.

It may be useful for routing funds to buy equipment but as a category of tool downstream of the buying process I'm not sure it does anyone any good.

AND, couple that with the idea that "generic" tools like AlphaSmarts, which are sold more in regular ed situations than special ed situations can carry a stigma for some kids if they perceive the AlphaSmart as a "special ed" or "AT" tool.

I'd love your opinions about how we use and/or abuse labels and categories.

- **Re: Labels and Categories** by **Kim Moccia** on Apr 12, 2004  
Good Morning,

My thought has always been if the individual NEEDS the tool to complete the task than it is considered "assistive."

Say for example you have a dysgraphic student who is unable to write legible assignments; however, with the help of a computer he can produce work the teacher can read. In my opinion, this student should be allowed access to a computer to complete written assignments. Access to computers by students in the class who have legible handwriting and do not need "assistance" would be at the teacher's

discretion. It's all a matter of need.

Hopefully someday Universal Design in Learning will be an everyday opportunity for students everywhere and then maybe the "labels" will finally fade away.

- **Re: Labels and Categories by Richard Wanderman** on Apr 12, 2004  
I'm not sure how "Universal Design for Learning" will change the situation described.

If one person needs a computer for illegible handwriting (me, for instance) and another doesn't, redesigning the computer or the environment (UDL) doesn't change that. It does not improve my handwriting nor does it change the fact that I'm the one person in the class who has bad handwriting and needs a computer instead of a pencil.

What would need to change, underneath UDL, is our attitudes about differences and what they represent.

Poor handwriting, like poor spelling, can undermine the credibility of the person with the poor handwriting. Using a computer solves that but only outside of an environment where the use of the computer is a "difference."

In the world I live and work in (the professional world) no one looks at me differently for using a computer as a way around bad handwriting but in school, they might.

Of course, any student who needs a computer to end run bad handwriting should have one (although this begs the question: then what happens to the handwriting? Does it ever improve?) but if they don't use it because they don't want to look different, then the computer does no good.

IMHO the solution is not UDL but a change in attitude about what bad handwriting represents (and does not, like lack of intelligence) coupled with more ubiquitous use of tools (tools everywhere, not just in special needs environments).

- **Re: Labels and Categories by Kim** on Apr 13, 2004  
Hello Kim,

I could not agree more with your definition of AT. It makes total sense. As a parent of a child who has Aspergers Syndrome and a specific learning disability I have found that I must be smart when meeting with any school staff. If I can ask for something and be very cautious with the words I use, I can get the tool or special help. If I keep it just that simple in thought..."If my child needs the tool to complete the task then it is assistive", then I have been pretty pleased with getting those required tools. If only I knew as a parent all of the tools that might help him.

I too will remain hopeful that someday the labels will fade away, but at this point it seems that we are just creating more and more labels.

Kim

- **Re: Labels and Categories** by **Richard Wanderman** on Apr 13, 2004  
Kim,

"but at this point it seems that we are just creating more and more labels."

Exactly! We have been dicing up general categories into ever finer categories with their own labels.

It's useful to know precisely what's going on so that one can make a good recommendation based in part on prior experience with similar kids (with similar labels) but when kids are reduced to labels (and I've heard long strings of acronyms used in meetings about kids, ugh) it does no one any good.

One might use the term "dyslexia" to describe my problems with reading and writing (not so evident anymore) but:

DYSLEXIA IS NOT WHO I AM.

It is one part of me that, while in school, where reading and writing are central, is important to know about so hopefully I can get the proper instruction. Post school the label doesn't really mean all that much except if one is fighting for disability rights in a workplace argument.

The collection of tools and techniques and life skills that I've accumulated are really not all that different from someone who is not dyslexic, they just happen to be mine and I'm dyslexic. So, in my case the label really means nothing, except that it gives me a kind of credibility here where life experience is worth examining.

My wife doesn't think of me as her dyslexic husband, even when I ask her how to spell something. Most husbands, dyslexic or not, ask their wives how to spell stuff at one time or another (and visa versa although I'd bet not as much).

The only time my dyslexia gets between my wife and me is reading in bed. She sometimes starts reading what I'm reading and because I'm slower than her I get self conscious and stop comprehending what I'm reading. Simple solution: tell her to bug off and read her own book or give her the elbow. What's really amazing is that she's a special education teacher and is acutely sensitive to this stuff yet does it to me regularly anyway. Part of me thinks its cute (it's harmless) and part of me gets mad (it's harmless, no reason to get me except that my comprehension is fragile enough so that I usually have to re-read a page).

- **Re: Labels and Categories** by **Discussion Board Guest** on Apr 12, 2004  
Isn't this what universal design is about? As a 3rd grade teacher, I see how sensitive kids are to any accommodation that's made for one of them. I think you're right about the stigma. There's jealousy and at the same time, not one of them would want to be the kid who "stands out". The school, of course, doesn't have the funds to buy the Alpha Smart (or other electronic aid) for the whole class. So what do we do?

Not give the child with learning difficulties the best shot? Isolate them in a special class? Talk to the class, making the child feel even more ill at ease? Thanks for your advice.

Laurie

- **Re: Labels and Categories by Richard Wanderman** on Apr 12, 2004  
Laurie,

Good points all.

On "Universal Design" : yes and no.

Universal design is about REdesigning things so that the access is built in, not added on.

My PowerBook already has the access built in and it's more a matter of how we categorize it, less redesigning it.

As far as funds and whole class... maybe the best way to tackle this is to have a pile of tools, not label them but just make clear what they are good for and let all the kids use them, not just put them in the hands of the kids with special needs.

I mean, many kids can benefit from using an AlphaSmart to write with, not just the dyslexic and dysgraphic ones.

My point is that tools are only meaningful if they are used and if stigma prevents use then we have to rethink how we present the tools.

- **Re: Labels and Categories by Brian Friedlander** on Apr 12, 2004  
Richard-

Knowing you as long as I do your point is very well taken. In many cases having tools classified as "AT" has more to do with funding. I have seen schools get into arguments as to whether a piece of equipment or software was "instructional technology" or "assistive technology" due to whose purse it would come out of. I feel that schools need to be more broad minded and I for one have been asking schools to create a "toolkit" so that they have a range of tools to work with students with learning disabilities. I would hope that they could begin to build on their expertise so that wouldn't have to rely on "experts" from outside their school settings to help them made decisions with regard to assistive technology. I was wondering how schools are dealing with the consideration issue and how it is being done.

Regards  
Brian

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- **Your top tools by Richard Wanderman** on Apr 12, 2004  
I'd love to hear from all of you on what your top tools are for yourselves and for working with students with learning issues.

Here are a few of mine:

### 1. PowerBook (portable computer)

This computer is the center of my life, not just because I can't write well without it, but because I do so much with it. We have a cable modem and a wireless network in our house, which means I can take this computer anywhere in the house and work. Since most of my work involves online communication, being online all the time is important to me. And, having all of my work and resources with me when I travel is important. This is my only computer and it does everything I need it to.

### 2. AlphaSmart 3000 keyboard

Without a doubt, the AlphaSmart is the simplest and best designed pure writing tool on the planet. I still use mine, even though I use this PowerBook for much of my writing. There are places I don't want to take the PowerBook and don't need all of its... er, "power." The AlphaSmart is useful for me but also for anyone who wants to write without all the expense, complexity, and fragility of a full-featured computer.

### 3. Tape and/or digital recorder

It's not always possible or appropriate to use a keyboard/computer to record ideas and recording voice is the next best thing. And, for people for whom writing is hard, voice recording may be the only way to record ideas.

### 4. HiLiter pens

These are one of the best reading and study aids I know of. I can't imagine reading something important, where I know I need to remember parts of it, without one or more (in colors) of these in hand.

### 5. Dymo Thermal LabelWriter Printer

I'm quite dysgraphic and for me, a dedicated label printer is a necessity for addressing envelopes. Yes, even though I'm mostly digital, I still do a fair amount of paper communication and being able to print an address label quickly and neatly is important. My handwriting is so bad that it undermines my credibility. Much like getting written communication with bad spelling in it undermining credibility, bad handwriting can do the same thing.

I have many other tools that I like but these are the ones I'm thinking about this morning.

- o **Re: Your top tools** by **Brian Friedlander** on Apr 12, 2004  
Richard:

I have been a Palm IIIC user for many years and for me staying on top of my schedule and To-do list is really important. I strictly use it for my contact database, schedule and To-do list. It has worked great for me since I am always in my car traveling from one school to another.

My next favorite tool is the AS 3000- despite having access to a Dana I enjoy the simplicity of the AS 3000 and often use it when I am traveling to write article and take notes for new projects.

One of my all time favorite tools are the small USB thumb drives. I have been using them for the past couple of years and their ease of use an amount of storage it

wonderful. It is easy to use to back up files or to store a PowerPoint presentation.

I would be interested in learning about your favorite tools as well

Brian

- **Re: Your top tools** by **Discussion Board Guest** on Apr 13, 2004  
My brother has this cool pen that reads typed text . He just scans the word and it reads it out loud to him. It also has a dictionary so he can figure out what the word means. I am not sure what it is called but he has found it really useful. He also uses a Franklin Speller to spell and define words.
- **Re: Your top tools** by **Kim Moccia** on Apr 13, 2004  
I believe you are referring to the Reading Pen by Wizcom Tech. My son also likes using the Franklin Speller (Language Master).
- **Re: Your top tools** by **Richard Wanderman** on Apr 14, 2004  
So, I take it both of you have seen success with the Reading Pen by Wizcom? I've used them for years (to demo, not personal use) and find them pretty hard to use:

1. it's hard to get an accurate scan, takes many tries
2. the UI on the pen for using all of its features is hard to learn and remember

As far as Franklin products go, I've also been using and demoing them for a long time and its true, they are useful but I'm curious how you both look up words you have no clue how to spell? There are some great techniques for using Franklins that most people don't know and I'll be interested to see if either of you or your children have discovered them.

Also, which model of Franklin are you using (besides the Language Master which does have these features)?

- **Re: Your top tools** by **Kim** on Apr 13, 2004  
My son was just recently diagnosed with a specific learning disability. He is almost 9. I assume that the tools have to have age guidelines. My son is a whole word reader (phonics is not his first choice and it is very difficult), his writing skills are poor and he has trouble with comprehension. Do you have any tools that you would recommend for a child of this age?

Hopeful,

Kim Woehl

- **Re: Your top tools** by **Brian Friedlander** on Apr 13, 2004  
I would certainly have an AT Evaluation completed so that a specialist can work with your son and make recommendations made on his strengths and weaknesses. However having said that over the years these are some of the tools that can be tried: Alphasmart 3000, Co:Writer Smart applet-which adds word prediction to the Alphasmart. On the desktop you may want to try a word prediction program that has good phonetic algorithms.

Hopefully-he is getting good instruction of a multi-sensory nature which is helping to improve his skills while he is using these tools. As far as comprehension, it is important to work with his teacher to develop metacognitive strategies such as visualizing, predicting, questioning, clarifying, feeling, and reflecting. These strategies have been found to be very powerful when teaching students comprehension skills.

Regards  
Brian

- **Re: Your top tools** by **Kristen Jarmer** on Apr 15, 2004  
It all depends on what is best for your child. When I evaluate students with LD I set up the following for trial:  
CoWriter  
Write Outloud (helps to edit own work, you can hear what you wrote)  
WYNN (Freedom Scientific) Text to Speech, highlighting, outlining, lists  
it is a little expensive but you can get a free 30 day demo to see if it works for your child)  
Kurzweil  
Intellikeys

Sometimes with dysgraphia learning to touch type is KEY. Try Type to learn or Ultra Key.

Kristen

- **Re: Your top tools** by **Brian Friedlander** on Apr 17, 2004  
Ki Kristen:

I was wondering how you set up the trials when doing an evaluation to determine if a student could benefit from a text to speech reader ie. WYNN or Kurzweil 3000?

Thanks  
Brian

- **Set up of Materials** by **Perrine Dailey** on Apr 20, 2004  
I have worked with many children and young adults with LD and much of the available technology & software. Most of the software I would need to demonstrate is already loaded on the computer for easy access. If it needs a CD, I'll keep them handy. I emphasize that the tools we are going to try are designed to make their lives easier and I want them to tell me what they do and don't like.

When I do a consultation with a younger child (10 or younger), I start by asking what they have used before and going from there. If they have never used AT, I might start with Write:Outloud and show them all the features. Then ask the user what features they find to be most useful. If there is a need for word prediction, then I show Co:writer. I might also show a Start To

Finish book, Draftbuilder and the AlphaSmart.

When working with a teenager or adult, I usually start with WYNN and explain that it is a literacy toolkit and has MANY features, some they will find useful, others they will not need. By going through all the features of WYNN and then asking the user what they found to be most helpful, we can determine which program is best suited for them. If they need more than two documents open, or are mature enough to handle Kurzweil, I'll suggest they try that - or Read & Write Gold if they need the literacy tools AND voice input. I tell them to download the demos and try them at home.

If Voice Recognition is an option, I use the latest version of Dragon Naturally Speaking. I might tell them about e-texts, portable book readers, reading pens and colored overlays as needed. I also give the parents and teachers a stack of catalogs that sell LD related software (Don Johnston for sure).

The tools most of the children I've worked with end up getting are WYNN and the Alphasmart.

Hope this helps!  
Perrine

- **Re: Set up of Materials by Richard Wanderman** on Apr 24, 2004  
"The tools most of the children I've worked with end up getting are WYNN and the Alphasmart."

Why do you think this is? Simplicity? Price? Some other reason?

- **Re: Set up of Materials by Perrine Dailey** on Apr 27, 2004  
"Why do you think this is? Simplicity? Price? Some other reason?" Good question!

Don't get the idea that those are the only tools I show the students I work with. Based on their needs, I demonstrate a variety of tools that might make their lives easier and let them try the tools themselves. If they are successful trying it, that is a real motivator to use it when it's needed.

Price is one consideration. The AlphaSmart (less than \$200) is relatively inexpensive item. It also seems to me that the parents are buying these for their

children, not the school (and the parents are usually desperate to try SOMETHING). In MN, we've had half-price sales on WYNN, which makes the product much more affordable (\$250 - 500 rather than almost \$2000 for Kurzweil. We have also had Kurzweil sales in MN, but I have not heard how that is going.

Another big factor - ease of use. During an informal consultation, I may only show the student WYNN for 20 minutes and the AlphaSmart for 10, but during that time, I give them an overview of the program/device, show them the useful features and let them try it. It's often the child that says "I'd use this" or "this would help me" when I ask them directly whether the tool would be useful. I use these tools often as a starting point to gauge how the student responds and what features they might need. If they need additional features found in a different product, I will point that out. But, if the child has already experimented with the tool, they will be more confident using it.

Also, these are tools that don't require much change in the preset routine of life to integrate. People who use PDAs and cell phones probably don't leave home without them - because they know the value of having that tool available when they need it. They also have routines for getting it out, turning it on and getting ready to use it. It eventually becomes automatic (for me, I automatically put on, turn on and adjust my hearing aids every day because I know that without them, I won't be able to hear, which would mean that I'll be frustrated, I'll spend more time and energy trying to lip-read and that will make me tired and crabby.

Those are some of the reasons I think AT users use ANY AT device. If it's costly, hard to integrate into our lives and complicated to use, who wants to bother?

Perrine

- **Re: Set up of Materials** by **Richard Wanderman** on May 02, 2004

I totally agree and I would put "integration" at the top of the list. Price usually gets it into your hands but doesn't keep it there; integration does. Once the tool becomes part of your life and you can't imagine living and working without it, you're set.

- 
- **research on AT** by **Discussion Board Guest** on Apr 13, 2004

Hi

I am interested in scientific research that has been done in the use of AT by students with LD. Are there published studies available to the public? Does the Department of Education do this type of research? Thanks

- **Re: research on AT** by **Richard Wanderman** on Apr 14, 2004

There has been research done over the years but much of it has been narrowly focused, not all that broadly focused.

Here are a few places to look.

Here's a study that I did with a colleague years ago but it still is useful reading:

[http://www.ldresources.com/articles/research\\_on\\_writing.html](http://www.ldresources.com/articles/research_on_writing.html)

I'd check the CAST web site, they've done extensive research, mostly to support their own grants but it's still very useful:

<http://cast.org/>

The most interesting research I'm currently reading about is the functional MRI work done at Yale by Dr. Sally Shaywitz. Unfortunately, it does not involve technology and given her background, I doubt it ever will but you can always ask:

[http://www.oecd.org/document/60/0,2340,en\\_2649\\_14935397\\_19483516\\_1\\_1\\_1\\_1\\_00.html](http://www.oecd.org/document/60/0,2340,en_2649_14935397_19483516_1_1_1_1_00.html)

[http://www.med.yale.edu/external/pubs/ym\\_ws98/cover/cov\\_brain02.html](http://www.med.yale.edu/external/pubs/ym_ws98/cover/cov_brain02.html)

I would imagine that the University of Washington's Project Do-It has done some research over the years:

<http://www.washington.edu/doit/>

I sat on the advisory committee for the largest AT national research grant ever given. It was given to Dr. Ted Hasselbring at the University of Kentucky. The findings aren't published yet but here are a few links:

<http://www.rqs.uky.edu/ca/rctf/faculty/thasselbring.html>

<http://natri.uky.edu/index.html>

I would imagine that Gregg Vanderheiden at the University of Wisconsin, who has been around the AT world longer than most, has done some research over the years:

[http://www.engr.wisc.edu/ie/faculty/vanderheiden\\_gregg.html](http://www.engr.wisc.edu/ie/faculty/vanderheiden_gregg.html)

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Now my question for you is, once you find this research, what do you want to do with it? What if you found a goldmine of research that proved, beyond a doubt, that using a computer to write with helped students with dyslexia do better in school. What would you do with it?

Or, is your reason for searching to find out if this stuff actually does all that its cracked up to do?

Both are interesting questions and I'll be interested in hearing your reply.

- **Re: research on AT by Discussion Board Guest** on Apr 15, 2004  
Thanks for the information about research. I would love to find a gold mine of research! To locate research which supports AT use could be used by a parent along with the information that AT can be considered a part of the educational services (under IDEA) for a student. There are still many out there who lack information about AT and its inclusion in education settings. I think it might be helpful to parents to have research which supports their request for AT as schools often seem to view a parent's recommendations with a great deal of skepticism.

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- **AT Services by Discussion Board Guest** on Apr 14, 2004  
While I haven't read every message, it seems you've been talking mostly about AT in terms of high-tech items. I understand AT to mean services too. Are there specific AT services that can be made available to kids who are struggling in mainstream classes? How does a parent get such services for their child?  
Thanks for the information.  
D.G.

- **Re: AT Services by Richard Wanderman** on Apr 14, 2004  
Would those services include the use of technology? If so, we're talking about one part of them when we talk about tools. If not I'm not sure what services you mean.

Maybe another way to frame your question is like this:

There's the technology and there's the infrastructure in which it is used: how students qualify for using it, how teachers implement its use, etc.

Is that what you mean by "services?"

- **Re: AT Services by Brian Friedlander** on Apr 15, 2004  
Services generally includes AT Evaluations, training, consulting to make sure that the tools are being used appropriately according to the students IEP. Training can include teacher, paraprofessionals, and family members. All this is to ensure that the student is receiving his/her Free Appropriate Public

Education.

Regards  
Brian

- **Re: AT Services by Discussion Board Guest** on Apr 15, 2004  
Actually I was thinking about things like speech therapy and occupational therapy. The therapists we've used have always used tools, sometimes low-tech, that seem to qualify as AT. But it's always been limited to an hour at our house or theirs. I've been wondering if I could get the school to pay for a speech therapist in class, if that qualifies as AT? Thanks.  
D.G.
- **Re: AT Services by Richard Wanderman** on Apr 15, 2004  
Speech therapists do not qualify as AT. Speech pathologists might use AT but their services are not considered "AT."

This is what is wrong with the label "AT." Everyone uses tools so classifying some AT and some not is problematic.

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- **Solve One Problem, Cause Another** by **Richard Wanderman** on Apr 14, 2004  
Note: I just copied this out of an article of mine, hope that's okay.

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Here are two examples of side effects of using tools that you might not consider.

You're in high school or college. You're dysgraphic and find it hard to take notes by hand. You decide to use your laptop or an AlphaSmart or a Palm PDA and folding keyboard to take notes in class.

You find a seat, get all setup and the lecture begins. You start typing. The person sitting next to you glares at you. You have no idea why. She then whispers, "can you type more softly?"

So, you've solved your handwriting problem but caused another person to be distracted because of noise.

You take another tack: instead of typing, you bring a tape recorder to tape the lecture only to find out that the teacher doesn't like being taped (this could become an ADA issue but let's not go there).

The important thing to consider here is that in a classroom full of kids or a meeting full of other people, some tools may be intrusive enough to be a problem for others.

What to do?

Ideal: re-engineer how teaching is done so that there is less listening and writing going on simultaneously. This would be the UDL approach.

Real: find a place to sit in a lecture hall that affects the fewest people (if you plan to pound a keyboard) and even then, acknowledge to your neighbors that you know you might be

distracting them and will do your best to keep it down.

Your thoughts and experiences with integrating technology into situations where it might not fit well.

- **Re: Solve One Problem, Cause Another** by **Brian Friedlander** on Apr 14, 2004  
Rich:

I have been working with a number of schools that have switched to using Smartboards of mimio Xi's so that teachers can write and capture notes for students for this is a problem. The solutions work very well. As more and more teachers are creating lessons in PowerPoint or Word they can provide the notes ahead of time and have students highlight the important points- this way they are engaged and attending. I think that interactive whiteboards are one way to reach the UDL approach

Brian

- **Re: Solve One Problem, Cause Another** by **Richard Wanderman** on Apr 14, 2004  
So how do the students learn to take notes? This is fine for giving them content but not study skills.

- **"inconveniencing" others with technology...** by **Perrine Dailey** on Apr 15, 2004  
It seems to me that those of us with disabilities have to accept that our technology might "annoy", "distract" or "bother" others. I have to remind myself that as a person with a disability, it is my right to have technology available to help me, regardless of the effect it might have on others.

For example: Recently I went to a interactive TV lecture with a group of other people interested in AT. I knew I'd never understand a word if the closed captioning wasn't turned on. Reluctantly, I asked that the captioning be turned on the big screen television we were all watching. Although I am used to words scrolling across the screen, and despite the fact that I am an AT advocate - I actually felt BAD for requesting the captioning because I thought it would distract the hearing folks in attendance (only one of me, ten of them...).

I asked myself, how often have I been inconvenienced by other people - blaring radios, dim lights, tiny print, etc. In the end, I saw the lecture captioned and was able to learn from it. But I had to remind myself again that having the captioning on was my right and to get over feeling bad about the accommodations I need.

I have learned from experience that using technology around non-disabled folks takes guts. I have to be able to insist upon it's use even in situations where others might find it distracting or annoying. This is a self-advocacy skill that I think many users of AT (especially children) are lacking.

IN my opinion, you should be able to type away on your notetaker during the lecture. If your neighbor doesn't like it, they can do what I have always had to do - move elsewhere!

Perrine

- **Re: by Jackie Hess** on Apr 15, 2004  
Good points and interesting insight, Perrine. To me, captioning should be a

matter of universal design. As a person without a hearing impairment, I routinely choose captioning options and am frustrated when the captioning is poorly done (as it is often on CNN and the major networks). During the brief time I taught I used captioned tapes and broadcasts whenever I could, as I found that many, many children processed visually better than auditorily. They might not have been diagnosed with a disability but the captions were helpful. Of course, reading speed is an issue for younger children; in my opinion students should be introduced to captioning at an early age.  
Jackie

- **Re: by Richard Wanderman** on Apr 15, 2004  
I'm not sure about that...

As a dyslexic adult, I can tell you that I avoided foreign films (subtitled) because not being a fast reader made it very hard to know what was going on. Some of my favorite movies are subtitled but I still have a hard time with it.

So, forcing text all the time as a means of immersion might get in the way of processing the other content, the visual and auditory content of film or TV.

For instruction, I'm all for it, but as a matter of course, it's problematic for weak decoders.

Which begs the question: would this help strengthen decoding skills?

Most current research suggests that with dyslexia, there is an upper limit to how fast a person can decode and the automatic reading that most people do is not as accessible to dyslexics as non-dyslexics.

I'm dyslexic and a relatively good reader but it's work: reading does not come as naturally for me as it does for others without dyslexia, even less well-read folks.

So, having captioning in my face too much I think would give me a headache and possibly get between me and the other content being presented.

I'm not sure about this and it's certainly going to be different for others but my experience coupled with the research I've read (mostly Sally Shaywitz and her fMRI research) about automatic reading seems to point to the idea that it's not possible to completely "normalize" a dyslexic brain, no matter how much immersion (and closed captioning) you do. Of course, this begs the question of what normal is but what I'm referring to is normalizing the decoding engine through remediation. You can move it a long way, but the very definition of dyslexia is a brain difference that affects decoding profoundly so I think there are limits.

That said, I'm pretty normal in terms of literacy but I have to work hard to say there.

- **Re: captioning by Jackie Hess** on Apr 15, 2004  
Thanks for the additional input, Richard. I have to admit that I

find it easy to not focus on the captioning when I don't want to, so I guess I wrongly attributed that to others as well. Although I've discussed it with my students, I suspect any who found it disconcerting may not have been willing to say so.

- **Re: captioning by Richard Wanderman on Apr 15, 2004**  
It's a subtle and personal thing and I'm not the best example because I'm "old" and well assimilated. I have a son-in-law who is also dyslexic (coincidence or I attract 'em) who will absolutely, under no circumstances, watch a sub-titled movie.

Between his visceral reaction, my experience, and thinking about how most of the folks I know with dyslexia do not read as much as I do for pleasure, I would think (and this is just a guess, not research) that most people who don't decode fast or automatically would not want to use captioning or sub-titling as a support; they're rather just hear it in English, even if the overdub looks stupid. As for me, one of my favorite all time movies is Cinema Paradiso and I would not want to miss the voice of the little boy or the other characters, even though I don't know the Italian.

- **Re: by Richard Wanderman on Apr 15, 2004**  
So, if I'm the person sitting next to you, making keyboarding noise and I happen to be ADD or ADHD, who wins?

One person's "rights" shouldn't trump another's.

And, do disability rights trump all? I'm not sure I buy that.

If my needs make it impossible for the majority of the class to learn, something's gotta give somewhere.

I would agree, this is a place where stepping back and looking at a bigger picture is important and while we do that, during the cultural transition, we in the disabilities world have to be a bit careful about stepping on too many toes just to exert rights. Enemies we don't need, even if we have public law behind us (and the current administration is doing its best to weaken that law as we speak/write).

- 
- **Digital Recorders by Discussion Board Guest on Apr 14, 2004**  
Hi. I came to the discussion group a little late so I am back tracking my question to Richard. I am curious how you use your digital recorder, what brand you prefer, and do you then import this to a computer application? Thank you for all the insightful information.  
Jean Wunder
    - **Re: Digital Recorders by Richard Wanderman on Apr 14, 2004**  
Jean,

I've not bought a new digital recorder in a few years and I'm sure things have changed a bit since I bought the one I use now.

Panasonic RRQR 100 (but any number after the RRQR is fine; it's a matter of total recording time and multiple recording speeds).

This is a small, pocketable recorder that I bought at etronics.com for about \$50.

I keep it in my pocket all the time and use it for reminders, such as:

1. don't forget to buy milk at the store
2. Linda's address is: 123 Main St....
3. Bart's phone number is: 555-1234
4. Please give me the directions to your house, speak into my recorder.

Like that.

One might also use a recorder like this as a pre-writing tool for someone who has a hard time using a keyboard or a hard time with spelling and syntax. Just talk the ideas and then worry about writing them later.

Recording voice is a wonderful way around memory and writing issues.

Now, for longer recordings I'd consider a tape recorder. Digital recorders with removable media are too expensive (the media is anyway) and tape is cheap.

Tape recorders are good for taping lectures or classes. If you buy a tape recorder with a tape counter on it you can index the tape by writing down the counter number and the topic being talked about at that point. Then later fast forward to that topic by fast forwarding to the counter number.

As far as getting stuff onto my computer: I don't. No need. I listen to things and add them to my address book, my to-do list, etc. but I don't store voice recordings on my computer. I could do that (I have the technology to do it) but simply don't have a need.

The above mentioned Panasonic has both a headphone jack and an external mic jack so you can run sound out (to computer) or sound in (from any source, including a better mic than the one built in).

I'd say my digital voice recorder is one of my core tools. I never go anyplace without it.

- 
- **Books on Tape** by **Brian Friedlander** on Apr 15, 2004  
I was wondering how many individuals have used books on tape or Recording for the Blind & Dyslexic new formatted Audiobooks Plus books as an accommodation?

I would be interested in you comments-success or challenges

Thanks  
Brian

- **Re: Books on Tape** by **Discussion Board Guest** on Apr 16, 2004

Brian --

I have been using books on tape for over 20 years. Due to the difficulty finding my place I have never been a big fan -- but never the less needed them to get buy. I now use the victor for RFB&D ( cd-reader/software ) and love it! I can go to any page of the book right away!

Christopher

- **Re: Books on Tape** by **Brian Friedlander** on Apr 16, 2004

Hello Christopher

Glad to hear your comments. Are you also using the reader software on your computer?

Brian

- **Re: Books on Tape** by **Discussion Board Guest** on Apr 26, 2004

I now use the victor for RFB&D ( cd-reader/software ) and love it! I can go to any page of the book right away!

Christopher

Christopher,

Can you explain the process of obtaining this and how easy it to use on any computer? This seems to solve the problem of losing one's place for typical books on tape.

- 
- **Myths about LD** by **Richard Wanderman** on Apr 16, 2004

I've noted elsewhere that some of you think there are numerous myths floating around about learning disabilities (laziness, etc.). This discussion is about technology but I think these "myths" get in the way of effective use of technology.

So, let's list them, with some commentary on how they might affect the use of technology.

- **Re: Myths about LD** by **Perrine Dailey** on Apr 20, 2004

One myth is that people with LD don't need AT! I have met many students who have never used AT or software because they (or others) think it is just for people with physically disabilities. How long have talking word processors been around? How can it be that the kids with LD are not being introduced to this basic technology in school? We need to remind parents and teachers that ALL students who have an IEP should be considered for AT - not just the ones that "look" like they might need it.

Another myth is that students with LD are not motivated to learn. I have found Rick LaVoie's web site ([www.ricklavoie.com](http://www.ricklavoie.com)) to be very useful in this case - I'll print some of the articles about motivation (Batteries not included) and give them to the student or their parents to read.

Those are the two I can think of right now. What are others?

Perrine

- **Re: Myths about LD** by **Discussion Board Guest** on Apr 26, 2004  
Another myth is that using AT is the "easy way out." This one drives me nuts because what technology does is removes the obstacles to learning for students with learning issues. It's all about accessing the curriculum for students. So MAKE IT POSSIBLE!! He ONLY uses technology when he NEEDS to - have it available and he will surprise and impress you!!!  
(Sorry, my frustration with my son's teachers is sometimes hard to control!)
- 

- **Pens and Pencils** by **Richard Wanderman** on Apr 19, 2004  
I know, how mundane can I get? But, as someone with dysgraphia, I must tell you that I'm very particular about my pens and pencils.

A general rule is, for people who push down too hard, the fatter the line, the more forgiving.

So, a Sharpie is easier to use for me than a fine point pen. A soft pencil easier than a #1 hard pencil.

Do those "grip" things work? Sort of but you can now buy pens with extra fat, rubberized grip areas which work well too.

Anyway, attention to the details of tools like these can make life a bit easier for people who have a hard time with handwriting.

- **Re: Pens and Pencils** by **Discussion Board Guest** on Apr 19, 2004  
This was very useful for me to read. My son has always pushed too hard on his pencils, with predictable results. I have to admit to getting ticked off at the number of pencils he breaks or goes through too quickly because he's constantly breaking the points and sharpens them into oblivion. The only problem I see with going with a softer pencil (I assume you mean no.3s as no.2s are pretty standard) is that it would be messier and the work of kids with LD is often pretty messy as it is. Anyway, I'm going to go out today and buy some no.3s. It's worth a try. Thanks.
- **Re: Pens and Pencils** by **Discussion Board Guest** on May 04, 2004  
My son writes too lightly..... barely able to see it. We often use markers, etc. but that doesn't allow him to erase. Suggestions?

Thanks, Laurie

- **Re: Pens and Pencils** by **Discussion Board Guest** on May 07, 2004  
Laurie,  
What grade is your son in? Is this due to diminished hand strength of decreased endurance? What does the school OT say? Their are different ways to go depending upon the reason for his light writing.
- 

- **Depression and social/emotional problems** by **Richard Wanderman** on Apr 19, 2004  
My question for all of you is: how do depression, low self-esteem and social emotional problems get in the way of using technology? Do any of you have experience with this either personally or with students or children?

If this is the case, let's talk about some remedies.

- **Re: Depression and social/emotional problems by Discussion Board Guest** on Apr 19, 2004

As a teacher I've seen a couple of behavior patterns that relate to your questions. First, there's the sense that "I can't do it and I don't want to fail at another thing". I see that more with girls than with boys. Then there's the tendency of my kids with LD to give their turn at the computer to other kids to "buy" their friendship, if only for a few minutes. I teach a mainstream class and although the computer programs have different levels and different speeds, there's enormous competition among the kids to reach the higher levels and faster speeds. Some of the slower learners would rather not use the program than to work at the "baby" level. They make excuses not to participate. I've tried a number of work-arounds but would be interested in your suggestion (and other teachers').

Gladys

- **Re: Depression and social/emotional problems by Richard Wanderman** on Apr 19, 2004

This is exactly what I'm getting at, thanks.

There are many things that get in the way of effective use of technology and the technology (difficulty, access, etc.) is just one of them.

People bring all sorts of emotional baggage to learning experiences and it's very hard to evaluate what's going on without knowing a bit about the background of the person you're facilitating for.

Learning and/or performing in real time is quite hard for some people (me included) and for them, finding ways for them to use the technology outside of a social setting may be best.

The other thing you allude to that affects learning is time pressure or speed: reduce the time and you up the pressure. This is true for everyone but for an LD kid who's already self-conscious it can be a disaster.

All of this stuff is outside of the technology itself and as far as I'm concerned, affects the overall usefulness of the technology as much or more than anything else.

- **Re: Depression and social/emotional problems by Brian Friedlander** on Apr 19, 2004

Hello:

I think that there are other alternatives to the issues that you raise. In order to reduce the pressure and speed by using software programs that are group based and require cooperation and discussion-thus removing the speed issue. If you haven't looked at the software from Tom Snyder in awhile then you should look at Choices, Choices for grade k-5 and Decisions Decisions 5.0. These are programs that simulate events and have students make choices based on the data. In this case students can learn from one another and students who may not have the self-esteem or confidence when speed and pressure are an issue should a little more comfortable with these alternative.

Regards  
Brian

- **Re: Depression and social/emotional problems by Richard Wanderman** on Apr 20, 2004  
I agree, simulation is a great way to learn all sorts of skills, including social.

- **Re: Depression and social/emotional problems by Perrine Dailey** on Apr 20, 2004

This is an excellent topic to chat about. As a person with a disability, I know how hard it is to have decent self esteem when you have a disability (any disability). I think being "mainstreamed" was part of the problem for me - I felt like I was the ONLY one in the WHOLE school with a disability.

In my case, I learned the hard way that not having any accommodations led to nearly flunking high school. Once I allowed the school to provide accommodations I needed (despite my initial embarrassment), things improved. However, it wasn't until I began doing public speaking about my disability and working with others with disabilities that I really began to feel OK about telling people that I was deaf.

In my opinion, children diagnosed with LD (and other disabilities) should have access to a self-advocacy group at a young age. I see so many kids with low self esteem and no self advocacy skills. I think they go hand in hand. Reinforcing that everyone is unique might help.

Educating all students about disabilities from first grade on might be good - like Black History Month, or Women's Herstory Month. Having role playing games also helps kids without disabilities relate to the kids with disabilities. Having a shared experience helps build understanding. I like the lists of famous/successful people with disabilities too. Kids know who Tom Cruise and Whoopi Goldberg are - they are stars and yet they have a disability.

As for how this relates to AT use - the students I work with are much more willing to use "cool looking" tools. If their AT is attractive and looks modern (like an iPod or portable CD player), other kids are likely to be interested in it - and want to try it. I think the Victor Reader Vibe is a good example of AT that kids would be OK using.

I also think we need to promote more role models with disabilities. Richard, you are a great example of this - I wish the LD kids I worked with could meet you and learn that they too can be successful. Any thoughts of writing a self advocacy book for kids?

Perrine

- **Re: Depression and social/emotional problems by Richard Wanderman** on Apr 20, 2004  
Thank you for the kind words. Believe it or not, I am at work on a book, although I'm not sure yet who exactly its aimed at but hopefully it will be broad enough to be accessible to kids and adults with LD and professionals too. Don't hold your breath, I've been working on it for over 10 years but I'm traveling less now so the pressure is on to get it done. Still, don't hold your breath.

I do agree that the cooler the tool, the more likely it will be at least carried if not used. An iPod can be used to listen to music, or a digitized book. Same cool tool, two very different uses.

I'm not sure how much it helps to know that Tom Cruise is dyslexic. I'm dyslexic too but I'm no Tom Cruise (well, maybe my wife thinks so, but I doubt it!).

It's an interesting question that I'd done some thinking and writing about.

[http://www.ldresources.com/articles/gifted\\_dyslexics.html](http://www.ldresources.com/articles/gifted_dyslexics.html)

It's old writing and it's not just about famous people but it does touch on a topic near and dear to my heart: the difference between propensity and action.

It may do people good to know they have the potential to do more than they are but until they do it, nothing happens.

I know, the knowledge that I'm not stupid, that I'm dyslexic and that I can do more things than I thought ought to lift my spirits some, and it does, but it does not DO the DOING. I still have to say "okay, I can do that" and do it.

Many "gifted dyslexics" forget that last part: they and their parents talk about their gifts but not a lot gets done.

So, I prefer the grass roots way: do a lot of stuff and try to make some sense out of it. In time you'll have a great resume of things that you've done and that fact alone will make you feel a lot better about what you can do. Then you'll hopefully go do more.

When I talk like this I feel like my father who grew up in the depression and that time shaped his values as it did many people who grew up then. Sort of like him saying: "when I was your age, I had to eat dirt, and had no clothes and blah blah blah."

Yeah right. Well, yes, he had it tougher but most importantly he accumulated a lot of experiences that shaped his view on life. The more the better.

That's the part of his depression values that I've taken to heart and it's worked well for me.

Now, what were we talking about...?

Sorry, I drifted.

- **Re: Depression and social/emotional problems by Brian Friedlander** on Apr 21, 2004

Rich:

I am eager to get a signed copy of the book-so keep writing!

Regards  
brian

- **Re: Depression and social/emotional problems by Discussion Board Guest** on Apr 20, 2004

The biggest problem in our society is the drug and alcohol abuse of parents. This, to me, appears to be the topic everyone dances around. How can you help a child when

her or his own parents won't? You can have all kinds of programs at the school, after school and in the community but that child still has to go home. That child still has to see his or her parents struggling through the throes of a disease for which they will not seek the cure. A school, an individual teacher can impact a kid and I would venture to say that most schools have a positive impact on kids throughout our country. But those kids still have to go home. What they see and do when they go home has a more powerful effect on them than any teacher or school can have, in most instances. I have watched many a good kid, through my volunteer efforts, turn into little lawyers playing the systems because of the freedom they get at home and what they see their parents doing. Depression, low self-esteem and social emotional problems are symptoms and until we as a society face the real problem, the elephant in the room, any 'fix' we attempt will only get us gov't dollars for our programs and have limited success.

- **Re: Depression and social/emotional problems by Richard Wanderman on Apr 20, 2004**

Interesting. I agree that some households add insult to injury; they don't help the problem but make it worse.

But, what I was referring to in my original question was how this underlying social emotional baggage affects the use of technology. After all, LD/Tech is what we're supposed to be discussing so we ought to try, if we can, to connect to that in some way.

I think you've hit on yet another, underlying reason many of these kids walk around with such emotional burdens; they have parents who also have problems and have little time to help them.

Then, there's the idea that dyslexia and ADD can be inherited and many times are. Which means that parents may be LD or may be LD and not know it.

This can compound the problem.

So, I think we agree that the social emotional stuff can get in the way of effectively using technology and it may be useless to introduce tools into a situation where they may not be used well.

On the other hand, a computer and high speed internet access might be just the escape from family reality that many of these kids need.

- **Re: Depression and social/emotional problems by Discussion Board Guest on May 07, 2004**

I am not sure 'useless' is the proper word to be used. Maybe 'having some effect' would be proper. I think children learning to use technology effectively is an asset to a total program. Depression and social emotional baggage create a wall of resistance within a child. it is easier and funnier to resist in a group than it is to try and get your mind off of your problems and attempt to learn something new. A kid can be momentarily cheered up by 'smarting off' or resisting instructor application, additionally, this same kid can gain some sense of power and accomplishment by making the class laugh. this momentary accomplishment/thrill/kicks/power boost is sometimes all a kid has so that is what the kid seeks. I would think that using the internet access as escapism is helpful for the child as a stand alone mechanism but there may be something to using the access as an incentive device,

albeit 'lawyer' kids see right through this and may see another opportunity for resistance.

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- **Assistive Technology Abandonment** by **Brian Friedlander** on Apr 21, 2004

Hello All:

As an assistive technology consultant I for one am amazed at the technology and what it has to offer but I am also cognizant that a fair amount of the tools that we recommend never get used or get used and are often abandoned by the student or user. I was wondering what your experiences have been and your ideas on how we can better insure that the tools that can make individuals more productive are not cast aside.

Regards  
Brian

- **Re: Assistive Technology Abandonment** by **Richard Wanderman** on Apr 22, 2004

So, when things don't work out, the problem can be manifold:

Wrong tool  
Wrong attitude  
Incorrect expectations  
Too much pressure to learn  
Tool comes with stigma

etc.

So, there are many reasons tools get tossed aside. I have a pile here in my house that are tossed aside.

There are two styles here:

1. do a ton of research, be very conservative, and get closer to finding good fit
2. try many tools, be less conservative, and take longer to find a good fit but maybe find a better fit because of the variety of tools tried.

Both ways work. Both ways can lead to good results. And both ways can lead to abandonment.

- **Re: Assistive Technology Abandonment** by **Perrine Dailey** on Apr 22, 2004  
AT abandonment could well be related to the depression/esteem issues discussed previously and use of technology. If a student feels "funny" using AT, they are likely to avoid using it all costs (even if it is useful) and it collects dust.

Another reason for abandonment - technology changes SO FAST - we have outdated tools sitting on shelves, unused, that could still serve a useful purpose but new items, such as upgrades, have made the original product obsolete. New tools are faster, lighter, more useful - why use the old ones when the new ones are so much better?

It seems that the English-speaking countries are the ones doing the most to develop

and use new technology. I would like to see a way to recycle abandoned AT in countries that really need it. I wonder if an international "AT Adoption" has ever been undertaken. Even if many programs are in English, many people around the world learn and speak English and would be glad to have the technology.

Unless a tool has become part of the student's daily routine, such as taking a notetaker to EVERY class, every day (and using it), its use may make life even more difficult for students with LD. Imagine having to try to take notes, remember how to use the device, spell, listen, and worry about what the guy at the next desk is thinking about the clack clack of the keys...However, once the device has proved itself useful and the student has achieved some success through its use, the student is much more likely to continue to use it.

Perrine

- **Re: Assistive Technology Abandonment by Richard Wanderman on Apr 22, 2004**

You make excellent points. The one that stands out to me is that tools should become part of people's everyday routines and if they don't, they stand a good chance of being abandoned.

I would go further though and say that a tool ought to be so much a part of everyday routines that it is taken for granted, falls into the background, and what is thought about is not the tool, but the application (what one wants to do with it). Great tools do this and the greatest tools do it relatively painlessly and fast.

- **Re: Assistive Technology Abandonment by Jackie Hess on Apr 27, 2004**

We've just completed our national AT information needs assessment and one of the things we've heard a lot is that there aren't enough opportunities for families and students to view/demo AT devices. There were a lot of calls for videos that parents can use to preview equipment, to see it in operation, and to serve as training tools. It makes sense to me that if a family is buying a piece of equipment after only seeing a picture of it in a catalogue that there would be a lot of unpleasant surprises and resulting abandonment.

A given technology may be theoretically powerful, but it may be a terrible fit with a given child (literally and figuratively). Sometimes it may take a while for that to surface, but often it's obvious quickly. We need more demo sites and more programs where families can return software and hardware even if the shrink wrap is broken. And we definitely need more visual training tools, not just wordy manuals.

- **Re: Assistive Technology Abandonment by Brian Friedlander on Apr 27, 2004**

I agree with you. There needs to be more Centers where parents and educators can come to try out hardware and software. Likewise, I think that schools that are using assistive technology effectively should reach out to other schools and provide them with the opportunity to see how they are using and integrating the tools into the curriculum. For the reasons that you shared, I too was frustrated when I was doing presentation to educators that I didn't have students on video discussing the various tools and technology that they were using. Having said that I just completed filming of an assistive technology video which will be out this Summer which captures students

using a variety of assistive technologies and their insights as to why they choose to use. I am excited with the project and hope to share their experiences so that others can see the value and import of these tools.

Regards  
Brian

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- **AT Toolkit for School by Brian Friedlander on Apr 24, 2004**

For the past several years I have been talking with schools about developing their own AT teams so that they can make decision with regard to "AT Consideration/" Additionally I have been speaking with them about putting together an "AT Toolkit" so that they have some tools that they can use to trail various interventions with students. I was wondering what tools you would put in your "AT Toolkit?"

Regards  
Brian

- **Re: AT Toolkit for School by Richard Wanderman on Apr 25, 2004**

AlphaSmart  
Tape recorder  
HiLiter pens  
Calculator  
Franklin spelling tool  
Computer (laptop hopefully)

- **Re: AT Toolkit for School by Brian Friedlander on Apr 25, 2004**

Rich:

I for one really like the Talking Franklin Spell checkers especially for students who have reading disabilities.

Brian

- **Re: AT Toolkit for School by Richard Wanderman on Apr 25, 2004**  
Which model?

Does the model you like allow both "?" and "\*" wildcard searches?

Does it say "boing... wrong" when you misspell a word (I hate that)

Does it have a headphone jack?

Are students reluctant to use the talking feature in public? I've seen reluctance to do this and of course, if students need speech then what good is the unit without it?

I agree, however, that in the right environment these things are useful.

Now, once the correct spelling of a word is found, have you seen

problems with transcribing it onto a computer or AlphaSmart? I certainly have and wish these tools communicated with computers.

- **Re: AT Toolkit for School** by **Brian Friedlander** on Apr 25, 2004  
Rich

I to wish that there would be some way to communicate with a computer or with an Alphasmart. My favorite models are : Merriam-Webster® Speaking Dictionary & Thesaurus, ((Speaking)) Merriam-Webster's Collegiate® Dictionary, 11th Edition, Speaking Language Master™. As far as I know they all have the wildcard searches using the \* and ? and they all have a headphone jack. yes- I would agree that students are reluctant to use the speaking models in public but will use them in the privacy of there of homes.

Regards  
Brian

- **Re: AT Toolkit for School** by **Discussion Board Guest** on Apr 26, 2004  
Although I agree that it is not "assistive technology" because it is a readily available tool that all students use, I would have to add Microsoft Word, Excel and PowerPoint as tools that are essential for use by students with learning disabilities. There are a number of very powerful features built into these programs.  
And I can't wait to see the new version for the MAC!

- **Re: AT Toolkit for School** by **Richard Wanderman** on Apr 26, 2004  
Can you list what those features are?

Auto-correct I'll bet is one of them but what are some others?

What exactly about PowerPoint is useful? The outliner? The slides?

Thanks.

- **Re: AT Toolkit for School** by **Discussion Board Guest** on Apr 27, 2004  
Word Features:

Ability to customize font, size, colors and background color  
Ability to collapse/expand in outline view - valuable tool for studying  
Auto-correct as you mentioned, and autoformat (type in initials, get your first and last name - kids love this feature)

Ability to save versions to show improvement through the writing process

Autosummarize

Readability statistics (with caution)

Right click to easily correct spelling and access synonym support

Forms features

Ability to create outlines easily

Ability to create tables easily (with and without lines)

Sorting features

- **Re: AT Toolkit for School** by **Jackie Hess** on Apr 27, 2004  
Brian, in addition to specific pieces of hardware, software, and low-tech adaptations, I would like to see videos of teachers successfully including special needs students (that other teachers can use to model behavior); I'd like to see a list of local resources that families and educators can use to seek funding, assessments, and evaluations. I'd also like to see a list of websites to which families and educators can be directed to get more information. In the needs assessment I referenced earlier, there was a clear need for all of those.

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- **Who should provide what?** by **Richard Wanderman** on Apr 27, 2004  
I'm curious how you all feel about the line between parents going to court to force schools to provide, say, an AlphaSmart keyboard for their child vs. just going out and buying one and not putting energy into the fight.

Sometimes I think maybe we get fixated on applying disability law through a long, drawn out, traumatic process when in fact it might be easier, and cheaper, to just put down the \$189 and get the AlphaSmart for a kid and be done with it.

Your thoughts?

- **Re: Who should provide what?** by **Perrine Dailey** on Apr 27, 2004  
This is a good question. I hope teachers and parents will present their sides and see what each other has to say.

Parents might feel that "if we buy it once, then ALL parents will be expected to buy their kids AT."

The law says the school must provide AT if it is needed for a free, appropriate public education. Because of limited school budgets and the time consuming chore of getting a signed check and purchase order, I'd weigh the stress associated with suing the school and dealing with all that paperwork against the \$200 and my peace of mind. Heck, if it breaks, the school STILL needs to repair it if the child needs it for FAPE!

Perhaps there should be a deductible, like with our medical bills. If the device is under a reasonable amount (determined on a sliding scale by the family's income) The family would have to pay the first \$500 and the school/insurance would pay the rest.

I have more ideas, let's hear yours.  
Perrine

- **Re: Who should provide what?** by **Richard Wanderman** on Apr 28, 2004  
This is great.

Then there's the more subtle but equally problematic argument:

Parents: We want our kid to have a laptop, Dragon naturally speaking, etc.

School: We think an AlphaSmart will do the job.

Parents: We think you're being cheap and don't want to buy the high end

stuff

School: We don't want to overwhelm the kid with all that stuff and we have a rule to try the least intrusive and least expensive tech first to see if it will work.

Parents: And while you're experimenting my kid is falling behind; get him the good stuff and it will do the job now.

School: Not really, he still has to learn how to use this "good stuff" and it may not work for him.

and this can continue forever... all the way to court.

Both sides have good points and both points can coexist when you take "the school must" out of the equation. If parents insist that they are right and the school is wrong then maybe, in some cases, they should pony up and put some money into the equation. I mean, after all, it's their kid right?

And, of course, schools ought not stereotype all parents as types who think that if it costs more its better (many people think this by the way, parents and schools) and that spending less on their child is copping out of throwing everything they can at the problem.

As Brian has noted in another thread, much of this stuff gets abandoned and someone at the school is watching so they may be less likely to toss big money at problems right up front.

Sometimes it pays to just change the picture and end run the logistical problem: get the tool, learn how to use it, help the kid, be done with it. If this "enables" the school so what? It also helps the kid. Yes, we need systems change but we also need kids who get through school without too many scars.

- **Re: Who should provide what?** by **Discussion Board Guest** on Apr 28, 2004

Great thread, Richard, since I run into this often. I have parents who are willing to buy the technology for their child but without support from the school, the technology is often abandoned or not used to its potential.

I see some schools offering little or saying, "Well, we have Alpha Smarts!" as though that is the extent of the AT consideration and they can wash their hands of anything else. Also, many IEP teams readily admit that they don't know what is available but they aren't exploring options for their students either. That does set up an adversarial position because the technology then becomes parent driven.

Whenever I work with IEP teams, I talk with them about how the technology doesn't just help that one student whose mother pushed for it, but that it benefits many students.

They agree, but do nothing until another parent insists on trying the tools with their child.

- **Re: Who should provide what?** by **Jackie Hess** on Apr 28, 2004

Interesting responses to your initial questions, Richard. Based on my limited experience teaching, I'd suggest that it's often not a matter of "the school" but of a particular element - the teacher, the principal (or the individual responsible for the

school budget), the AT resource person, etc. In the school in which I taught, the principal was often willing to pay for the AT device, but the teacher in question was resistant. The principal tried persuasion, but ultimately wasn't willing "to take the teacher on," particularly if he/she had been at the school a long time. In other cases it was the AT resource person who had staked her reputation on certain approaches and wasn't willing to learn new techniques. As someone who had run the National Demonstration Lab (for educational technologies) I periodically offered to conduct ed tech workshops for teachers, including AT, but I rarely had any takers. I've become a believer that it has to come from the top and has to be mandatory or people don't participate. That isn't to say that it's not reasonable to encourage parents with adequate resources to pay for items under a certain cost (I like the deductible idea as long as there's a means test).

- **Re: Who should provide what?** by **Richard Wanderman** on Apr 28, 2004  
Well said: there are many elements that must work together to:

1. get the student evaluated properly
2. know what the tool options are
3. get the tool
4. educate teachers and others working with student
5. integrate the tool/student
6. follow up

The problem is that each of these "elements" or variables has fuzzy edges so it's less like fitting together tinker-toys and more like working with clay (in the most plastic sense).

Then there's the coming from the top model. Sometimes when things come from the top they are resented: "you will do this in-service..." rather than "gee, that topic interests me, think I'll ask the boss if I can get time off for a workshop."

Both can lead to a more educated teacher but the first can lead to baggage or resentment along with that education.

Ask me how I know this?

I'm one of the people who's been doing in-services in this area for over 20 years now. Some teachers who come to my talks are there because they're interested in the topic and some are there because they have to be. I tried (I'm not doing many anymore) to make them enjoyable for everyone but it's quite tough to talk to groups who aren't interested in the topic, let alone want to be there at all.

I think this is ultimately a means/ends problem. The end most of us want is to see a student use a tool to help him fully participate in school. If that can happen, one way or another, it's a good thing. How that happens (the means) is where the issues get thornier.

- **Re: Who should provide what?** by **Jackie Hess** on Apr 29, 2004  
I certainly wouldn't want to drag teachers screaming and yelling to a workshop. Nor would I want to address a group of sullen professionals, forced to give up their evenings or weekends.

The successful mandatory training I've seen includes the following

elements:

- (1) the principal or department head discusses the potential training opportunity with the staff during one or more of their regularly scheduled meetings;
- (2) the principal lays out the overarching goals, explains why the training is important for the school/department, students, and the teachers' professional development;
- (3) the principal answers all questions concerning scheduling and logistics;
- (4) sometimes the person or team who is to deliver the training makes a presentation geared to engendering interest and excitement on the part of the staff;
- (5) the principal and training team makes every effort to hold the training during regularly scheduled work hours.

Among the benefits of mandatory training are:

- (1) the entire staff learns and can use a common vocabulary;
- (2) those staff members who are more adept at the new skills can help those who are less so;
- (3) staff are exposed to new concepts and skills that they might not otherwise have sought out (the "browsing the stacks" idea).

I believe that teachers' skill levels fall along a bell curve. As the Congressional Office of Technology Assessment once noted, those teachers who (individually) seek out and use educational technology are the "very best of the very best." (At the time they estimated that this was the top 10% of teachers; by now it may be the top 20%.) There are reasons for that - software programs are not designed to be easily integrated into local curricula; hardware can be difficult to manage; and teachers have very limited time in which to individualize programs. I still think, though, that we have to reach out to the next 80% and urge them along the path.

- **Re: Who should provide what?** by **Brian Friedlander** on Apr 29, 2004  
Hello:

While I have seen parents purchase assistive technology for their children-they still run up against the same hurdles when actually using it day in and day out. I would agree that there are some technologies that do not need that much support but by and large there needs to be acceptance of the tools and support to make it effective. So even if a parent goes out and purchases the tool the child may not be getting what he or she needs accomplished because the key players have not bought into the solution. There needs to be some acceptance of the tool and some buy in by a teacher or administrator to make it happen for the child.

Regards  
Brian

- **Re: Who should provide what?** by **Richard Wanderman** on Apr 30, 2004  
The simple problem with mandatory training is that if you don't

want to be there, it's a waste for everyone.

I agree that people need to broaden their knowledgebase but I also think they ought to want to.

That said, I would think any teacher who wants to be a better teacher would want this, but alas, many teachers get into teaching for the vacations, not for the teaching.

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- **Balance by Richard Wanderman** on Apr 30, 2004

If I use a computer or an AlphaSmart (a keyboard) because my handwriting is a problem, will my handwriting ever improve?

If we don't work on the areas that we're using the technology to avoid, are we possibly creating problems down the road?

I wish I had better handwriting. It was never any good, I'm dysgraphic. But, there is no doubt that as I keyboarded more and more of my written communication (there was very little pre-keyboard but it did exist) my handwriting has gotten worse.

Having some kind of balance in how we use technology vs. doing things without it might be a good thing to remember as we recommend these kinds of solutions.

Use a calculator too much and you lose some of your speed at doing simple arithmetic. Good to continue to attempt to spell words, add numbers, and do other things that are hard and use the technology a bit more sparingly, at least while we're learning (well, we're learning forever but as young children).

I'm not saying withhold it but just keep those other skills strong if possible.

- **Re: Balance by Discussion Board Guest** on May 01, 2004

Richard,

As another adult who doesn't have any learning disabilities (that I'm aware of), I have to say my handwriting has gotten worse since I have chosen to keyboard everything. Even my kids notes for school for dismissal are all keyboarded. It's a choice that I've made because I love using the readily available technology - it's "mistake tolerant" as you say. So my handwriting's is worse, so what?

I think your point is as adults we can make those choices - use the tool or not. But with the students with whom we work, we want to keep in mind the balance. Just yesterday this issue came up at an IEP meeting on a sixth grade student. My concern is that the pendulum usually swings heavier on using the "mistake-intolerant" tools - paper and pencil especially, at the student's expense.

Good point to always keep in mind.

- **Re: Balance by Richard Wanderman** on May 02, 2004

I agree but depending on the context the pendulum can also swing a bit too heavily on the latest and greatest sexy new technology.

There are liabilities to not learning how to do simple arithmetic in your head and relying a bit too heavily on a calculator and one way to keep these at bay is to continue to work on doing math in your head, even as you use the

calculator for harder problems.

Sorting out what to use the calculator for and what to use your head for is the problem and we, as teachers and parents and professionals need to help guide and model for this.

How many of you pull out a calculator to leave a tip in a restaurant or have an algorithm (double the tax) for doing it rather than thinking about what 10, 15 or 20% of the bill is?

What is there's no tax?

Could be that the tax algorithm is a short cut evolved because people do not like to do math under pressure but trust me, as one who avoided math my whole life I find it easier to look at the bill, come up with 10% (move a decimal if that's the way you see it) and either double it or round up from 10 or a bit more to the nearest dollar.

This "method" works every time, in any currency and can be done sans-technology. It also puts very little strain on my mental abacus.

However, it really doesn't matter what the method, just so you have one and the overuse of a calculator gets in the way of making one up.

The word for this little "method" in our heads in computer science is "heuristic" which is a commonsense rule (or set of rules) intended to increase the probability of solving some problem.

Again, I'm in no way saying we should withhold calculators. I am saying that in the big picture, it might be useful to have some mental "methods" to double check the calculator's result and to do simpler problems without one.

- 
- **Organization** by **Richard Wanderman** on May 03, 2004  
I'm curious about how technology is being used to help LD students with poor organizational skills.

What kinds of things are you doing with:

Computers  
PDAs  
AlphaSmarts or Danas  
3 ring notebooks  
Planners  
DayTimes or Runners  
Digital Recorders  
Rubbermaide containers

etc.

How are you using tools to help people stay organized?

- o **Re: Organization by Brian Friedlander** on May 03, 2004

Hi Richard:

I know that a number of the schools that I work with have students using the Alpha smart 3000 in lieu of using an Agenda book. Many of the students enjoy using this as supposed to a paper Agenda book. There are a number of high schools in my area that have begun to use PDA's to teach time management and organization.

I for one have some organizational difficulties and find the computer and my Palm IIIC to be indispensable. Having all my vital information either in my computer or Palm makes it easy for me to retrieve it. Can't do that as easily with paper.

Regards  
Brian

- **Re: Organization by Richard Wanderman** on May 03, 2004  
How do they use the AlphaSmart for organization? Do they use all the files or one file? Do they make a list or what?

How do kids use PDAs and sync them with computers or don't they? Do they lose PDAs?

- **Re: Organization by Brian Friedlander** on May 03, 2004  
Rich:

Most of the students who are using the Alphasmart 3000 use File 8 to type there assignments, projects or homework. It works really well. We just need to get them into the habit of use 1 file.

I have some schools that have moved to the Dana and the students use the To Do lists and the Calendar for time management. It is harder to lose a Dana than a Pocket Pc or Palm but I'm not saying it can't be done:)

Brian

- **Re: Organization by Richard Wanderman** on May 04, 2004  
And when they use Dana do they sync with a computer or just use it alone with no syncing?

If no syncing how do they back up what they are working on?

- **Re: Organization by Discussion Board Guest** on May 04, 2004  
What's a Dana?

- **Re: Organization by Brian Friedlander** on May 04, 2004  
The Dana from Alphasmart is a portable notetaker that runs using the Palm operating system. It is a Palm device with a large screen and full size keyboard. It makes for a great assistive technology solution when a laptop is not needed. For writing and taking notes it is a wonderful tool. Now that there is a model

wireless students can print to network printers and there are some new tools that allow students to save to servers. For more information go to [www.alphasmart.com](http://www.alphasmart.com)

Regards  
Brian

- **Re: Organization by Richard Wanderman** on May 05, 2004

The Dana is both a large Palm OS device and an AlphaSmart with a virtual PDA inside it. It is a hybrid tool, not one or the other but both.

In Alpha Word, the Dana's AlphaSmart-like writing environment (which no other PDA has) you can write and save and send just like on an AlphaSmart.

Move out of Alpha Word into one of the standard Palm OS applications like datebook or to-do list and you're using a Palm OS device that happens to have a big screen and a full size keyboard.

The Dana costs about \$400, typical of PDAs but twice as much as an AlphaSmart.

- **Re: Organization by Brian Friedlander** on May 04, 2004

Rich:

Most of the students will send text from the Dana to the computer at school and then Synch it at home. There are still issues to be worked out with Synching at school. I will be working with a school that just purchased 250 Dana's. It should be interesting to see how they use them. I was not involved with the technical end of the training but will be working with the teachers to integrate it.

REgards  
Brian

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- **Evaluation of young children by Jackie Hess** on May 05, 2004  
A couple of final questions, gentlemen, as we wrap up the discussion:

What signs should parents for in their young children that would signal them to seek an evaluation for learning disabilities?

Should parents think differently about learning disabilities if their child has other physical and/or emotional disabilities as well? How does that complicate things (if in fact it does).

Thanks.

- o **Re: Evaluation of young children** by Jackie Hess on May 05, 2004  
oops, that should have been "What signs should they look for"?
- o **Re: Evaluation of young children** by Richard Wanderman on May 06, 2004  
Well, first it might be a good idea to talk about what you mean by "learning disabilities" as that will determine where to look for "signs."

This area has been diced up so finely that it's hard to know what is meant by "LD" anymore.

Verbal or non-verbal or both? Etc.

Here is what the International Dyslexia Society thinks is a learning disability. Please notes that I would link to that page at their site but this software does not like direct html so I copied and pasted a piece of it here. Sorry.

Also, note that they have a bias and their bias is "verbal." They do not think ADD and ADHD are learning disabilities.

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What is dyslexia?

Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and / or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

Adopted by the IDA Board of Directors, Nov. 12, 2002. This Definition is also used by the National Institute of Child Health and Human Development (NICHD).

Studies show that individuals with dyslexia process information in a different area of the brain than do non-dyslexics.

Many people who are dyslexic are of average to above average intelligence.

Are there other learning disabilities besides dyslexia?

Dyslexia is one type of learning disability. Others include...

Dyscalculia - a mathematical disability in which a person has unusual difficulty solving arithmetic problems and grasping math concepts.

Dysgraphia - a neurological-based writing disability in which a person finds it hard to form letters or write within a defined space.

Are Attention Deficit Disorder (ADD) and Attention Deficit Hyperactive Disorder (ADHD) learning disabilities?

No, they are behavioral disorders.

An individual can have more than one learning or behavioral disability. In various studies as many as 50% of those diagnosed with a learning or reading difference have also been diagnosed with ADHD.

Although disabilities may co-occur, one is not the cause of the other.

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## Recommended Resources

### **Tools and Dyslexia: Issues and Ideas**

by Richard Wanderman

This article first appeared in the Fall 2003 Issues of Perspectives, the newsletter of the International Dyslexia Association. You can access it online at [http://www.ldresources.com/articles/tools\\_and\\_dyslexia.html](http://www.ldresources.com/articles/tools_and_dyslexia.html)

### **Assistive Technology for Children with Learning Difficulties.**

This guide, which contains strategies for identifying and addressing learning difficulties, is available on the Schwab Learning website at [http://www.schwablearning.org/pdfs/7610\\_tech\\_guide.pdf](http://www.schwablearning.org/pdfs/7610_tech_guide.pdf)

### **Inclusion Times**

This newsletter is published five times a year by AssistiveTek. Dr. Friedlander is its editor. Subscription information is available at <http://www.assistivetek.com>

### **Tech Tools for Students with Learning Disabilities: Infusion into Inclusive Classrooms**

by Jane Quenneville

This lengthy article discusses a range of technologies that can be of use to children with learning disabilities. It can be read online at [http://www.ldonline.org/ld\\_indepth/technology/tech\\_tools.html](http://www.ldonline.org/ld_indepth/technology/tech_tools.html)

### **Learning Disabilities and Assistive Technologies**

This resource, from Tools for Life, is an excellent guide, that discusses the use of AT in reading, writing, math, and social interactions. It can be read online at <http://www.gatfl.org/ldguide/defin.htm>