



**Family Center on
Technology
and Disability**

FCTD Conference Series: Designing a Performance Technology Toolkit

Designing a Performance Technology Toolkit

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EXPERT'S CORNER

Introduction

Our goal in this discussion group is to work together to create a Performance Technology Toolkit for Students that can help them in dealing with school based standards or peer based standards. Taking language from IDEA 2004 we are going to use the following as our framework (though not necessarily in this order):

1. Accommodations
2. Assistive Technology
3. Technology That Supports Learning
4. Universal Design for Learning

Within this framework we will look at a variety of tools, with an emphasis on problem solving and performance. The types of problems will be varied: from inaccessible text to mathematics/science to color theory. The outcome of this discussion group will be a digital handout of resources. I hope you will join us.

Experts' Perspectives

Ideas on Designing a Performance Technology Toolkit for Students

The relationship between our society's standards of performance/intelligence and our choices of technologies for students with disabilities is important. For example, if a deficit model is developed and used to determine if an individual has a disability, society has a responsibility to provide technologies and resources so that individual can reduce the deficit. Or, if a response to intervention model is used then society has a responsibility to provide state-of-the-art interventions: in particular performance based interventions.

Why? The more a student can self-customize a variety of technology tools and strategies in a problem solving activity, the higher the chance of success, and the more intelligent that student will be perceived to be. Self-customization of technology tools is critical to student success when dealing with predictable and unpredictable situations.

To complicate matters further students with disabilities have at least two very different domains they need to learn to self-customize technology in. One domain is the school setting. Things in this setting haven't really changed much over the years. Word processors, spreadsheets, and other tools continue to be important. The Internet is a new addition but the information processing tools are often based on old models; things like outliners, word processors, email, etc. Web 2.0 tools are often blocked in the school setting.

But the second domain, the world outside of school, is changing rapidly. Cell phones, text messaging, social networking, blogging, and 3D immersive virtual worlds are the norm. Because of this we actually have response to intervention issues in two different domains with different levels of expectations. In one the expectations are set by adults and in the other by peers. And, since the domains are different, the technology tools and interventions may be different as well.

Our goal in this discussion group is to work together to create a Performance Technology Toolkit for Students, something that will be useful to students, friends, parents, teachers, and therapists. Because many new technologies are blocked by school districts it may be that a student may need to explore these tools independently. Or a friend or parents may be the primary support in learning new skills. In any case the toolkit needs to be usable by a variety of people.

Taking language from IDEA 2004 we are going to use the following as our framework (though not necessarily in this order):

1. Accommodations
2. Assistive Technology
3. Technology That Supports Learning
4. Universal Design for Learning

Within this framework we will look at tools across both domains described above, with an emphasis on problem solving. The types of problems will be varied: from inaccessible text to mathematics/science to color theory. The outcome of this discussion group will be a digital handout of resources.

Experts' Bios

David Davis is the Project Director of the Florida Instructional Technology Training & Resource Unit (FDLRS/TECH), a specialized statewide center with the Florida Diagnostic Learning & Resources System (FDLRS). He has worked with the FDLRS Network in assistive, instructional, and communication technologies since 1990. Prior to working with FDLRS, Mr. Davis was an Academic/Diagnostic Specialist, a Certified Behavior Analyst with the State of Florida, and a Music Therapist.



CONFERENCE

Transcript: Teaching Digital Natives

□ **Welcome** posted by **Jackie Hess** on Mar 03, 2008

Good morning and welcome to the Family Center's March online discussion. We're pleased that David Davis of the Florida Diagnostic Learning & Resources System has agreed to serve as moderator. We'll be addressing a number of issues that fall into the "theory versus real world" category and will therefore be particularly useful.

As always, we ask that you speak up. All thoughts and questions are welcome. If you haven't been able to read all of the posts and an item has been addressed earlier, that's ok. No harm, no foul. Often people tell us that they fear their question will sound too simplistic. Given the large percentage of people who don't post because of that fear, I think it's safe to assume that many people would appreciate having simple questions posted.

As always, we're glad you're here and hope you'll return regularly throughout the month.

Jackie

- **Re: Welcome** posted by **OM** on Mar 03, 2008

Hi! I got the email from FCTD inviting me to participate here. I am very interested in finding out more information on student centered technology customizations. I am in a very large public school system (86 schools). I train our teachers to use software programs that we have purchased for Special Education. I also give a workshop on computer programs for student access, like Cleverkeys, ReadPlease, modifications of Microsoft Word, etc. I'm always looking to learn more that I can share with our teachers and students, especially those students with high incidence Assistive Technology needs. I look forward to the upcoming discussion. Thanks!

- **Re: Welcome** posted by **Nancy Parker** on Mar 03, 2008

My name is Nancy Parker. I am a Regional LATS (Local Assistive Technology Specialist.) My job is to support the LATS, the school professionals and staff, the parents and families, and most of all the students who need and use assistive technology. The more that I learn the better I am able to serve our students. I appreciate the opportunity to participate in this project. I really like the "house rules," and feel that these rules will allow the group to develop a new vision of education, technology, communication, and inclusion. I often "think different," and I often hesitate to share that "think different" opinion.

- **Re: Welcome** posted by **Shobha Sundar** on Mar 04, 2008

Thanks to FCTD for giving this opportunity to participate in this discussion. As a new learner of AT from India, I would be interested in following threads to improve my knowledge and information on AT and it's appropriate adaptation to individuals. I look forward to following the discussion threads.

- **Re: Welcome** posted by **Ellen** on Mar 04, 2008

Welcome Shoba!! These online discussions are wonderful!! They're very informative and I always learn a lot!!

Ellen

- **Re: Welcome** posted by **Lily** on Mar 13, 2008

Hi all,

I just found out about this online discussion.. the title is very intriguing..

I'm a little overwhelmed with all the posts to read through so it may take some time to really participate. Will this go on for the whole month of March or just part of the Month??

I look forward to reading all the threads!!

Lily

- **Re: Welcome** posted by **David Davis** on Mar 13, 2008

We are here all of March, and welcome to the discussion. We look forward to your thoughts and ideas.

- **Re: Welcome** posted by **MAS** on Mar 24, 2008

Thank you for the invitation to participate. I am an AT Director and am interested in this discussion

- **Hello : Intent : "House Rules"** posted by **David Davis** on Mar 03, 2008

I want to start off by saying "Hi" and also welcome you to this discussion. If you haven't yet, please read the "Perspective" to get an idea of some of the topics that will come up. Hopefully we will end up with resources for a handout. Not that there is anything special about a handout as a product, but the process of developing a handout often takes the developers through a distillation and synthesis of thoughts, ideas, and specifics. It is that process I am looking forward to.

In point of fact one of my motivations for moderating this discussion is that I want to find out what people think on several topics that I am working through. Joel Barker has a book titled "Five Regions of the Future" in which he describes five different technology paradigms, or points of view. Usually people with any given point of view consider other points of view to be wrong. But Barker points out that some of the biggest advances in product development arise from the dynamics between different points of view or paradigms.

With that in mind there are a few "House Rules" I would like to put forth.

1. Participate. Remember that what you have to offer is important and needs to be on the table.
2. Be expressive & opinionated. Don't be afraid to express a different viewpoint.
3. Don't argue. Each person, and all information, is important and valued.
4. Stay with the flow. Move from topic to topic as the discussion progresses.

If you don't mind, please "sign in" by posting a hello, letting us know who you are, and what you may be looking for out of this discussion.

- **Re: Hello : Intent : "House Rules"** posted by **Ellen** on Mar 03, 2008

Hello and thanks!! I am looking forward to a lively discussion!! I am an assistive technology specialist and work with a variety of populations and organizations. I adore what I do and am excited at the opportunity to add information and tools to my technology toolbox!!

Ellen

- **Re: Hello : Intent : "House Rules"** posted by **Jim** on Mar 03, 2008

Just wanted to introduce myself. I'm Jim, a speech/language pathologist in the public schools (middle/high) in Idaho. I'm looking forward to learning about what others are doing in this area/topic.....and want to thank you for offering it!!!

- **Hello** posted by **LM** on Mar 03, 2008

Hi...I am happy to join this discussion. I always learn so much about what I could do differently and what I am doing also has validity. I am a special education teacher. I have some students using low tech AT systems and some students using technology as a source of learning. My goal would be to improve my instructional practices using all kinds of technology. Next year my classroom will have new computers for students as well as a SMART board. Any help or discussions centered around technology will be most helpful for me as well as related instructional practices. Thank you!

- **Re: Hello** posted by **David Davis** on Mar 04, 2008

I posted a topic on SMART boards and other interactive whiteboards. Please look through it and the link there. Hopefully it will give you some resources you can use. Interactive whiteboards are amazing tools.

- **Re: Hello** posted by **Tiffani** on Mar 04, 2008

It's always a benefit to participate in these discussions! I am part of a Family Advocacy Organization in Nebraska. We work with families that have children with a variety of special needs, and by taking the information I learn here, I can continue to pass along important and current information to the families our organization serves. Thanks for another wonderful opportunity!

- **Re: Hello : Intent : "House Rules"** posted by **Terry** on Mar 03, 2008

Hello! I am a special services director in Anderson County in South Carolina. My district has been interested in universal design in the curriculum for a couple years. About 50% of our teachers have interactive whiteboards in their classrooms, but may not fully understand how to design lesson that allow full participation of all children. Thank you for allowing discussion and I look forward to the information that might come from it. I am currently using a voice to text software program(Dragon 9.5) to participate in this forum. We were hoping this software would be applicable to our learning disabled students at the high school level.

- **Re: Hello : Intent : "House Rules"** posted by **David Davis** on Mar 04, 2008

Check the post on interactive whiteboards. How do you like Dragon 9.5? Do you find it reliable?

- **Re: Hello : Intent : "House Rules"** posted by **Io** on Mar 03, 2008

Hi, I am an occupational therapist contracted with a school district and providing AT services as well. I am always looking for practical solutions to meet students needs using AT. I look forward to the discussion.

- **Re: Hello : Intent : "House Rules"** posted by **Lori Warner** on Mar 03, 2008

Just joining the discussion...I am a school based OT working at a rural school district. Since I am the only OT at our district I have been asked to participate on the AT team. With a minimal knowledge base for AT I am researching every avenue out there to help me gain more knowledge to help the students in our district.

I am interested in what would be the best tools to have available for a "start up" AT team and resource tools. I am looking forward to this discussion.

- **Re: Hello : Intent : "House Rules"** posted by **Bridget** on Mar 04, 2008

Welcome to the discussion and welcome to the wonderful world of assistive technology!! These online discussions are a great way to educate yourself about a variety of topics in assistive technology. Another tool I still find helpful is participating in AT list serves and forums. You can lurk and listen to the conversations as a way of learning about assistive technology. The first place I would start is to see if your state has a state level assistive technology list serve. In Minnesota I have found our state AT list serve to be an invaluable resource. It's the group of people I turn to when I have a question.

I also like to lurk in the QIAT list serve. QIAT = The Quality Indicators of Assistive Technology which is a larger group of people sharing a common interest in assistive technology. Participants include professionals, parents, vendors and more. You can access more information about QIAT and the list serve they have at: <http://www.qiat.org>.

There are many others and I hope others will share their favorites with you and all of us but this should get you started!!

Bridget

- **Re: Hello : Intent : "House Rules"** posted by **David Davis** on Mar 15, 2008

This is from another post. It may be useful with the start up AT Team.

This is one of sites I use in the course I teach for general education teachers working on their masters in Special Ed. in the unit on AT Assessment/Teams: <http://atto.buffalo.edu/>

- **Re: Hello : Intent : "House Rules"** posted by **CLH** on Mar 03, 2008

Greetings! Past experience with FCTD's topics has been really positive gaining resources and expertise from others in areas of AT. I am happy to again join in a discussion group on AT. As an OT and AT Coordinator in a small school district, any insights on improving AT services for students in the educational system is welcome! CLH

- **Re: Hello : Intent : "House Rules"** posted by **teresa** on Mar 03, 2008

Hi everyone,

I am an assistive technology specialist covering 7 small and rural districts via a DOE grant. One of my counterparts is also part of the discussion and I am hoping others will join in. I have the challenge of supporting students and teachers in the classroom who have assistive technology needs. I also include the rest of the student's IEP team-therapists, instructional aids and parents in the process of assisting and supporting the students access to the curriculum. I also teach a graduate course to general education teachers on application of assistive technology in the classroom. I am hoping to "hear" about what's working out in the classrooms as well as what skills future teachers need to have.

teresa

- **Re: Hello : Intent : "House Rules"** posted by **Connie Talent** on Mar 04, 2008

Hello, I'm Connie Talent and I'm an Assistive Technologist with VR. I'm looking for ideas and solutions for college students and that might carry over into vocational applications for my consumers who are working.

- **Re: Hello : Intent : "House Rules"** posted by **David Davis** on Mar 04, 2008

Connie,

It will be great to hear your ideas on real world problems and solutions. What are some of the types of vocational applications you and your students are dealing with?

- **Re: Hello : Intent : "House Rules"** posted by **Heather Frye** on Mar 05, 2008

Hi. I'm a Program Manager of a Supported Living Program for Survivors of Brain Injury. We provide lifes skills training (in their homes) to adults with brain injury and other disabilities.

I believe I will get quite a bit of wonderful information out of this discussion. Thanks!

[This post has been edited at the request of the author.]

- **Re: Hello : Intent : "House Rules"** posted by **Bridget** on Mar 05, 2008

Hi Heather,

What a great question to pose. I would agree with you in that while my first expectation was to find resistance amongst regular education teachers I found just as much resistance amongst special education teachers. I also agree with the reasons you've listed for that resistance. Teachers in both regular education and special education have increased demands on their time and increased performance expectations expected from their students (doing more with less time) and then we ask them to embrace technology. Depending on whether they are technology natives or technology immigrants their ability to embrace technology varies.

Someone stated earlier that a good starting place is with Universal Design for Learning (UDL). Designing a classroom to incorporate the needs of a wide range of learning styles, learning differences.. a wide range of abilities and disabilities.. including a technology component.

I'm excited to see the direction this conversation takes us!!

Good luck with your thesis!!

Bridget

- **Re: Hello : Intent : "House Rules"** posted by **teresa** on Mar 05, 2008

Great thesis, I would like to read the finished product. As someone who visits many classrooms, both gen. ed. and special ed., and supports the use of AT I think you are on the right track with the reluctance issues. I try to reduce the time element of "working with the team and making the adaption" by being a case manager of sorts for the student. I know the teacher has a lot of demands on his/her time so if I can disseminate information, organize meetings, make what ever is needed and assist with student/adult training, I do.

teresa

- **Re: Hello : Intent : "House Rules"** posted by **guest** on Mar 05, 2008

Thanks for your reply. I'd like to mention your type of position in the school. Is your title case manager?

- **Re: Hello : Intent : "House Rules"** posted by **teresa** on Mar 10, 2008

No, I am an OT by training, but hold a position of Regional AT Specialist. I travel to/serve 7 small and rural school districts in North Central Florida. There are actually 5 of us that cover the state and to my knowledge we are unique in the job the state has hired us to do. Dave was instrumental in the creation of our jobs so he may have more info./insight.

I worked in the same public school system as an OT for 20 years before this position, many of my friends are teachers who struggle with trying to achieve that just right balance using AT in their classrooms.

I am truly interested in your research and hope to see it published some day.

teresa

- **Re: Hello : Intent : "House Rules"** posted by **Barry Klein** on Mar 05, 2008

Hello. I'm a Resource Specialist at a middle school in a large urban school district. I have focused my personal professional development in the area of Assistive Technology and that has also led me to become involved in the general use of technology at my school. I am a new Co-chair of the school's technology committee.

I hope to learn more about the variety of hardware and software that is being used at different levels and the benefits derived. I know its difficult to quantify cost/benefits, but I am hoping to hear some feedback on the reasons for selecting different technology and how well it has met the intended needs.

- **Re: Hello : Intent : "House Rules"** posted by **David Davis** on Mar 05, 2008

Hopefully we will get to some discussion that will help you and your school's technology committee with decision making. Please don't let us lose this. If it doesn't surface, bring it up again.

- **Re: Hello : Intent : "House Rules"** posted by **ello** on Mar 06, 2008

Howdy. I am a mom of three teenagers 17,15,14! Please feel free to pray for me. We live in a small rural west Texas town. Although I am not that technological, I have always been able to see that technology could be an invaluable tool for my children who have autism, down syndrome and dyslexia, respectively. I have, for years been advocating that they learn to various forms from high tech to low tech. I have generally been met with much resistance, however, for my oldest two at least, they are coming around. I think a handout would be an excellent tool. I have already learned quite a bit here and this is only the fourth day--good teachers! I am here to get as much information and as many perspectives and tools for my kids (and others) as I can. I really value these FCTD discussions as well as their website! Thanks. ello

- **Re: Hello : Intent : "House Rules"** posted by **David Davis** on Mar 06, 2008

We are glad you are with us. Feel free to comment at any time, and I hope the final product is something useful for you.

- **Re: Hello : Intent : "House Rules"** posted by **OM** on Mar 07, 2008

Howdy, ello, Please check out bookshare.org. They have been awarded a grant so that they may supply digitized books to students with print disabilities. You can visit the site and apply for your children that qualify.

There are many software programs available to "read" the digitized text including Kurzweil, Wynn, SOLO, and many others; however, you might be interested in one that has a very good free version: ReadPlease 2003 is a downloadable, reliable reader with good voices, varying speeds, varying font size, and it highlights the words as they are "read."
Happy Trails, OM

- **Re: Hello : Intent : "House Rules"** posted by **AmyM** on Mar 11, 2008

Hello! I am a mom of 4 kids, with a OTR truck driver husband who is only home on weekends mostly. Kids ages are 16 DD, 14 DS, 13 DS, and 8 DD. The oldest two are homeschooled, with the oldest one having undiagnosed ADHD I believe. The 13 year old is in 6th grade special ed in public school, under a general learning disability. The 8 year old is in 2nd grade, and up until 6 weeks ago, has been in regular ed, diagnosed with moderate quad cp and speech apraxia. 6 weeks ago she was put into special ed reading out of necessity, and is flourishing after a year and a half of being constantly behind typical peers.

So, as you can see, I need and use various types of technology and in various settings. What works for one child, usually doesn't work for another one. It has been one battle after another at the public school for my youngest child. I am constantly looking for ways to get something done differently than the normal old school ways, while at the same time making sure it is almost the exact same content. I am always willing to share what I learn along the way, in the hopes that I can spare another parent out there some of the same problems in the future. My little girl is the only physically handicapped child in a school of about 450, in our little elementary school district.

I am hoping to help form a technology toolkit, and hopefully learn from others in doing so.

- **Re: Hello : Intent : "House Rules"** posted by **David Davis** on Mar 11, 2008

It is great to have you join us. I really look forward to learning from your experience as you share in the posts. Welcome!

- **Re: Hello : Intent : "House Rules"** posted by **valerie** on Mar 24, 2008

Hi David!

You might want to include in your toolkit, Don Johnston's Readers Theater online and his book called Building Wings. Fairfax VA and Schaumburg IL schools took Don's book (which is written on a 3rd grade readability level) and created a student self-advocacy model. The program inspires struggling learners to ask for the supports and technologies they need to address their learning styles. Each school demonstrates the effective use of student technology advocacy through extended reading and writing camps for kids who have difficulties in literacy skills. I think kids will advocate for themselves if we "open the door" for them.

- **Re: Hello : Intent : "House Rules"** posted by **David Davis** on Mar 24, 2008

Those are excellent resources and now you have me thinking I should add a section that specifically targets self-advocacy or self-determination. You are absolutely right. Thanks!

- **AT for communication** posted by **ello** on Mar 03, 2008

Hi y'all! I am in Texas and really excited to learn. I have two children that need AT for communicating what they know (and sometimes what they want to say) It has been very hard getting the school to buy in. It started with my oldest(son). Now he no longer wants to use his Say it sam and I really feel it is because there has been so much opposition from the school district and from teachers who don't know how/don't have time. I want him to learn to use software to express what he knows but we are having some issues. He graduates next year! Handwriting is such a struggle, but this year he has had to keep a journal with two or three sentences and he has some absolutely beautiful, sad, funny and colorful things to say in it. (I was accidentally allowed to view it) I thought this would be an excellent opportunity for him to use the software, but the teacher says it takes him too long etc and she is busy teaching reading. Now he says he doesn't want to use it, he hates it, etc. I would like to take the approach of it being like piano lessons and I say he is going to take them anyway but I am not sure. I thought of having him take it as a class next year and after he learns how, which I am sure will be quick as he is techno savvy, using the rest of the year to create papers from it. I really don't know what I should do, but I do want him to have a way to easily communicate what he knows or wants to communicate. He has high functioning autism and an articulation disorder but talks away like you understand him and will repeat and try to repair when you don't understand him. Should I back off or forge on? I will post about my daughter later as I am sure this post is a little too long. Thanks for being here!
ello

- **Re: AT for communication** posted by **SLL** on Mar 03, 2008

I was wondering what software he's using at school for writing...Are you familiar with Don Johnston's Co:Writer software? You can check it out at donjohnston.com sll

- **Re: AT for communication** posted by **Jim** on Mar 03, 2008

The word prediction features are wonderful with this piece of software... student has to be fairly adept at scanning/reading however.

- **Re: AT for communication** posted by **Shobha Sundar** on Mar 04, 2008

I've seen that co writer also sounds out the words,(or can be set to sound out words) so it proves useful even with those who do not scan/read easily. However, it requires quick reaction to click on the word as it is being sounded out.

- **Re: AT for communication** posted by **Nancy Parker** on Mar 03, 2008

Years ago a special script was used to shorten text and speed up documentation in writing. It was called "short hand." It was even taught in school as a subject. Now, the same idea is used on cell phones and it is called "texting." What is the difference? What are the similarities? I believe that students who have difficulty writing should be encouraged to text. We now have technology that we can use to expand the shortened text. That will give our special needs children a means to "be cool," with their peers and it will give them a means to communicate.

- **Re: AT for communication** posted by **Terry** on Mar 03, 2008

Great idea! It never occurred to me that texting is a form of shorthand. And frankly I think spelling is much over done. We have some students who are struggling over spelling, and nearly failing ELA because it

- **Re: AT for communication** posted by **David Davis** on Mar 04, 2008

ello,

My responses are going to be "surface" type responses since I don't fully understand everything with your situation, so please take everything I say in that context. This also may be stuff you have heard before, if so sorry about that.

If your son has a Say-it! SAM then he has a great tool. I understand he may not want to use it but don't give up on the tool. It may still come in handy at some point, assuming it is something that will go with him after he graduates. If it does go with him, or is his device, then look for situations in the community where it may be useful. It is likely that he will decide to use the tool if it makes sense to him to do so; if it helps him solve communication problems that are important to him and helps him integrate with others.

If the device doesn't go with him then I think you still want to look at the same type of situations in the community and start looking at what type of communication tools may be available, and simple may be a good place to start. While technology is great and I love computers they are difficult to carry around and use on the spur of the moment in the community, so low tech or simple tech tools are a good thing to explore.

To me a big part of all of this will be identifying situations in the community where successful communication becomes important to your son and then having lots of interactions where he can problem solve how to communicate quickly and successfully. And what determines success is going to be determined by him.

- **Re: AT for communication** posted by **ello** on Mar 06, 2008

Thanks David. His Sam was actually stolen at school...The school also has one but now he rarely uses it at school and of course, they are afraid for him to take it home. It's odd that when he had his, I would set up situations for him to use it in community--go into vets and order "science diet, 10 lbs, small bites" and he would do so without resistance. It also was a pocket pc that I was trying to get him to use as an organizer, but he was not allowed to use that application at school, and they said he was very reluctant to use the SayIt Sam. I also believe that it helped his articulation. Another benefit was that when he speaks and says something like "me go to store" he wouldn't correct it. If he put that sentence in his Sam and played it back, then he would correct it to "I want to go to the store" without any prompting! I am wondering if for "verbal" communication, we are just going to have to go low tech and simple. Like I said, he talks as if you understand him. He talks a lot. After you get to know him, he is easier to understand, which is what the district always used as a reason for him not needing AAC. My concern is his first contact, for example, when he goes in and asks for an application and they cannot understand a word he says. Will he get called back? After reading your post yesterday, I let him drive (again, feel free to pray for us) to the Sonic drive-in with the understanding that he had to order our drinks. He did want to drive more than he didn't want to order two cokes and two dr peppers. He had to repeat and I noticed that he really took his time and tried to enunciate the hard "c" and "k" as best he could. Thank goodness it worked because it really boosted his confidence. I guess we can move on to more problematic situations and solutions. I think I understand you to say I should find the problematic situations in community to expose him to and then sit back and observe. I really like the text messaging ideas. My focus now is his written communication. I know he has more knowledge and insight than he[can, wants, cares to, or feels able to] communicate verbally. I think if I can get him to use some sort of software like co-writer (the one he says he hates) or clicker that he will realize an outlet for deeper communication. thanks for the insight and I hope I haven't rambled or gotten off topic too badly.

ello

- **Re: AT for communication** posted by **David Davis** on Mar 08, 2008

No problem and feel free to ramble at any time. The thing that jumps out of this post is the driving and I hope you don't mind if I respond to that. If you son doesn't have a driver's license then don't let him drive. Aside from legal and liability issues you need to remember that it is important that he understand and follow the laws of his society. Let's say that he does complete a job application, interview, and gets hired. If he were to decide he needed to drive at work one day, something happened, and he got fired that would follow him for a very long time. You may have to give up some very powerful motivators now but it will be best in the long run.

If you do have to give up a motivator like driving then try to use the change to help teach your son that this is his society also and that he has a responsibility in shaping it, as well as the power to shape it. One of the goals that I feel should be a part of helping our students to independently problem solve is to give them a feeling of ownership and pride in their effect on society, and they do have a contribution and effect. Teaching that is not an easy thing to do because in all honesty most people do not believe they make a real difference in what goes on around them, and that is even more true for folks with disabilities. But we are all important.

- **Re: AT for communication** posted by **ello** on Mar 17, 2008

He does have his license! That was the one test I hoped he would fail!
But all joking aside, he does have his license, but Mom doesn't let him
drive alone. I agree we are all important. Thanks for your input.
ello

- **Re: AT for communication** posted by **David Davis** on Mar 17, 2008

Great. Just as another thought, you mentioned that when he heard a message on the communication device then he would correct himself without prompts. If he doesn't want to use a communication device to communicate for him maybe he could use one with ear buds or an earphone as a prompt. He could listen to the appropriate message as a prompt before saying it out loud. That way he is the one communicating and the device is there as a support to him only.

- **Re: AT for communication** posted by **Bridget** on Mar 17, 2008

That's a really great idea using headphones to give self an auditory prompt and put the power and control of communication in his hands!!

Bridget

- **Re: AT for communication** posted by **Ellen** on Mar 04, 2008

Hi Ello!!

Getting a student to buy in to using and "owning" their own technology is so important. He has the potential to be his own best advocate as he learns to use his device or any technology he uses for that matter. I hear you when you liken the situation to being like taking piano lessons. As a teacher who worked with students that used a variety of AAC (not the Say it Sam) I looked for activities that didn't seem like work at all to encourage play and exploration and use of the device. Often it was in a social context because my students very much wanted to interact and communicate. Does he have anyone else who uses AAC that he can connect with?

This also reminds me of a student panel we recently had in which four student presenters presented to a rather large audience. They shared with the audience the technology they used in school. They talked about how they used it and why it made a difference. They were hesitant about using technology when it was first presented to them as an option. They were unsure and they really didn't want to look different from their peers (although much of the technology they are now using is very mainstream ie., MP3 players) I guess I am sharing this to encourage you that while he may not be buying into technology right he may buy into it as he grows and changes.

Ellen

- **Re: AT for communication** posted by **teresa** on Mar 05, 2008

ello, I agree with Dave and it is not unusual for our teenagers to be reluctant, but within a high interest, relevant context he may be more willing. He may need to use the software when he is not under a lot of pressure to "perform". Practice in small relevant situations

may lead to having more ownership of the software. Learning communication software is like learning a foreign language and a lot of times you have to learn how to "think" differently. Is he using the device to write in his journal?
teresa

□ **Peer versus teacher/parent/therapist "standards"** posted by **Roger** on Mar 03, 2008

I'm intrigued by the reference in the introductory materials to differing technology standards and wonder if you can talk a little more about what you mean.

It seems clear that students are expected to use a specific linguistic shorthand when communicating with friends (and strangers) on networks such as Facebook or MySpace. Those environments seem to be grammar-free, spelling-free zones. Obviously we have a different standard for written communication in school. Is that an example of what you mean?

Looking forward to hearing your thoughts (and those of others).
Roger

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **David Davis** on Mar 03, 2008

Your examples are excellent and this is a topic we will continue with in the discussion. Using your examples we have several issues that come up. One of the biggest is who is going to teach students how to use Facebook or MySpace type services? If the school district blocks these types of websites then we really can't expect the teacher/therapist to be the support, or to customize any type of overlay or alternative interface. They also probably won't be providing support in emerging grammar-free text languages, which provides some amazing opportunities for text compaction.

Another issue concerns the IEP. In all probability the above won't appear on any IEP. And since for many student age individuals the IEP drives the discussion on needed assistive technology, support for Facebook or MySpace, again, will probably not be discussed. And that brings us to the fact that the school district assistive technology plan is probably service delivery centric rather than student centric. And that is completely appropriate given the school district's responsibilities. But the student is more than the school, particularly in the context of peer "standards".

It would be great to hear from folks on what type of models are being used to address areas of a student's life that schools may not be able to address; such as MySpace or other Web 2.0 sites that schools often block.

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **Jim** on Mar 03, 2008

The first step toward being able to advocate for any of the above types of changes would be educating ourselves about the possibilities! Only this year (and I've been around for awhile...and am fairly tech savvy) have I learned to text message.

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **David Davis** on Mar 03, 2008

I am in the same boat with a lot of new technologies. A decade ago I was pretty current in technology but now I find myself having to work to catch up.

Part of the reason for this is reflected in this online discussion. The technology tools that I use on a daily basis to be productive are very different from the tools that many young people are using today. So if I were to decide what someone needed to learn to do based on the way I worked it would be for a workforce based on the past, not on the future.

Here are a couple of interesting online resources to help with text messaging (something many people consider an emerging language).

Text Messaging Abbreviations . guide to writing and reading an emerging language

http://www.webopedia.com/quick_ref/textmessageabbreviations.asp

Text Message Translator . instant translation from English to txt lingo or txt lingo to English

<http://lingo2word.com/translate.php>

- o **Re: Peer versus teacher/parent/therapist "standards"** posted by **Ellen** on Mar 04, 2008

Another tool that comes to mind is email and blogging. Email is something most students have access to or at least exposure to. What a great environment to encourage writing without standards. However, email is often not something that is available as an educational tool. It took me a year to sell the idea that email had educational value. Now all of my students use email on a daily basis. (I work with students with autism and cognitive disabilities. I also work with a variety of AAC users) When they ask me if they can check their email I liken it to them asking me "Can I read and write today?"

We also teach them the slang that their peers use and when and with whom it is appropriate to use such slang. (Multiple means of expression)

My point is that we have this very mainstream activity that has the potential to be a very powerful tool to improve not only literacy skills but to also improve technology literacy.

Regarding blogging (another very mainstream tool) here is an example of a teacher using a blog to promote writing and communicating without standards the purpose of which is to get students writing more!

<http://www.hpjh.blogspot.com>

Ellen

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **David Davis** on Mar 04, 2008

I really like the way you equate students' asking if they can check their email to asking if they can spend time reading and writing. That is such a great viewpoint and exactly what we need with email, blogs, and other tools.

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **teresa** on Mar 05, 2008

You are so right in that e-mails and blogging are a natural environment, age appropriate, mainstream activity for our students that promotes literacy. Our students are motivated to participate and will attend to the details of writing when they know their peers will respond.

teresa

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **David Davis** on Mar 05, 2008

It also fits great in the Rigor and Relevance move in the school system today, which is a good place sometimes to start the conversation on using digital tools and the effect of digital tools, including Web 2.0 tools, on learning.

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **Ellen** on Mar 06, 2008

Can you talk a little more about Web 2.0 tools? I thought I was familiar with what you are talking about but as time and postings go on I'm not so sure..

thanks!!

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **David Davis** on Mar 06, 2008

This is in general because I think different people may have a slightly different take on it, but the first "Web" or what we might call Web 1.0 was a "read only" web. Most people didn't create web pages but searched the web to read information. Now a lot of web sites are actually online applications where you can read, write, draw, create presentations, talk to people, post pictures, etc. It is highly interactive and that difference is usually called Web 2.0.

Web 2.0 type web sites offer incredible opportunities for sharing information, making social connections, doing business (ebay anyone?), all types of activities. Blogs and wikis make it easy to write and "publish" online. Facebook and MySpace are huge with teens and young adults in sharing about themselves (or a view of themselves) and all of these types of tools, or web sites, have and continue to change the world. Many schools, however, block these sites in order to provide physical hardware security (computer viruses and such), student security (keep predators out), and informational security (block inappropriate sites like porn). So in many areas we have real differences starting to crop up between what a student may be able to do in the classroom versus what is available technology wise in the community. For students with disabilities this problem is often compounded by the fact that they may need

support to learn to use these new internet services and teachers/therapists cannot help them if the sites are blocked in the school.

Many, if not most, schools recognize the problem but are different places in working through the security issues versus keeping up with new technologies.

One of the goals for this discussion is to help parents become aware of the possibilities in some of these new web tools, as well as the pitfalls, and come up with a usable handout/resource.

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **Bridget** on Mar 07, 2008

Good definition!! It really puts it into perspective how far we've come!! Good examples about explaining the difference!!

Thanks!

Bridget

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **Bridget** on Mar 04, 2008

I think this is exactly an example of what he means. Facebook, MySpace, YouTube web based email, etc. and technology tools such as cell phones, MP3 players, etc are some of the sites and tools that are typically blocked or prohibited in a school setting for a variety of reasons. At the same time they are very mainstream and in use outside of school by many of the students we are teaching. I think there are several valid cases for at the very least having conversations about the merit of incorporating such sites and tools into our teaching.

Bridget

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **om** on Mar 05, 2008

Kudos, Bridget! Some of the computers in school systems are so locked down that even the most commonly used simple downloadable applications have become impossible to acquire. Thank God for the flashdrive! :D On the other hand, I have seen some computers so riddled with viruses that they are nearly unusable. There must be some middle ground. OM

- **Re: Peer versus teacher/parent/therapist "standards"** posted by **David Davis** on Mar 05, 2008

The flash drive is a great tool. Sometimes it helps to go back to early software to find programs that will run off a flash drive without being installed on the main drive.

I also try to stay involved with regular education technology teams and district IT folks to keep the conversations going regarding the need for variety in classroom technology tools. Teachers, therapists, and students need to be

able to experiment with different tools to determine what will work best for solving specific problems.

□ **Preparing Educators to Use AT to Complement Instruction** posted by **jls** on Mar 03, 2008

Hi -- I am excited to be part of this discussion and wonder if you could address the use of AT to complement - rather than supplant good instruction. I am a professional development specialist - technical assistance provider and at times encounter schools where AT is used "instead" of good teaching. How can we help schools view AT as a support? And how can we teach preservice educators, and new teachers, how to use AT to complement instruction?

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **Nancy Parker** on Mar 03, 2008

I believe that the first step is Universal Design for Learning. All students should be using technology tools to create, communicate, compute and learn. We need to prepare students for the world that they will be living in and working in as adults. What percent of your writing do you do with a pencil? How has that changed in the past 10 years? How do you expect that to change?

How do you get information? How has that changed in the past 10 years? How do you expect that to change?

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **Andrea Yates** on Mar 03, 2008

This is another good example of the different standards we set for kids. While I certainly think that most (but not all) students need to learn to write with pen and pencil, I would guess that the majority of adults in professions that require written communication (including email) do more than 90% of their writing via keyboard. Even that may change within ten years, as we move increasingly toward voice-activated and eye gaze activated programs. When I taught 3rd grade I had a number of students who struggled terribly with handwriting. Most of their parents felt strongly that they should be allowed to work entirely on a keyboard. They felt their children would have very successful careers without having to pick up a pencil.

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **Mary Hassler** on Mar 03, 2008

My daughter has had 7 surgeries on each hand, is missing knuckles and has dysgraphia. She is doing some work at school (first grade) using technology (ClozePro, Clicker5, voice writing). However, her special education teacher insists on having her write sentences. She draws a big box for each word in the sentence that my daughter dictates and then makes her write and spell the words. I imagine it takes my daughter 10-15 minutes to produce the sentence when she could have done it in less than half that time using a keyboard. I have to wonder why the teacher doesn't just use the technology? I am presently thinking that either (1) the teacher is pushing my child in a good way to learn through the mechanical efforts of hand writing or (2) she just doesn't get that the technology can replace the handwriting. So the point raised about standards is a very good one. Is there any research that compares these two methods of learning to write words/sentences for students with significant challenges?

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **Bridget** on Mar 04, 2008

Hi Mary,

7 surgeries is sure a lot for a little first grader!! I guess one of the first challenges for teachers is helping them change their understanding of what a "pencil" is. Fundamentally, a pencil is simply a tool for getting our thoughts into a form we can share with others. Traditionally this has been with pencil and paper. As technology has advanced so has our understanding of what a "pencil" can be. For your daughter, it sounds like her "pencil" could be (should be) the specialized programs she is using such as Clicker 5. Part of the challenge is deciding what is important.. the cognitive process of interacting with the text in a way that makes sense for her (Clicker 5) or improving her fine motor ability to produce that text (writing with a pencil)?

Bridget

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **David Davis** on Mar 04, 2008

There is a lot of disagreement in the educational community regarding handwriting versus typing. Really big disagreements, so there may not be any real clear cut guidelines for the teacher to follow. Sometimes people work on handwriting simply because it has always been important in education. Sometimes it is because the pencil as a low tech or simple tech tool is the best thing to use when a computer isn't around. I use computers, have a cell phone that I can type notes in with, and still take a pen with me. In some places students need handwriting skills to take high stakes tests.

But when students struggle just to physically write their energy is spent on the struggle, not necessarily on developing composition skills. One of the things I like to encourage teachers to do is identify which skills each activity targets. If the skill is composition then use the simplest writing system at the student's disposal. This will give the best support for good composition. Then other activities can be developed to target the development of physical handwriting skills.

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **Bridget** on Mar 04, 2008

That is a great question. Technology really has had an impact on how we engage in writing activities. I personally do very little writing with a pencil. This has changed significantly in the past 10 years. When I reflect on the papers I wrote in college, although my final copy was always done on the computer my rough drafts were all hand written. Now I do most all written work on the computer or using some form of technology. I write very few letters preferring to send emails or letter attachments. (Although I think there is something very personal about sending a hand written note.)

This particular question reminds me of a thought provoking little video called Did You Know? There are several versions available and you can find them on You Tube by searching for Did You Know.

Bridget

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **Shobha Sundar** on Mar 04, 2008

Hi. We just found that Clicker is a great way to complement spelling learning, if used for that purpose in mind. Once Clicker reads the word out aloud, the child hears it sound different if he has spelt it wrong. This has provided scope for reflection and discussion on the possible spelling options. We at SSK India are looking at AT to enhance self learning wherever possible.

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **David Davis** on Mar 04, 2008

Using assistive technology and instructional technology/strategies together is always an interesting thing to work through. Something that may be useful in this is an online version of a resource CD called "IT for AT". It includes information on technology tools in a wide variety of curriculum areas, universal design for learning, low-tech tools, and accommodations/assistive technologies like screen readers, on-screen keyboards, alternative keyboards, magnification, etc. The link is below:

http://www.paec.org/fdlrstech/itforat/start_here.html

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **ello** on Mar 06, 2008

Although I am not a teacher I do get a teacher mag via email and found this article. It addresses this question I think, in that it helps us understand the resistance of the educators from the educators point of view. Here is the link:http://www.teachermagazine.org/tm/articles/2008/03/05/23tln_norton_web.h19.html?tmp=248575175

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **ello** on Mar 06, 2008

I just clicked on the link and discovered that you have to register to view the link, but registration is free...I didn't know if I should/could paste part of the article so I just sent the link. I will paste if anyone wants me to. ello

- **Re: Preparing Educators to Use AT to Complement Instruction** posted by **David Davis** on Mar 06, 2008

I wouldn't recommend pasting part of the article, just to be careful on copyright issues, but knowing the registration is free really helps. Thanks.

- **Interactive whiteboard resources and thoughts** posted by **David Davis** on Mar 03, 2008

<http://www.fsdb.k12.fl.us/rmc/tutorials/whiteboards.html>

Above is a link to a page full of resources for using interactive whiteboards such as the SmartBoard or ActivBoard. Several people mentioned interactive whiteboards in their post so I thought it would

be a good topic to add to the discussion. The web page is maintained by the folks at RMTTC (Resource Materials and Technology Center for the Deaf and Hard of Hearing), a statewide technology center here in Florida. They use interactive whiteboards a lot to help increase the visual/graphic richness of the instructional environment for students who have problems with hearing. Interactive whiteboards are great examples of instructional technology or technology that supports learning.

They may also be assistive technology, depending on the situation. An interactive whiteboard is essentially a very large touch window and for some students a touch window is AT. Add to that the size and you may have a good tool for a student who needs vision support as well as direct touch access. Then there is the physical positioning aspect. Standing and stretching while interacting with a computer using direct touch may make all the difference in performance, something we have noticed in a few situations.

And for those who want to push the envelop with interactive whiteboards there is free software from Edusim (<http://edusim3d.com/>) for creating a 3D immersive interactive world on the whiteboard.

Please post any other ideas and resources for using interactive whiteboards with students with disabilities.

- **Interactive white boards...thank you** posted by **LM** on Mar 04, 2008

Thank you so much for the great resources for the interactive white boards. This will come in handy for me.

- **Re: Interactive white boards...thank you** posted by **David Davis** on Mar 04, 2008

You are very welcome. I really, really like the interactive white boards :)

- **Re: Interactive whiteboard resources and thoughts** posted by **dave s** on Mar 17, 2008

Also there is a great free webinar on using the smart board/whiteboard with kurzweil on the kurz web site which highlights its uses within the classroom

- **Re: Interactive whiteboard resources and thoughts** posted by **David Davis** on Mar 17, 2008

Thanks! I went to find the url to add to the post and I added it to the collection of resources we are building.

Kurzweil Recorded Webinars (including whiteboards)
<http://www.kurzweiledu.com/webinars.aspx>

- **Writing tools for students** posted by **David Davis** on Mar 04, 2008

There have been several posts that included discussions about writing and writing tools, so I am adding this as a topic and would like for ya'll to share your ideas and resources on writing support for students with disabilities.

For my contribution, one of the things I like to recommend to teachers of young and cognitively young students is to reverse the usual sequence of writing skill development. Take what is typically the prerequisite skills (handwriting, typing, etc.) and put them last. Start with tools that enable

students to create holiday greeting cards, letters to parents, journal entries, even printed lunch choices. Software like Classroom Suite from Intellitools can be used to give students an icon/graphic based interface so they can publish now. Then as they learn to handwrite or type there is increased relevance because they are already successfully working with text.

So, what are some of your favorite writing tools, resources, and strategies?

- **Re: Writing tools for students** posted by **Bridget** on Mar 04, 2008

Some of my students love to send emails and write in a BLOG. They have a variety of tools in their technology toolbox. Some of them used Clicker 5. They like the auditory feedback they get as they type. They also use it to help them figure out words they don't know. Some of my students use Co:Writer word prediction software with Clicker 5 or in the body of their email. For my students who physically cannot use a pencil or traditional writing tool we set up a switch. We create writing templates in Clicker 5. In scanning mode it scans through the choices. When they pick a choice (for example who they want to write to) it automatically advances to the next page. For some of them it is the first time they have interacted with text. To help some of my students better navigate their device we also have them use their AAC device as their writing tool.

One of my favorite ideas for giving writing a purpose is Project 365.

<http://alltogether.wordpress.com/2008/01/24/project-365-er6/>

Bridget

(sorry I tend to babble : -)

- **Re: Writing tools for students** posted by **David Davis** on Mar 04, 2008

Babbling is always welcome :)

- **Re: Writing tools for students** posted by **Guest** on Mar 05, 2008

Other useful writing tools for some students are electronic writing tablets, such as those made by Wacom.com. These can be helpful for students who need the flexibility of digital input when required to do tasks that involve handwriting.

I have been working with a high school student with a learning disability who has been using a writing tablet for writing out Japanese characters. The tablet hooked up to a computer allows him to edit and correct his work more easily so that his final product is much more polished vs. using a pencil/paper method.

Portable pen tablets come in all sizes and price ranges starting at about \$80.

- **Re: Writing tools for students** posted by **David Davis** on Mar 05, 2008

That is a great use of the writing tablet. Very cool :)

- **Re: Writing tools for students** posted by **Io** on Mar 06, 2008

I love what I have seen in previous school districts with reversing the sequence of the development of writing skills. I am new at the school district I currently serve and

implementing such divergent thinking will not be taken lightly. Any suggestions on how to win over staff?

As far as some writing favorites; I have used Co: Writer with a variety of students and often their writing was of higher quality than their reading. I like Kidspiration to help students who struggle with initiating and staying on topic.

I have been using Windows speech to text with great success with a student who previously struggled with Dragon 9.5.

I love technology and all it can do but it is much more than a full time job keeping abreast of the latest trends, selling staff and then training.

- **Re: Writing tools for students** posted by **David Davis** on Mar 06, 2008

One of the things I try to do is find easy and inexpensive ways to implement some of these ideas. That sometimes helps when folks are a bit resistant to change. And most of us need to see something in action before we start to realize how it can help us. That is fairly universal I think.

Is the Windows speech to text you are using XP or Vista? And in what types of activities is it working the best for you?

- **Re: Writing tools for students** posted by **lo** on Mar 07, 2008

Thanks for the reply. The students are using the speech to text for a variety of things. One writes me an email daily Re: homework or basketball(Badger fan). The other just wrote a persuasive paper. The downfall with it in school is finding a quiet space and supervision if independent with the technology. Side note. Has anyone used a Classmate Reader and if so are they worth investing in for non reading middle school students?

- **Re: Writing tools for students** posted by **David Davis** on Mar 08, 2008

I have a Classmate Reader checked out to a Technology Specialist who is working with some teachers with it. I see her next week and find out how it is going for you. I also would like to hear from anyone who is using the Classmate Reader.

When you say "non reading" do mean absolutely no printed text decoding?

- **Tools for Organization** posted by **Bridget** on Mar 04, 2008

Tools for organization also seem to spark a lot of discussion. Some of the tools that have the most potential seem also spark the largest discussions. Many of my students have MP3 players which they use in my room. They access the built in calendar and calculator features in their MP3 players. If used in other classes they would be taken away. MP3 players also have the potential to be a recording device for recording class lectures or taking a voice reminder regarding homework assignments.

Palm Pilots are also controversial. Teachers are concerned that students might access the game features of the device or engage in cheating. On the other hand for a student who loses everything and needs to have just one thing that incorporates many features the palm could be that one thing. There are Palm programs for e-text (US constitution, stories and more), homework planners, period table of elements, scientific calculator, taking quizzes and flashcard programs, the bible, and much more. A student can also use the built in calendar with alarm feature in a Palm.

Some of my favorite tools for organization include:

Google Calendar

Free online calendar that a student can color code by assignment, can share with others, can send reminders via text message and email and set alarms. A student can access anywhere and anytime they have access to the internet.

<http://www.google.com> (click on the link for calendar)

Google Documents

Free online document sharing. Gives group assignments a whole new edge. Only users that have been given access can see your documents.

<http://www.google.com> (click on the link for documents)

JOTT

JOTT converts voice to email, text message, reminders, lists and appointments. It is a free service but text message rates apply when using the text message feature.

<http://www.jott.com>

DANA

Portable writing device that has Palm capabilities. Combines the power of Palm with a writing tool. Anything you can have on a Palm Pilot you can have on the DANA.

<http://www.alphasmart.com>

Schoolhouse 2 for Macintosh

A program for organizing homework. It is currently free. I am looking for a link to the program. You can always google it!!

NoteTaker by AquaMinds

A fairly inexpensive program for the Macintosh that acts as an electronic notebook. A student can take notes, make voice recordings, highlight, embed web pages, word documents, pdf files and more.

<http://www.aquaminds.com>

Palm training for educators

<http://www.edteck.com/palm/software.htm>

Bridget

- **Re: Tools for Organization** posted by **David Davis** on Mar 04, 2008

My all time personal favorite text organization tool and writing support was MORE [<ftp://ftp.paec.org/itrk/organization/More/>] for Macintosh. It only works on older Macs but is free now (the company discontinued supporting it years ago). OmniOutliner for Mac OSX is based on MORE. I use it but miss the old program. AquaMinds NoteTaker is very cool to me, probably because I love the look of spiral bound notebooks; which is a great feature for many students who want to "write" in spiral bound notebooks like other students are.

- **Re: Tools for Organization** posted by **Guest** on Mar 05, 2008

I think it is interesting that all the newest technologies are "controversial" and that many schools come up with all kinds of "reasons" that students shouldn't use these technologies i.e. a digital recorder in a classroom or an MP3 player, Quite frankly, many of these reasons (excuses??) are not substantiated by school policy, legal precedent, etc.

I suspect that the resistance to technology use in the classroom arises from the "non-natives" fear of what they don't understand. I'm a non-native myself and also struggle to keep up with emerging technologies, but I believe we non-natives need to stay current and keep our minds open to the potential of newer technologies to open doors for students with all kinds of abilities.

- **Re: Tools for Organization** posted by **David Davis** on Mar 05, 2008

I agree. Even though I love technology and computers and all things digital I find that I really have to work to stay current. Partly because I just don't use the tools like younger folks do and I suspect that makes a big difference with everyone.

And I really don't like cell phones so trying to stay current with all the changes there is interesting :)

- **What AT is most commonly used in the classroom?** posted by **Heather Frye** on Mar 05, 2008

This post has been deleted by request of the author.

- **Re: What AT is most commonly used in the classroom?** posted by **Jackie** on Mar 05, 2008

Heather, you might take a look at the FCTD's illustrated AT glossary (it's listed under "fact sheets" and also in the Family Information Guide to AT) for a few additional ideas.

- **Re: What AT is most commonly used in the classroom?** posted by **David Davis** on Mar 05, 2008

This is an excellent post and topic. Several of us here in Florida are working on a similar tool and looking at all the tools others have developed that will help. The resources on this web site are excellent and you should find lots of stuff here. We will also start a topic soon to look at various ways of defining accommodations, assistive technology, technology that support learning, and Universal Design. That discussion may also help.

- **Instant Messaging** posted by **Bridget** on Mar 05, 2008

Janie gave me permission to share this wonderful story about how her 17 year old daughter uses instant messaging!!

(Warning -- I have no statistics, just anecdotal report)

The idea of using Instant Messaging as a strategy for accommodation for students with disabilities is something that I have been playing with for my own daughter (who has Cerebral Palsy and whose speech is not easy to understand) for some time. Cottie has a Sidekick -- that is the kind of cell phone technology that is specifically oriented toward text message (it's actually a little awkward for taking phone calls, but has a full keyboard for typing out messages quickly). At the

age of 17, it appears the sucker now is permanently attached to her arm. For her, text messaging and instant messaging is not a message system, it is a communication system (fortunately, I have a plan that allows her unlimited text messages each month. Last month she sent/received 4151 messages). Depending on which cell phone carrier you use, there are other options available as well. We are on a T-mobile plan. She can text message like crazy, OR she can get online from the phone and send instant messages FROM HER CELL PHONE. Since her whole high school is wired for wireless access to the internet, on several occasions, she has hooked up in an IM conversation with one of her more tech-savvy teachers to have an IM message to ask questions about ongoing class work, or to answer questions being asked of the class -- she sends her answer to the teacher who reads it out to the class. The Sidekick is light, portable (doesn't have to fiddle with setting up a computer in front of her, which in her case would mean having a lap tray on the chair, etc.) and -- best of all -- it is what everyone else who is seventeen either has, or wants to have. She won't use much of the accessible technology that is available, but she will use this (after all, she IS 17!!!).

All this to say that I think Instant Messaging has great potential to promote both communication and independence for some of the students we see.

Janie

Isn't that a great story of mainstream technology becoming assistive technology and making quite a difference!!

Wow!!

Bridget

- **Re: Instant Messaging** posted by **Annette** on Mar 06, 2008

The fact that the school has wireless access and permits this student to use her Sidekick throughout the day (for educational/communication purposes) is very promising! There are so many benefits for this student - communication, independence, and inclusion at all levels.

Thanks for sharing this wonderful success story!

- **Re: Instant Messaging** posted by **Meghan** on Mar 06, 2008

I think your story is such a great example of "thinking outside the box" of what we consider assistive technology. The example you shared of her instant messaging the teacher her responses and answers is a great example of taking texting to the next level and seeing how flexible mainstream technology can be. Thanks for sharing.
Meghan

- **Re: Instant Messaging** posted by **ello** on Mar 06, 2008

I think this is a WONDERFUL story. It is, to me, the ultimate. It is accessible, valued by her peers and the teacher even participates. Most importantly, that girl is communicating--one of the most valuable experiences in the world! This story truly brings a tear (or twenty) to my eye. Good work Mom! ello

- **Re: Instant Messaging** posted by **David Davis** on Mar 06, 2008

I agree with all the other posts; this is an excellent example of what we are discussing. I posted this in another reply, but in case someone didn't see it here are a couple of useful links for those of us who don't know text messaging lingo and also for students who need help learning the lingo.

Text Messaging Abbreviations . guide to writing and reading an emerging language
http://www.webopedia.com/quick_ref/textmessageabbreviations.asp

Text Message Translator . instant translation from English to txt lingo or txt lingo to English
<http://lingo2word.com/translate.php>

For anyone who uses a computer instant messaging programs, like AIM (AOL Instant Messaging) can send text messages to mobile phones and receive messages from mobile phones. Students who can't use cell phones but can use a computer with alternative keyboards or switch control can still text message with their peers. And with adults.

However most of us older folks will need to use the translator above to figure out what they are saying :)

- **Starting on the toolkit: some basic definitions** posted by **David Davis** on Mar 07, 2008

We have some really great discussions going on and I don't want to slow that down, so please keep adding to the discussion topics and posts. But I am going to start adding some structure to our toolkit development and the first place I want to start is with a discussion on some definitions on:

1. Accommodations
2. Universal Design
3. Assistive Technology
4. Instructional Technology (or) Technology that Supports Learning

This post is going to include my viewpoint on what these are. What I would like is to get other viewpoints added as well.

For me the starting point is performance. All of these things work together to support functional performance for everyone, but particularly for individuals with disabilities. And that performance support is achieved through an environmental or structural change (accommodations, Universal Design) and through a technology partnership (assistive/instructional technology).

Let's start with a basic example. An individual is unable to walk, resulting in problems with mobility. To help solve this mobility problem a technology may be used that doesn't result in walking but does result in increased mobility. So a person using a wheelchair is not walking but does have increased mobility. There is a partnership between the individual and the wheelchair. Now add structural changes in the environment, such as ramps, wide hallways and doors, desks that accommodate wheelchairs, and you have provided that individual a "total package" for performance support.

For me assistive and instructional technologies are partnership in nature; they are defined by their partnership with the user. Assistive technology has a long term partnership. A student partners with assistive technology and performance is increased. Take the technology away and the performance drops. Classic examples include communication devices, switch control systems, etc. With instructional technology the partnership is limited in time and the performance increase results from learning that remains after the technology is removed. Using a cognition example, if a student learns to organize information for a writing activity using a graphic organizer, and

continues to be able to organize the information after the organizer is no longer being used then it is instructional, a short term partnership. But if the student can only organize the information successfully for a writing activity using a graphic organizer then it is assistive technology, the partnership has to continue for success to continue. Now start changing the structure or environment so there is an accommodation to allow the student to use a graphic organizer during a test, or do a Universal Design structural change so that all students have graphic organizers at their disposal to use as they need them and you have one example of comprehensive performance support for information organization and writing that includes both structural/environmental changes and technology partnerships.

Again that is just my way of looking at these four concepts. How do you define accommodations, Universal Design, assistive technology, and instructional technology?

- **Re: Starting on the toolkit: some basic definitions** posted by **TR** on Mar 10, 2008

How do I define "universal design"? Well, I'm pretty familiar with the literature coming from CAST and others about it - multiple modes of presentation and expression, etc. I'm looking forward to the day when a significant percentage of teachers will be able to seamlessly use the Microsoft tools that allow quick and easy font changes, will support text-to-speech in gen ed classes, will incorporate audio and video as part of the curriculum and not just an added "treat", will assign team work using online collaborative tools and will encourage presentations in digital form. But we're so very, very far from that day. I think it's good to have a target to aim at, but I also think we probably need to present it to teachers in digestible bites. I'm wondering if anyone has any suggestions about how to "ease" one's way into universal design.

Another problem, as always, is the cost. I'm looking for ways of bringing UDL into my district's classrooms that don't involve my going to the Superintendent and asking for a huge budget for new materials. Or asking teachers to put in huge amounts of their own time to "gerry-rig" existing materials. UDL is a noble goal, but sometimes I feel like Don Quixote tilting at windmills.

- **Re: Starting on the toolkit: some basic definitions** posted by **David Davis** on Mar 11, 2008

I agree. Sometimes we ask teachers to think outside the box while we really need to give them tools they can use while thinking inside the box they are used to, which is my way of saying "digestible bites". And Microsoft tools like WORD and PowerPoint are great places to start. One of the FDLRS Technology Specialists created an online tutorial on WORD [<http://www.efdlrs.com/%7E sunrise/wondersofword/>] and does a lot of training on this to help teachers learn to use something they already have as a UDL tool. And your examples of just using Microsoft tools like the language bar text to speech are super examples of UDL that teachers can start to incorporate with little to no expense.

- **Hello**, posted by **Anita Suresh** on Mar 08, 2008

I am from India and an OT by profession. I am pretty new to AT and hope to use and learn. I thank FCTD to give us this opportunity to learn. I have been reading the discussions and it has been really interesting and informative. When we started AAC 3yrs. back in our classrooms, we had a lot of resistance from parents as well as teachers. From there we have reached today's scenario where parents and teachers (few) have come forward to

ask us for the cards, charts, etc. Our speech therapists were really excited and motivated now. So I hope with technology, things will facilitate the process.

- **Re: Hello**, posted by **Bridget** on Mar 08, 2008

Hi Anita and welcome.. this is a great place to learn!!

There is resistance at different levels and for different reasons here in the US as well for AAC (Augmentative Alternative Communication) as well as with assistive technology (AT). Technology has so much potential if we can help more people embrace and understand its potential.

Again welcome to the discussion!!

Bridget

- **Using Skype** posted by **Bridget** on Mar 08, 2008

Skype is a program that allows users to make phone calls over the internet to other Skype users for free. There is a video component so you can see each other when talking.

Here's another example of some creative people using this mainstream technology in a really cool way!! Great story!!

http://www.kare11.com/news/local/mornings/sunrise_article.aspx?storyid=500959

Bridget

- **Re: Using Skype** posted by **David Davis** on Mar 08, 2008

That is a great article to share. I also watched the video and it is also great. The links are under the picture.

One of the technologies it mentions, Elluminate, has a free version. It is called the vRoom and connects up to three computers with video, audio, interactive whiteboard, web tour, file sharing, desktop sharing, etc. It is very powerful and you can't beat free. It is what they are using to share the interactive whiteboard, which can be used with any interactive whiteboard (Activboard, SmartBoard, eBeam, etc.). All you have to do is go to the web site and sign up for your own free Elluminate vRoom (Win and Mac). It includes video but only one at a time (you have to take turns) so that's one reason they are using iChat for two way video, but as you mentioned above Skype also has video now.

<http://www.illuminate.com/vroom/>

- **Next step on the toolkit: curriculum** posted by **David Davis** on Mar 09, 2008

I talked about some definitions of accommodations, universal design, assistive technology, and instructional technology in a previous post. Keep these in mind as we get ready to start building out toolkit. But I want to add something else to consider as well and that is the concept of curriculum.

Wikipedia [<http://en.wikipedia.org/wiki/Curriculum>] mentions the work of John Bobbitt in describing the concept of curriculum coming from the Latin for race course. As such curriculum consists of the deeds and experiences that take us from young to mature, or kids to adults.

For parents of kids with disabilities the concept of curriculum extends past the classroom. And so the understanding of assistive technology also extends past the classroom. Somehow as we build this toolkit it would be great to recognize this extended curriculum and include language that helps people to see how the technologies included can be used both in the domain of education as well as the domain of peers/community.

And for the purposes of this particular type of toolkit we are looking at something a little different than whether or not a technology or device can be used in the classroom or at home. We are looking more at the differences in the domains of education and peers. Not that this is a new thing; the posts so far in this discussion have been incredible and exactly what we are working on, and people have been dealing with this issues for many years. I just want to mention that, for example, while many communication devices have overlays for school, community, shopping, etc., what we want is to identify are some of the technologies that are a little more effective in helping students meet the performance expectation of their peers. This moves us into an expanded curriculum.

As an example, if you are looking for a one hand keyboard you might want to consider the Frogpad [<http://www.frogpad.com/information/iFrogWearable.asp>]. It is small, lightweight, can be used on a table/tray or attached to the body (wearable), and is bluetooth so it can be used with cell phones and PDAs (providing larger keys). Add this to the posts in this discussion on the use of text messaging/cell phones and you start to expand the use of text messaging as a communication system for students who cannot use the small keys on a cell phone.

Please be thinking and posting about other curriculum areas, such as science, math, music, art, and what types of technologies can be used by students to successfully meet expectations in the educational/adult domain as well as the peer domain. Don't forget to consider gaming systems :)

- **Re: Next step on the toolkit: curriculum** posted by **Andi** on Mar 10, 2008

Your reference to Wikipedia brings up an interesting question. Although I like the idea (and see it as inevitable) that our students should learn how to get information from Web sources (as opposed to just textbooks) and should participate in wikis, I wonder (like many educators) about the misinformation that unvetted sources can provide. I know some teachers forbid their students from using Wikipedia, but I've found a lot of good information there. Then again, I like to think that I know how to evaluate things like source bias, a skill many students don't acquire until late in high school, if then. I'm not sure what my question is here. Perhaps you could just comment on the subject. Thanks.

- **Re: Next step on the toolkit: curriculum** posted by **Ellen** on Mar 10, 2008

Someone from a listserve I am on shared this article about Wiki. It seemed appropriate for the line of conversation.

<http://www.slate.com/id/2184487/?GT1=10935>

Ellen

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 11, 2008

That's a good article and it really does illustrate the dynamics of dealing with information in a world where the information (not accurate information, just information) increases exponentially.

One of the nice things about tons of information is that it starts to act as its' own filter. The more information you have the more you can cross check. So giving students access to more information, rather than trying to restrict the access to "accurate" information, is a good practice.

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 11, 2008

I think you are right that, while there are some questions that are easy to ask like, "Is it accurate?" there are other questions we sense but aren't really sure what they are. That is, to me, a big part of this entire discussion and why I really want people to post responses, thoughts, ideas, etc. There are still questions to discover.

Wikipedia is a great example of the difference between the classic classroom curriculum and an extended curriculum that goes beyond the classroom to become relevant. When I was in grade school the encyclopedia was considered accurate and the final authority. Textbooks contained the "right answer" to the questions. But the truth is that encyclopedias are not accurate, neither are textbooks. Using wikipedia, and teaching students to contribute to wikipedia, brings about a completely different way of thinking about information and an understanding that research includes the skills you mentioned; like evaluating source bias.

One of the areas in which I am trying to discover questions is this notion of extended curriculum. On the one hand I think maybe I am just looking at or considering the new cool gadgets that students are using today. But another part of me feels that the digital revolution is bringing about a completely different way of thinking for students as well as a different relationship to technology that adults sometimes dismiss as just kids and their toys. There are a lot of implications here for things like transition, instruction, new ways of looking at assistive technology, etc.

- **Re: Next step on the toolkit: curriculum** posted by **LM** on Mar 11, 2008

I agree with you about how we look at technology and it's relationship to learning, especially when the technology that comes in the next years will be things we never thought of today. Students that have disabilities seem so comfortable with using it and wanting to use it. How do school systems struggling with funding, often using outdated technology and weary of new technology stay current, excited and understand the possibility of the future of learning. The future that is here today? How do we develop staff development programs that help all to be better users of technology? How do those of us that want to learn and develop our instructional plans with technology convince those that make the decisions that it is the right path to walk? I offer a willing heart and my strong point of view. I know the quality of my instruction improves as I become more comfortable with technology. I also know my students learn more! What can we start with...let's build that tool kit. What are the top 10 things we need?

- **Re: Next step on the toolkit: curriculum** posted by **Ellen** on Mar 11, 2008

I think one of the things on that top ten list is not necessarily a tool but learning to use well some of the tools we already have. For example the program Microsoft Word. There are many many things a user can do with Word that make it friendlier to someone with or without a disability. Most people use the surface familiar features but

are relatively unaware of some of the really cool useful features. The program is generally available to everyone and is very mainstream so learning to use it better would benefit everyone.

My first pre coffee thought of the morning!!

Ellen

- **Re: Next step on the toolkit: curriculum** posted by **lori warner** on Mar 11, 2008

Ellen,

Great point! Can you share with us what are some of the "tools" or "options" available within MS Word that you or others have found valuable?

Thnaks,lori warner

- **Re: Next step on the toolkit: curriculum** posted by **Jackie Hess** on Mar 11, 2008

Hi Lori. Glad to see you here, you're always a great participant in our online discussions.

A resource everyone may want to check out is an online video from Teacher Tube, entitled "No and Low Tech Literacy Tools" at http://www.teachertube.com/view_video.php?viewkey=5ff317aecdc367009447. It's presented by Jennifer Eubank of Assistive Technology of Alaska and covers podcasts, vidcasts, blogs, wikis, Microsoft templates and other online tools. (Not everyone will see this as "low and no tech":-) Be sure to click the "full screen" icon in the lower right of the video screen so that you can see her examples adequately.

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 11, 2008

Here is another source for clear explanations of various online tools. Scroll down to the bottom of the page to get to a list of videos.

<http://www.commoncraft.com/>

- **Re: Next step on the toolkit: curriculum** posted by **Jackie Hess** on Mar 11, 2008

The following comes from Access IT, The National Center on Accessible Information Technology in Education, University of Washington. It's from a webpage entitled "What accessibility features are provided with the

Windows operating system?"

<http://www.washington.edu/accessit/articles?1012>

Display and Readability:

These features are designed to increase the visibility of items on the screen.

- Font style, color, and size of items on the desktop—using the Display options, choose font color, size and style combinations.
- Icon size—make icons larger for visibility, or smaller for increased screen space.
- Screen resolution—change pixel count to enlarge objects on screen.
- High contrast schemes—select color combinations that are easier to see.
- Cursor width and blink rate—make the cursor easier to locate, or eliminate the distraction of its blinking.
- Microsoft Magnifier—enlarge portion of screen for better visibility.

Sounds and Speech:

These features are designed to make computer sounds easier to hear or distinguish - or, visual alternatives to sound. Speech-to-text options are also available.

- Sound Volume—turn computer sound up or down.
- Sound Schemes—associate computer sounds with particular system events.
- ShowSounds—display captions for speech and sounds.
- SoundSentry—display visual warnings for system sounds.
- Notification—Get sound or visual cues when accessibility features are turned on or off.
- Text-to-Speech—Hear window command options and text read aloud.

Keyboard and Mouse:

These features are designed to make the keyboard and mouse faster and easier to use.

Mouse Options:

- Double-Click Speed—choose how fast to click the mouse button to make a selection.
- ClickLock—highlight or drag without holding down the mouse button.
- Pointer Speed—set how fast the mouse pointer moves on screen.
- SnapTo—move the pointer to the default button in a dialog box.
- Cursor Blink Rate—choose how fast the cursor blinks—or, if it blinks at all.
- Pointer Trails—follow the pointer motion on screen.
- Hide Pointer While Typing—keep pointer from hiding text while typing.
- Show Location of Pointer—quickly reveal the pointer on screen.
- Reverse the function of the right and left mouse buttons—reverse actions controlled by the right and left

mouse buttons.

- Pointer schemes—choose size and color options for better visibility.

Keyboard Options:

Character Repeat Rate—set how quickly a character repeats when a key is struck.

Dvorak Keyboard Layout—choose alternative keyboard layouts for people who type with one hand or finger.

StickyKeys—allow pressing one key at a time (rather than simultaneously) for key combinations.

FilterKeys—ignore brief or repeated keystrokes and slow down the repeat rate.

ToggleKeys—hear tones when pressing certain keys.

MouseKeys—move the mouse pointer using the numerical keypad.

Extra Keyboard Help—get ToolTips or other keyboard help in programs that provide it.

Accessibility Wizard:

The Accessibility Wizard is designed to help new users quickly and easily set up groups of accessibility options that address visual, hearing and dexterity needs all in one place. The Accessibility Wizard asks questions about accessibility needs. Then, based on the answers, it configures utilities and settings for individual users. The Accessibility Wizard can be run again at any time to make changes, or changes can be made to individual settings through Control Panel.

Windows XP Accessibility Utilities:

- Magnifier—a display utility that makes the computer screen more readable by creating a separate window that displays a magnified portion of the screen.
- Narrator—a text-to-speech utility that reads what is displayed on the screen—the contents of the active window, menu options, or text that has been typed.
- On-Screen Keyboard—displays a virtual keyboard on the computer screen that allows people to type data by using a pointing device or joystick.
- Utility Manager—enables administrator-level users to check an accessibility program's status and start or stop an accessibility programs—automatically, if required.

- **Re: Next step on the toolkit: curriculum**
posted by **David Davis** on Mar 11, 2008

This is a great handout and a great list of activities for a workshop. We used to have a guy in our network, Mark Sardo, who did handouts of the accessibility options for each operating system (including different versions of an operating system). I would use his handouts as the activity guide for workshops on learning how

to get around the operating system on a computer. Accessibility was not the goal of the workshop, but the activities of the workshop were based on changing the accessibility features of the OS.

- **Re: Next step on the toolkit: curriculum** posted by **Ellen** on Mar 12, 2008

I like for students and teachers to be aware of the following features:

auto summarize
spell check and grammar visual cueing
right click a word to access dictionary, thesaurus, etc.
word count
readability
word reader

just to name a few. Word literacy and being able to use well the tools that are readily available goes a long way!! We as educators also need to know about these great built in features.

How about using power point to create accessible books?? It's one of my favorite activities to do.. now I just need an army of volunteers to create!!

Ellen

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 12, 2008

I think PowerPoint books are great. It is amazing what can be done with PowerPoint. Here is a link to a digital lending library. On the left you should see a button to Powerpoint Activities. It includes a lot of Powerpoint books you can download and use.

<http://region2library.org/>

Also, here is a link to a PowerPoint file that includes a macro to read the text aloud. There are instructions on the last screen I think. It reads the text in the notes section, so you can have it read anything aloud while having the text, just graphics, or a mixture on the screen.

http://www.paec.org/fdlrstech/files/make_a_book02.zip

- **Re: Next step on the toolkit: curriculum** posted by **Ellen** on Mar 13, 2008

What a GREAT resource!! Thanks!!

I noticed when perusing the site information about a program called Word Talk.. it looks very interesting.. is there a comparable Macintosh version?

thanks!!

Ellen

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 13, 2008

I don't know of anything like this on a Macintosh that works in WORD on a Mac, and is inexpensive. There are tools like Read and Write Gold that will highlight words as they are read but it is fairly expensive.

http://www.texthelp.com/page.asp?pg_id=10002

Ghostreader for Mac highlights words as they are read and is fairly inexpensive (about \$40.00) but I think the text has to be copied into Ghostreader for the features to work.

<http://www.convenienceware.com/ghostreader.php>

If you don't need the word highlighting then you can use the text-to-speech that is built in on the Mac to read writing in WORD aloud.

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 11, 2008

WORD does have some great features in it. I put this link in another post but want to add it again here. It goes to an online tutorial on WORD that one of our Technology Specialists created.

<http://www.efdlrs.com/%7Esunrise/wondersofword/>

- **Re: Next step on the toolkit: curriculum** posted by **Ellen** on Mar 12, 2008

This is awesome!! I've already made a point of bookmarking and going through some of the modules myself to see what else I can learn!!

THANKS!!

Ellen

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 11, 2008

One of the things I do when I am in a classroom with old technology (like Windows 95/98 computers or old Macs) is pull out some of the amazing old software programs. There is still some great things that can be done with old machines and I still have my library of freeware, shareware, and commercial software for old systems that I give to teachers and parents. Sometimes it is exciting for a teacher just to find out that there are some great tools for students that will work on the old machines.

- **Re: Next step on the toolkit: curriculum** posted by **AmyM** on Mar 13, 2008

I am finding that the question I have the hardest time answering during IEP meetings is what do you want your child to do, or be able to do, that they aren't currently doing? Once we figure that out, we have a basis for everything else. In our case, we want her to be able to communicate, in any way possible, effectively, and to repair communication breakdowns.

Now, since we figured out that goal, we try to gear all other goals towards that. She will have to be able to form a sentence using a noun, verb, and at least one descriptive word. She will practice building sentences using the Masterpiece Sentence model. We will identify words by the part of speech and the icon on her communication device. (Minspeak for 84 locations is pretty much based on knowing your parts of speech). Once she learns how to do these things academically, we start using her Eco communication device, to show her how to do them using her device.

Then we give her lots of practice, by playing games with her peers, letting her teach her peers how to do it on the device, and I am currently preaching about showing her practical ways to use what she is learning. We are only talking second grade here, so we aren't talking about sitting down and writing a book. BUT, we would like her to know how to use her communication device, to answer test questions, and be able to fill it out and print it, so the school has a true representation of her work, and not the input of an aide or helper's work.

We are finding a multi modality way of teaching anything to her to be the best and easiest way, and has made a great difference this year. Speech therapy is used to work on saying spelling words correctly, and finding them on her device (she does use speech too, and mostly needs the communication device for writing purposes). In Occupational therapy, they might use the device to practice her dictation sentence, and other sentences using spelling words. In language, she is learning the parts of speech, which will help with her communication device. In a second speech therapy, they practice finding words on the device, from a set of words from a word bank. This in turn gives her access to more words to be able to answer test questions and to use her device for spontaneous speech, which is

when people have the most trouble understanding her. Since we have integrated this all together on her IEP at the end of Jan., she has gone from straight Fs in spelling, and a year and a half behind in reading, to 4 out of 5 spelling tests with 100% on them this nine weeks. And her reading has improved also, because she is better able to recognize more words because she can spell them now.

So, maybe the first step to creating a toolkit, would be maybe a set of questions printed out, asking about each child's goals, and what steps can help that child reach that goal. Even if it is something like interacting with other kids. Computer games where there are two players are great ways to encourage play. Intellitools has lots of activities that children can work on together, like creating a book report or a small book. Being assigned a leader or captain on recess can help them interact with other children.

Another step I would think is to have some printed info about IEP goals that others have used. A lot of times, IEP goals aren't successful, and if you find one that is, you should share it. This will save a teacher lots of time trying to figure one out. Each goal on our current IEP simply states as a resource, that she will have access to her communication device at all times. In the future, we may have goals like she will be encouraged to complete at least a part of every assignment using her device, and go from there. At some point, she should be using it to complete all of her assignments. I am finding regular ed teachers are not all familiar with IEP goals. And if we could create some guidelines, or tell them HOW to integrate technology with their current curriculum, then they might not be so reluctant to use it. The Teacher support part of the IEP, could be like a monthly meeting with the programmers of the device or users of the software, to show the teachers what it can do in relationship to typical school work, and HOW to use it. Most, I feel, are scared to try something different than what they have always done. I always tell the school, if you aren't part of the solution, you are part of the problem. Choose which part you want to be!

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 13, 2008

Thank you for the post Amy. Some interesting thoughts and it makes me curious as to how others go about formulating IEP goals. I am not trying to change the discussion subject with this, but I would like to hear some more examples of IEP goals from a variety of people because I think the goals reflect different ways of thinking about how to solve performance problems. Amy brought up a relationship between a toolkit and IEP goals, or problem solving goals from the discussion point of view. And I think this may really start to reflect the difference in performance standards when we start looking at transition and how we start to shift our view of performance from school based to community/peer based.

So, anyone else want to share a few examples of IEP goals?

- **Re: Next step on the toolkit: curriculum** posted by **Enter name here** on Mar 18, 2008

<http://www.kid-power.org/samples/goals.html> This whole site is awesome, but I really like this page.

<http://www.osepideasthatwork.org/toolkit/index.asp> is another toolkit that is really helpful with IEP info.

<http://www.wrightslaw.com/idea/law/model.iep.form.pdf> is a model IEP form.

<http://www.wrightslaw.com/info/iep.goals.plan.htm> is the place to learn about SMART IEPs

- **Re: Next step on the toolkit: curriculum** posted by **AmyM** on Mar 18, 2008

sorry, that last one was me, I didn't sign in.

Here is one more site I really like

<http://www.schwablearning.org/articles.aspx?r=73&f=relatedlink>

And here is a 177 page BANK of IEP goals, that is totally free.

<http://www.bridges4kids.org/IEP/iep.goal.bank.pdf>

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 18, 2008

Thanks. Those are all great resources and I have added them to the list. They also demonstrate different ways of thinking about IEP goals and objectives and that is also nice to have.

Here is something else to throw into the mix :)

Under various topics like accountability, NCLB, and RTI there are discussions on the relationship between IEP goals and grade level expectations. So if we create IEP goals that are far below grade level expectations are we creating a contract that says the student will not make adequate yearly progress (AYP) or creating a contract that says the student will do poorly on high stakes testing?

One of the examples on one of the Wrightslaw links of a measurable IEP goal is "The student will demonstrate the following study skills: skimming written material and the use of reference materials in the social studies class." This is a good example of how IEP goals can be written to match the language in state benchmarks (for us in Florida that would be the Sunshine State Standards). However, since our regular diploma benchmarks and alternate assessment benchmarks are in alignment that example IEP goal could appear on a variety of grade levels as well as regular diploma or alternate assessment based IEPs. In that light it doesn't serve much of a purpose.

Any thoughts?

- **Re: Next step on the toolkit: curriculum** posted by **AmyM** on Mar 18, 2008

I made sure, when my daughter transferred from an integrated preschool to a regular education kindergarten, that I made clear that she was to do what

was expected of everyone else in class. That was important for me for her in first grade also, but problems started becoming evident. She has a personal aide, that adapts stuff for her, and she has a communication device. She had no support of the special ed teachers at that point. Last year was basically a disaster, school wise. We had a teacher that did not like parents to be in the classroom, was resistant to simple little adaptations such as bingo markers for dabbing correct answers, and never once even tried to get my child to sue the communication device for anything at school.

This year, we have a teacher that early on in the school year, started asking for testing to be done, to get her more individualized help. She has 11 years previous experience working as an MH classroom teacher, and is great at adapting and modifying materials, and is willing to learn the communication device (Eco-14 from PRC). She even took the copy of the software for it home to practice on. I am still clear that stuff not be DUMBED down for her, as I call it. I want her doing grade level work, just not so much of it. Maybe 6 out of 10 math problems (related to CORE content, to make sure she knows how to do it), or lately, only 1 out of 3 dictation sentences, and only a set of 8-10 spelling words, that are repeated often for review, electronic forms of book reports using Intellitools, typing out 3 instead of writing spelling words 5 times, etc etc. There usually is a lot of busy work assigned to kids, and teachers aren't always good at doing away with that.

Since we have put her into special ed or reading/language/spelling, she has flourished in school the last 2 months. It is a slower pace, more individual time with half as many kids, still gets to be with some of her classmates that are in remedial reading, less BUSY work, and more time to get what is assigned done. She gets the same words as her typical classmates (just fewer, and no surprises, she knows EXACTLY which words will be on the test, even bonus), but might see the word SAID 3 weeks in a row, and she gets to choose one of 3 dictation sentences she wants to get tested on. She is doing better in reading and spelling, has more time to get it done, therefore has more time to get other class stuff done also. All of her grades have improved this 9 weeks.

I print out the state standards at the beginning of each school year for her grade. Then I challenge the school to find a way to meet those standards in a way that will benefit my daughter, and in a way she is capable of doing it. It is working so far this year, and I hope this year's success will follow into next year. I have had the

school district wishing to place her someplace else, because they say they can't teach her how she needs to be taught. When I pointed out her C average last nine weeks, and this nine weeks A/B average, I just simply asked them what it is they want to teach her, that she isn't learning? It is just finding the magic formula or the correct testing technique, that makes it possible to go from straight Fs in spelling for a year and a half, to straight 100%s, in a week's period. Now we know how to test her, she is doing it, over and over again in spelling.

- **Re: Next step on the toolkit: curriculum** posted by **David Davis** on Mar 18, 2008

That's great. I like the way you talk about finding the correct testing technique. Matching demonstration of knowledge to the student is as important as matching instructional techniques and materials to the student, and there are two different areas of demonstration. One is the demonstration/assessment process that comes in under the umbrella of instruction. The other is the demonstration/assessment process required by the educational system. Both have to match the student as well as the related process or system, so like you said it is a formula, which was a great example. That same type of formula has to be found when the demonstration isn't in the educational domain but in the peer domain. Different standards and all, same principles.

Great sharing.

- **Synopsis to this point** posted by **David Davis** on Mar 14, 2008

Just to help us see some of the things we have discussed so far, below is a list of tools/technologies, resources, and needs. Feel free to add, we are about to start building the toolkit.

Tools / Technologies

Cleverkeys <http://www.cleverkeys.com/ck.html?p=home>

ClozePro <http://www.cricksoft.com/us/products/clozepro/default.aspx>

Clicker5 <http://www.cricksoft.com/us/products/clicker/default.aspx>

ReadPlease 2003 <http://www.readplease.com>

Microsoft WORD <http://office.microsoft.com/en-us/word/default.aspx>

WORD Talk <http://www.wordtalk.org.uk/>

SMARTboard / Interactive Whiteboards <http://www.fsdb.k12.fl.us/rmc/tutorials/whiteboards.html>

Dragon Naturally Speaking <http://www.nuance.com/naturallyspeaking/>

Kurzweil <http://www.kurzweiledu.com/kurz3000.aspx>

Wynn <http://www.freedomscientific.com/LSG/products/wynn.asp>

Read and Write Gold http://www.texthelp.com/page.asp?pg_id=10002

Ghostreader <http://www.convenienceware.com/ghostreader.php>

Classroom Suite <http://www.intellitools.com>

Kidspiration <http://www.inspiration.com>

SOLO <http://www.donjohnston.com/products/solo/index.html>
Co:Writer <http://www.donjohnston.com/products/cowriter/index.html>
Say it Sam http://www.words-plus.com/website/products/syst/say_it_sam.htm
Facebook <http://www.facebook.com/>
MySpace <http://www.myspace.com/>
Wikipedia <http://en.wikipedia.org>
Skype <http://www.skype.com/>
Elluminate <http://www.illuminate.com/vroom/>
Blogging <https://www.blogger.com/start>
YouTube <http://www.youtube.com>
Frogpad <http://www.frogpad.com/information/iFrogWearable.asp>
Classmate Reader <http://www.donjohnston.com/products/portables/classmate/index.html>
Sidekick <http://www.sidekick.com/>
Palm Pilots <http://www.palm.com/us/>
Edusim 3D free software <http://edusim3d.com/>
Text Messaging Abbreviations http://www.webopedia.com/quick_ref/textmessageabbreviations.asp
Text Message Translator <http://lingo2word.com/translate.php>
Google Calendar & Documents <http://www.google.com>
MORE <ftp://ftp.paec.org/itrk/organization/More/>
OmniOutliner <http://www.omnigroup.com/applications/omnioutliner/>
JOTT <http://www.jott.com>
DANA <http://www.alphasmart.com>
Schoolhouse 2 <http://www.loganscollins.com/schoolhouse/>
NoteTaker <http://www.aquaminds.com>
MP3 Players
eMail
Flash drives
Graphics tablets

Resources

QIAT list serv <http://www.qiat.org>
FCTD AT Resources <http://www.fctd.info/resources/search.php>
FCTD Family Information Guide to AT http://www.fctd.info/resources/fig_summary.php
UDL <http://www.cast.org>
Bookshare <http://www.bookshare.org/web/Welcome.html>
Example of teacher using blogs <http://www.hpjh.blogspot.com>
Did You Know video <http://www.youtube.com/watch?v=pMcfLYDm2U&feature=related>
Online IT for AT "CD" http://www.paec.org/fdlrstech/itforat/start_here.html
Teacher Magazine article
http://www.teachermagazine.org/tm/articles/2008/03/05/23tln_norton_web.h19.html?tmp=248575175
Interactive whiteboard resources <http://www.fsdb.k12.fl.us/rmc/tutorials/whiteboards.html>
Project 365 <http://alltogether.wordpress.com/2008/01/24/project-365-er6/>
Palm training for educators <http://www.edteck.com/palm/software.htm>
Wonders of WORD <http://www.efdlrs.com/%7Esunrise/wondersofword/>
News story on using distance learning tools
http://www.kare11.com/news/local/mornings/sunrise_article.aspx?storyid=500959
Article on wiki <http://www.slate.com/id/2184487/?GT1=10935>
Wikipedia on curriculum <http://en.wikipedia.org/wiki/Curriculum>
No and Low Tech Literacy Tools
http://www.teachertube.com/view_video.php?viewkey=5ff317aecdc367009447
Commoncraft <http://www.commoncraft.com/>
Windows Accessibility Features <http://www.washington.edu/accessit/articles?1012>
Region2 Digital Lending Library <http://region2library.org/>

Needs

Resources for an AT Startup Team

Solutions for college students and vocational applications

Cost/benefit data on various technologies and integration strategies

- **Re: Synopsis to this point** posted by **Tamara** on Mar 14, 2008

One resource that I have found extremely useful when working with students who have visual and hearing impairments is the Described and Captioned Media program, www.dcmp.org. This program provides free access to described and captioned educational media to students with qualifying disabilities. Schools are often unaware that this resource exists. With more and more curriculum being delivered in nontraditional formats (video vs. print), we need to remember that all learning tools should be inclusive and accessible to all.

While the DCMP doesn't have every possible educational video captioned or audio-described, they have over 4,000 videos in their ever expanding library.

So, that's my plug for adding the Described and Captioned Media Program to the toolkit. (Honestly, I do not work for them, just love their service :)

- **Re: Synopsis to this point** posted by **David Davis** on Mar 14, 2008

Thanks, I will add it to the list. Great resource!

- **Re: Synopsis to this point** posted by **teresa** on Mar 14, 2008

This is one of sites I use in the course I teach for general education teachers working on their masters in Special Ed. in the unit on AT Assessment/Teams: <http://atto.buffalo.edu/>

Another is: <http://www.onionmountaintech.com/>

the documents are a little harder to find; go to left/Services and click on "handouts and document downloads" the assistive technology continuum handout is a great tool to use in an IEP meeting or when looking for possible solutions. The Personal Choices document is a great tool to use with your LD student/teenager.

There are other good documents to download also.

teresa

- **Re: Synopsis to this point** posted by **David Davis** on Mar 15, 2008

Thank you for the resources. One of the needs listed in the synopsis from a post regarded resources to help with starting an AT Team. The unit on AT Assessment/Teams will be a great help.

- **Re: Synopsis to this point** posted by **Bridget** on Mar 17, 2008

I agree that these are both excellent resources!!

- **Re: Synopsis to this point** posted by **Ellen** on Mar 15, 2008

what an absolutely incredible list!! Of course one of my favorite things about these discussions. I always learn at least one or two things I didn't know about before. I call them nuggets and I immediately go off and check them out and then add them to my tool box. A

couple of others I think are really interesting..

JOTT - www.jott.com

a currently free resource to use your cell to send emails and reminder voice messages. Think about organizational difficulties and mainstream technology. I think it has potential.

Bookbuilder - bookbuilder.cast.org

a currently free resource from CAST. It gives you the ability to create books or (because we are all busy busy) it gives you access to books others have created!! The cool thing about this is that it addresses reading comprehension. There are knowledgeable others (these adorable little critters) that act as the voice inside to ask questions and get the reader engaged and thinking about the what they are reading.

Route 66 Literacy

a currently free beta release of an online collection of books based on the research and work of Karen Erickson out of North Carolina. The books were designed for older non or emergent readers. High interest - easy text. Don't know how to teach reading?? That's okay.. Route 66 has a built in helper to give you the words to say to help develop reading skills.

okay.. just a couple of my favorites that I think you might like to add to your toolbox and I believe they are all free!

Ellen

- o **Re: Synopsis to this point** posted by **David Davis** on Mar 16, 2008

Those are great additions. I have added them to the collection and they will show up in the next synopsis.

Thanks!

- **Re: Synopsis to this point** posted by **KarenJanowski** on Mar 22, 2008

David,

Just found this online discussion. Lots to catch up on. I tend to stick to web 2.0 tools these days such as Twitter, Ning (Classroom20.ning.com, assistivetech.ning.com), Skype, Yugma, ustream, blogs and wikis.

You may be interested to review my blog <http://teachingeverystudent.blogspot.com>. I recently blogged about the use of JOTT as a UDL tool in our classrooms. On the right side of the blog, click on the link to my most popular blog post. It will take you to a "Free Technology Toolkit for UDL in all Classrooms." I would love to get the word out to all educators everywhere. There are so many free tools that benefit our students and it's ALWAYS about our students!

AT does not have to be expensive, especially for students with high incidence disabilities.

- o **Re: Synopsis to this point** posted by **KarenJanowski** on Mar 22, 2008

oops, try <http://teachingeverystudent.blogspot.com>

- **Re: Synopsis to this point** posted by **Bridget** on Mar 22, 2008

Karen,

What a great list of ideas!! I am a JOTT user and promoter and often promote during an AT consultation as a UDL tool. Your list generated some new ideas that I will certainly share!!

Bridget

- **Re: Synopsis to this point** posted by **David Davis** on Mar 22, 2008

This is an incredible resource; thanks for sharing! It is like finding a gold mine.

I got the Flip camera in January and it really is easy to use. My project hosts a training institute each year in Florida and a couple of years ago we did sessions on making videos of what is happening on a computer screen using software like Camtasia and SnapzPro. Those are not free but have a lot of great features. CamStudio [<http://camstudio.org/>] for Win is free as well as Jing [<http://www.jingproject.com/>] for Win and Mac. We now have a lot of folks making and using videos; online, burned to CD/DVD, or saved on USB Flash drives. Videos are great for students as memory tools, lesson review, and a media for instruction and demonstration.

I like videos :)

- **Re: Synopsis to this point** posted by **Karen Janowski** on Mar 24, 2008

You can also upload videos to VoiceThread, Teacher Tube or YouTube so that students can access them anywhere at anytime. Have you explored VoiceThread? I think it is the best free tool available for differentiated instruction.

- **Re: Synopsis to this point** posted by **David Davis** on Mar 24, 2008

I had not seen VoiceThread and you are right, it is amazing. Now my brain is bouncing all over the place, but in a good way :) I am definitely going to find some way to highlight this tool.

- **Finding a workable solution** posted by **Cindy** on Mar 17, 2008

Hello! I am the parent of a 16 year old son with a complex brain injury. Alex's receptive language skills are intact, but expressive language is very difficult (he knows what he wants to say, but the correct words will not come out). Alex has right-side paralysis (he was previously right-handed), and now requires left-hand facilitated hand-writing. Basically, someone needs to keep their hand on top of his to help him maintain control and fluidity. Now that he is in high school, this handwriting assistance is not easily accepted by all of the staff, and causes issues when it is time for state assessments. In the nine years since his injury he has definitely made improvements, but he is still not an independent communicator. We have tried various communication devices, from the very simple all the way to a Dynavox "DynaMyte". We have also tried keyboarding, but Alex has scanning difficulties and becomes very frustrated with the keyboard. Our assistive tech coordinator does not have any other ideas. An independent evaluation resulted in focusing on keyboarding.

I am concerned that my son is still not an independent communicator. He wants to go to college, but he really needs to be able to advocate for himself. There must be some kind of technology out there that can help him, but I don't know what to do next.

- **Re: Finding a workable solution** posted by **Bridget** on Mar 17, 2008

Have you tried word prediction paired with some voice output? If he has some auditory cues he may be able to identify the word that he wants.

Regarding keyboarding have you tried any on screen keyboards or alternative keyboards such as big keys??

How about access to the keyboard? What kind of features does he need the keyboard to have??

Bridget

- **Re: Finding a workable solution** posted by **David Davis** on Mar 17, 2008

Cindy,

Based on your mention of an evaluation that seems to be recommending keyboarding I would agree with Bridget in exploring different types of keyboards. And other folks in this discussion may have additional ideas you can try.

But it sounds like you really need some people who are experts in complex brain injury to be involved, which is not news I am sure. We can't tell in this discussion what cognitive processes were impacted by the injury. Plus those injuries probably compounded problems in cognitive development during the years of growth from 7 to 16 years of age. The problems are, indeed, complex.

From a very, very basic viewpoint, here are some things you might try. Bridget mentioned large key keyboards. Different alternative keyboards have different target sizes. BigKeys [<http://www.bigkeys.com/>] and Intellikeys [<http://www.intellitools.com/>] are possible considerations. Adhesive keyboard labels [http://www.infogrip.com/product_view.asp?RecordNumber=83] provide choices in label size and color contrast.

You may also consider trying an arm rest, such as the Ergo Arm Rest [<http://www.ergo-items.com/armrests/ergorest/ergorest.htm>]. This may help with possible physical problems.

But again, when you have complex problems you need some expert help in working through all of this.

- **Re: Finding a workable solution** posted by **Alice** on Mar 19, 2008

I just want to say thank you for all the information. I don't understand half of it (or most of it) but I've been printing it out and taking it to my son's school and I don't think they understand half of it either but they've started to talk about trying some things with him. They weren't doing that before and I think giving them this information has made all the difference. We don't have any technology experts in our town (at least that I know of) but we get the internet so this kind of information is great. Also, trying to teach myself about this stuff has given me a better idea of what my son is up against and has made me more patient with him. So double thanks from him too.

Alice

- **Re: Finding a workable solution** posted by **David Davis** on Mar 20, 2008

You are very welcome and please feel free to ask for more information or explanations on anything you see here.

- **Re: Finding a workable solution** posted by **dave s** on Mar 17, 2008

There is a program called wordQ speak Q that may be able to improve his language organization and acquisition as well. It is a speech recognition program that works only in word type programs where you type I.e. M-word , e-mail word pad etc.. It is free to download the thirty day trial, you must take word-q and the speakq to work it functionally and should be used with a usb noise canceling microphone headset. It has auditory feed back, reads back as well. As far as readers, if the school doesn't have kurz then something like claro read might work too.

<http://www.wordq.com/index.html> This can be trained at his vocabulary level and has no command/edit functions with the speech.

<http://www.clarosoftware.com/>

<http://www.assistivetech.com/>

has a different type of dynamic display with a different communication software that he may be able to use more functionally then the d-vox.

- **Re: Finding a workable solution** posted by **David Davis** on Mar 17, 2008

Those are great resources. Thanks for recommending them.

- **Multiple digital voice possibilities** posted by **David Davis** on Mar 17, 2008

Folks,

I have been looking for several years for text to speech tools that enable students to embed voice changes within a document. What got me looking at this years ago was a program called ScreenWriter [<http://www.screenplay.com/default.aspx>] which guides a writer through the process of writing a screenplay, complete with guiding the formatting of the writing and being able to assign different characters with different voices to each part. When you run the text to speech you hear the screenplay read aloud by the different characters. It is a bit expensive but a really good tool that guides the writing process of screenplays.

Narrator [<http://www.dejal.com/narrator/>] also offers the ability to assign different characters or voices to different parts of a writing assignment. You can even change voices mid sentence. And is it very inexpensive.

So do you have a favorite program that supports reading in multiple digital voices? Multiple voices are great for writing plays, but they also provide the auditory equivalent of visually organizing text as well as emphasis such as bold and italic. What ways do you think multiple digital voices would be useful?

- **Re: Multiple digital voice possibilities** posted by **Bridget** on Mar 17, 2008

I believe two of my favorites have this feature. How about Hollywood High by Tom Snyder Productions [<http://www.tomsnyder.com/products/product.asp?SKU=HOLHIG>] and Kreative Komics Comic Book Maker by Visions in Technology [<http://www.kreativekomix.com/>]. You

can assign the characters different voices. My students loved writing using these tools.

I attended a great session at Technology Reading and Learning Diversity (TRLD) held in San Francisco in January [<http://www.trld.com>] about using Hollywood High and Scripts to help students learn how to write a 5 paragraph paper. Most of my students were at the stage that I just needed to get them writing but I always thought the concept had merit.

Bridget

- **Re: Multiple digital voice possibilities** posted by **David Davis** on Mar 18, 2008

Those are super resources and I will add them to the list. My only problem with Hollywood High is that it is an old program and doesn't seem to be really supported anymore. You can at least purchase it, but when you look at the system requirements it is Macintosh Classic only and only up to ME on Windows. That doesn't mean it won't run in XP, but it does indicate that there probably won't be any type of update soon.

Which is a shame because it has some great features and is a great writing support tool.

- **Math tools** posted by **David Davis** on Mar 19, 2008

Below is a selection of various math tools. Math is one area where having a collection of tools can really help in problem solving, homework, real life activities, etc.

Calculators are allowed on most states' high stakes testing and as such are something that all students should be fluent in using. Most computers come with built in calculators. Here are some additional ones.

Big Calculator (Win) . free basic calculator that can be adjusted for really big buttons .
<http://www.sensorysoftware.com/bigcalculator.html>

Metacalc (Internet) . free basic calculator that can be adjusted for large buttons .
<http://www.metacalc.com/>

KoalaCalc (MacOSX) . free simple and scientific mode calculator .
<http://www.macropodsoftware.com/koalacalc/index.html>

Calc Thingy (MacOSX) . simple interface but fairly powerful calculator .
<http://liquidbinary.com/software/>

MoffSoft FreeCalc (Win) . great basic calculator with adjustable size and color schemes along with a simulated paper tape display . <http://www.moffsoft.com/freecalc.htm>

Microsoft Math (Win) . all-in-one math homework solution. solve equations, graph functions, use a fully-functional graphing calculator, solve triangles, and convert standard units .
<http://www.microsoft.com/math/default.mspx>

Free Graph Paper

Graph paper can be extremely useful to help organize and "line up" math problems. Here are two free resources.

GraphTablet (Win) . free program for creating custom graph paper .
<http://www.graphtablet.com/graphtablet.html>

Free Online Graph Paper . free online PDFs of various graph papers. includes an online generator so you can create customized graph paper and print it out . <http://incompetech.com/graphpaper/>

Math Problem Solvers

Finally here are some web resources that students can use to type problems in and get an explanation on how to solve it. If the student has a screen reader then the explanations can be read aloud.

WebMath . online tool that helps students solve math problems, showing step-by-step solutions. general math through calculus . www.webmath.com

Algebra Help . online tool that helps students solve math problems. can be read aloud by screen readers . <http://www.algebrahelp.com/calculators>

With tools like these students start to have their own "math toolbox" to pull tools from as they need them. What math tools have you found useful? How about virtual manipulatives or conversion tools?

- **Re: Math tools** posted by **Ellen** on Mar 19, 2008

What a great set of math resources. I have a lot of tools in reading and writing but struggle with finding good tools for my math tool kit!!

One of my favorites is Ask Dr. Math at Math Forum <http://www.mathforum.org/dr.math/>.

Ellen

- **Re: Math tools** posted by **David Davis** on Mar 20, 2008

Thanks. Great resource and I really like that people can ask questions. Super feature.

- **Re: Math tools** posted by **Katrina** on Mar 20, 2008

Wow! That algebra help site has a lot of great resources and tools. We often get requests for middle school math help. The interactive worksheets with step-by-step help are pretty neat. This will be a nice site to share with families.

Thanks for sharing,
Katrina

- **Re: Math tools** posted by **David Davis** on Mar 20, 2008

It has been a real help to us also. And the fact that the interface is mostly text is great for screen readers and text to speech tools. It also responds well to enlarging the text for students who may have some vision problems. For example, in Firefox you just click Control+ and the text enlarges. So you have support for text to speech as well as magnification.

- **Re: Math tools** posted by **Bridget** on Mar 20, 2008

I just want you to know I already went and checked out all these resources. I've been doing this for a while and they are all new to me. Thanks!!

Bridget

- o **Re: Math tools** posted by **David Davis** on Mar 20, 2008

You're welcome. I hope they end up being useful for you.

- **Music Tools** posted by **David Davis** on Mar 20, 2008

Music and audio is very important today, especially in the peer domain. Pod casts and audio editing are becoming basic skills for many teens and we will cover that in an upcoming post. But making, or composing, music is also big. Just as classrooms and homes have become publishing houses (publishing newsletters, flyers, cards, etc.) they have also become recording studios. Here are some tools to help students become musicians and develop their own sense of music expression.

Music Toolkit (Windows) - Excellent music exploration software and it includes patterning activities that prepare students for loop based music creation. <http://www.2simple.com/music/>

Music Factory (Windows) - An accessible introduction to the concept of loop based music. Includes settings for switch access. <http://www.widgit.com/products/musicfactory/index.htm>

Super Duper Music Looper (Windows) - One of my all time favorite loop based music creation programs. It has the best and easiest interface (in my opinion). Very inexpensive and you can try the online flash demo to get a feel for how to use it. Look for the link to the Flash demo on the right side of the screen.

<http://www.sonycreativesoftware.com/products/showproduct.asp?PID=535>

GarageBand (Macintosh) - Great loop based music creation program and it is free on Macintosh systems. <http://www.apple.com/ilife/garageband/>

Mashup Music Machine - Free online music DJ software that is a lot of fun to use.

<http://www.taketheleadmovie.com/mashup/>

Notepad (Win or Mac) - Free music notation. Students can write standard music on the onscreen "paper" and the program will play the music back using the instruments selected by the student. The notation, or scores, can also be printed out to be played by other musicians. The interface has a steep learning curve. Excellent resource. <http://www.finalemusic.com/notepad/>

Dancing Dots (Windows) - Braille music notation software. Also scans printed music into braille.

<http://www.dancingdots.com/main/index.htm>

TalkingTabs - Audio based music instruction programs. No reading, tactile, or video materials.

<http://www.talkingtabs.com/>

Sample Based Playing - Using small clips of audio, or samples, can be a very effective strategy to enable students to "play" instruments. Here is a resource article. <http://garritan.com/drake.html>

Reason (Win or Mac) - High end digital music creation program. It does not record audio but is great for electronic music creation. <http://www.propellerheads.se/index.cfm>

Does anyone have any other music software resources you like?

□ **Tool Trials** posted by **BJ** on Mar 21, 2008

I apologize upfront if you already answered this, I haven't had time to read every post yet. Although this is a great list of AT (and general edtech) tools and instructional videos, I keep thinking about the cost and about how hard it is to know upfront whether a particular tool will work for a particular child. I know some of these can be tried out at AT demo sites that exist in some of the bigger cities, but, apart from that, I'm wondering how easy it is to get some exposure to some of these before you buy them. I know some companies offer demo programs, usually to just a few of the product's capabilities and some companies will even offer trials of the more expensive pieces of equipment. But I'm wondering about other options.

In another of these online discussions the issue of a national AT re-cycling center came up, but I don't think there is one. Then again, between Craig's list and E-Bay, I guess there are some possibilities for finding used products. But that wouldn't provide the kind of guidance that an AT re-cycling center might. Guess I'm just thinking out loud and wondering if anyone out there has thoughts about trials and re-cycling.

Thanks,
BJ

- **Re: Tool Trials** posted by **Bridget** on Mar 21, 2008

Trial software and demo versions is one of things we've capitalized on as an AT lending center. It saves us money but gives us and our consumers access to trial/demonstration software. Most are usually full version. Some are 15 days, some are 30 days and some are x number of access attempts.

A large number of vendors are willing to let us try things before we buy even if they do not have an advertised trial version or formal demonstration program. It is in their best interest to get their products into users hands to realize the full potential.

Bridget

- **Re: Tool Trials** posted by **David Davis** on Mar 21, 2008

The issues you bring up are very important. I wish I actually had some answers but basically I am also just thinking out loud. For me this is a statewide issue. We have two statewide loan libraries in Florida and if you Google "assistive technology loan library" you will find a wide variety of different types of services available in many states. Maybe there is something in your area; though as you noted often "in the area" can mean a few hundred miles away. And then there is the need for support and guidance.

Something that can be helpful is knowing a bit about basic assistive technology evaluation/assessment procedures. Years ago I used the LifeSpace Access Profile as a learning tool for teachers and parents who were new to assistive technology (that was when it was paper based). It helped people start to get a big picture on the types of issues to consider when making device selections. If you find an assistive technology library or resource close enough to visit, contact them and find out what materials/resources they may have available that could help you learn more in this area.

□ **Audio Tools: text to audio, audio editing, podcasting** posted by **David Davis** on Mar 22, 2008

There is a lot of discussion going around on Universal Design for Learning elements like multiple modes of representation, engagement, and expression; but we still tend to be very much a text

based community. Most of us know how to cut and paste text. How many of us can cut and paste audio? Or cut and paste video? It can be difficult to really implement multiple modes, and teach students how to be fluent in the mode that best works for them, when we are fluent in only one mode. If you looked at the music tools post; did you see "music ed" or did you see one of those multiple modes of engagement and expression? The thing is that if something is not a multiple mode of engagement and expression for each of us personally then we may have a difficult time seeing it as such for others.

Text to audio software provides some really useful tools in the classroom and at home. Let's start with TextAloud [<http://www.nextup.com/>] for Windows. With TextAloud you can type or paste text into the program, click on a button, and save the text as an audio file. That audio file can then be played on an MP3 player, burned to an audio CD, posted on the web, saved on a flash drive, etc. You can quickly make audio books and create separate chapters and sections but just saving the text of each section separately. Plus you can assign different voices to different sections of text, so you can save a summary in one voice, vocabulary in another voice, and main content in another voice.

Here is another possible use for TextAloud. If you have a student who has some problems with speech communication and who does some writing then that student can write in TextAloud, with text to speech to hear what is being written, and then save it as audio. They can "write" a podcast. And in some situations this may be a preferred method because the student can bypass dealing with microphones. They write, listening to what they are writing until they like the results, choose a voice, save it as an audio file, then upload the audio file as a podcast to share in the Internet. One service you may want to look at is Podbean [<http://www.podbean.com/>] . It has a free version and basically all you have to do is create the audio file and upload it. They provide the tools for the podcasting.

Using text to audio tools can help build a collection of audio files. You can also find audio clips online at places like www.freeaudioclips.com . You can even save the text on web pages to audio using tools like ReadingBar for Internet Explorer [<http://www.readplease.com/english/readingbar.php>]. Once you start to build a collection of audio files you will want to be able to edit them, just like editing text. Audacity [<http://audacity.sourceforge.net/>] is a free audio editor for Win and Mac. You can open up audio files and cut, paste, add sound effects, do all sorts of things. This can be highly engaging and expressive. And the final product is also another mode of representation. Really cool!

Here is a collection of flash video tutorials on how to use Audacity to create a podcast [<http://www.how-to-podcast-tutorial.com/17-audacity-tutorial.htm>].

If you have never explored working with audio then let me encourage you to try. It really is a lot of fun and the more you work with audio the more ideas you will have on how to use it and how to help students learn to use audio as well.

□ **Graphics Tools** posted by **David Davis** on Mar 24, 2008

There are some incredible graphics and art software tools available. One of the tricks is to look for the features that enhance performance, and by performance we are talking about extending abilities beyond our own. For example, I don't know color theory very well and would need help coming up with a color palette for a newsletter, poster, scrapbook, etc. But there are lots of tools that help with that. If you use Microsoft Publisher you can choose from a variety of preset color palettes and see what each one looks like. Many scrapbook programs have themes to choose from so the layout and graphics look good. These are all performance supports.

But say you need pick some colors that go together from scratch. Maybe a student is painting a

skateboard, or designing a display for a science activity, or doing a poster for an art class. There is a free color wheel calculator at [http://www.sessions.edu/career_center/design_tools/color_calculator/index.asp#] that is perfect for working through color combinations. You don't have to know color theory to use color like a pro. Another easy way to pick color combinations is to use a paint coordinator program like Color Smart from Behr [<http://www.behr.com/behrx/workbook/index.jsp>]. And there are lots of programs like these free online.

Natural media software programs are great for students who can physically use a pencil/pen type instrument, graphics tables, or mouse/trackball, for drawing. These programs enable students to work in "oils", "pastels", and other media without the mess. It is digital so paper isn't wasted, mistakes are encouraged, and results can be quickly published/shared online using tools like blogs. ArtRage for Win and Mac [<http://www.ambientdesign.com/artrage.html>] is an amazing program that has a free starter version and an inexpensive full version. The starter version is great and provides several digital painting media and the ability to save and print so it is a fully functioning program. Another of my favorites is Sketch Studio for Win [<http://www.sketchandsmudge.com/>]. It has a very simple interface and includes drawing tutorials. Both of these programs are really fun on a large interactive whiteboard. Finger painting was never so cool!

I don't draw well so I tend to finger paint abstract paintings using the above tools. When I do want to create something realistic I use a set of tools that enhance my performance by providing the skills for me. No, this is not cheating, and you can do some amazing things. Take PD Particles for Win as an example [<http://www.thebest3d.com/pdp/index.html>]. All I have to do is move the cursor on the screen and the software paints in the clouds, trees, grass, shrubs, etc. I decide where everything goes, but I don't have to be able to do all the details. Then there is Sketch for Win or Mac [<http://akvis.com/en/sketch/index.php>]. This is more expensive than PD Particles but will take a photograph and convert it to a "pencil" or "pen" drawing, then add color or leave it black and white. You can also do watercolors and pastels. And full image editing programs like Painter Essentials 4 [<http://www.corel.com/servlet/Satellite/us/en/Product/1190317151777>] not only give you a full set of tools for photo editing but also include natural media brushes, converting photos to paintings/drawings, and Image Hose tools that "paint" flowers and other items automatically.

For students who use mouse emulators to control a computer and do not have tools to freely draw curves and other shapes, graphic software with stamps or software that renders can be perfect. Free programs like Tux Paint for Win or Mac [<http://www.tuxpaint.org/>] include hundreds of stamps that can be used to create artwork. Kid Pix [<http://www.learningcompany.com/jump.jsp?itemID=87&itemType=CATEGORY>] continues to be a great program. One program that renders art from choices made by the user is Ultra Fractal for Win [<http://www.ultrafractal.com/index.html>] which can be used to create some incredible fractal artwork. A very sophisticated, professional modeling program for creating landscapes is Bryce for Win or Mac [<http://www.daz3d.com/i.x/software/bryce/>]. Again you don't paint the landscape. The user chooses forms, terrains, skys, etc. and the software renders, or creates, the final scene.

Hopefully this post gives you some ideas on how anyone can do some amazing things with color, graphics, and art. For additional resources on clipart and other media try this site from RMTc. Just scroll down a bit to get to the clip art sites.

<http://www.fsdb.k12.fl.us/rmc/tutorials/multimedia.html>

Last week of the discussion posted by Jackie Hess on Mar 24, 2008

Thank you all for your excellent suggestions and comments thus far. We're entering the final week of our "Building a Technology Toolbox" discussion, so I hope you'll take the opportunity to post

final questions and comments. David Davis is doing an excellent job of leading the effort; he (and we) would love to hear from you!

□ **e-books** posted by **Kathleen McClaskey** on Mar 24, 2008

I just discovered this great discussion and wanted to contribute on the location of e-book sites. In my travels as a professional developer, I discovered that most educators have no idea where you find sites for e-books so I am going to direct you to my website where I have compiled a fairly comprehensive list with an annotation for each site: <http://www.edtech-associates.com/ebooks-etexts-and-readers.htm>

If anyone would like to send me a site that is not included here, please forward it me and I will add it to the list.

I want to note that I think that the Bookshare and Don Johnston Read:OutLoud partnership will move the use of e-books in K-12 to another level on the 08/09 school year. Any thoughts on this?

I have to jump off here to join a conference call with the ISTE SETSIG board. I will check back to this great discussion this week.

- **Re: e-books** posted by **David Davis** on Mar 25, 2008

Thanks for the link. I have already shared it with our network here. I do think the partnership will result in some changes, partly the use of digital text and partly the use of the types of tools in Read:OutLoud. One of the things I have worked on for the past few years is identifying various strategies for using highlighters and that will surface again with the different color highlighters available. However, if digital versions of high stakes tests only offer one color highlighter then there is a problem. In fact, with just about any tool like Read:OutLoud there may need to be a transition process between the types of information organization tools available in it versus the types of tools available on digital high stakes tests.

Something I made to help some of our folks in just the general process of determining if a student needs text to speech support on the IEP is a basic process guide [http://www.efdlrs.net/docs/text_to_speech_determination.pdf]. It is very simple but still useful.

- **Re: e-books** posted by **Ellen** on Mar 25, 2008

Hi David,

I'm having a hard time keeping up with all the information and all the new stuff. Will you post a final resources list at the end of the discussion??

Thanks so much for everything. This has been GREAT!! I thought I knew a lot but I sure got put in my place. I learned about so much new technology and new resources!! Thank you very much everyone for sharing. That's how we find out about all these great resources!!

Ellen

- **Re: e-books** posted by **David Davis** on Mar 25, 2008

Yes, there will be a final document you can download and share with others. I will get a draft up in a couple of days for folks to review.

- **Final resources document** posted by **LM** on Mar 26, 2008

Thank you so much for taking the time to compile a list. I have been trying to do that myself and it's hard to get a list. Sometimes I have found just the web listing and other times there is some commentary. It would be nice to have them grouped by subject or categories. However the final list is configured, thank you for all you have done to help me become more confident in what I am doing, get excited about new possibilities and for the resources.

Thanks to all of those that have shared what they know. I appreciated everything I read! Have a great day.

- **Re: Final resources document** posted by **David Davis** on Mar 26, 2008

I have appreciated everything I have read also. The sharing has been great and I have lots of new ideas and resources from this.

- **Tablet PC** posted by **KSobus** on Mar 25, 2008

My daughter is a bright 7th grader with a significant Learning Disability and Fine Motor Delay with Weak and Grip. She has had repeat Neuropsychological Evaluation with the recommendation to purchase a lap top computer for her to use to assist her at school and home to allow her to demonstrate her true intellectual skill and allow her to stay up with her peers at her advance level. The school has denied this as they feel they do not have to provide the "Cadillac" but can provide the "Chevrolet" an Alpha Smart. She feels this does not allow her to see enough of her work and she wants to see more than 5 to 6 lines at a time. What experience do you have with tablet PC that would allow her to type for some classes but allow her to write for classes such as a science or art class in the future. I am concerned that not all classes are notes able to be typed as some information even in Math for example geometry have shapes. Does anyone have experience with tablet PC and are they durable and reliable for the cost at this time?

- **Re: Tablet PC** posted by **David Davis** on Mar 25, 2008

If the only recommendation in the evaluation is a laptop for the purpose of writing via keyboard rather than handwriting then an AlphaSmart device such as the Dana may be appropriate. It provides more screen room than the original AlphaSmart. However it is not a Chevrolet version of a Cadillac laptop. It is a completely different type of device. A laptop enables a student to use additional software and tools for cognitive support, information organization, color support, web browsing, and communication that an AlphaSmart type device does not offer. An AlphaSmart device like a Neo or Dana is basically a writing device with additional software supports like programs you may find on a Palm device (this includes basic "Office" type software for word processing, spreadsheets, charts, presentations) with the addition of basic text to speech if you add Write OutLoud to Go. Again, those types of supports may be what your daughter needs so don't discount something like a Dana.

http://www.alphasmart.com/k12/K12_Products/dana-w_K12.html

I personally like Tablet PCs but the surface on many of them is slick and may actually make writing harder. It would be something to try out before any purchase.

□ **Tablet PS** posted by **KS** on Mar 26, 2008

Thank you for the suggestion. My Daughter has used a Dana and finds the same as an Alpha Smart. Not enough screen is shown. She is extremely bright and is trying a Dragon version at school but that will not necessarily help in a large college classroom. She really likes to see more than one or two paragraphs at a time when doing a report and needs that feedback with organization. I believe one should plan for the now and have a 5 year plan.

What commercial products can a parent purchase for use at home to help a student organize book reports and future English projects at the high school level. Some of the suggestions given earlier are more for schools.

I am thinking of the skeleton outline that a student would then build on for students with LD who struggle with organization.

• **Re: Tablet PS** posted by **David Davis** on Mar 26, 2008

There really are lots of different ways to go about this. I am going to list a few and hopefully others will list some as well. And I am going to stick to fairly inexpensive stuff or stuff you can get a trial version of to try out first. For myself there is one outline program that I really like working in and it is no longer supported so I can't use it on today's computers. The current version of it, OmniOutliner for Macintosh, is the one I go to now, but the old version, MORE, is best for me. I am sharing this just to say personal preference comes into play on this so the more things you can try out the better the chance of finding a good match.

Sometimes a paper based outline can be useful for planning.

<http://everyschool.org/u/global/rdcurry/bookreportform.htm>

For more paper based organization guides try this.

<http://www.teachervision.fen.com/graphic-organizers/printable/6293.html?s2>

Anything you can download in PDF you should open in Adobe Reader and check to see if you can use the typewriter tool. If you can then you can type on the electronic version of the organizer.

If you use Microsoft Office check the templates there. They have one for reports, speeches, etc.

<http://office.microsoft.com/en-us/templates/CT101439681033.aspx>

If you need a good word processor then OpenOffice is a free suite of programs similar to Microsoft Office. And they should be releasing version 3 in a few months which will be even better.

<http://why.openoffice.org/>

Zoho is a free online suite of programs that include word processing as well as a notebook which is great for organizing information in.

<http://www.zoho.com/>

The Assignment Calculator is a great tool to help organize time and activities for a writing assignment.

<http://www.lib.umn.edu/help/calculator/>

Evernote is an information organizer that is currently being updated for Win, Mac, and online. You may want to sign up for the beta. One of the coolest features is that you can use a web cam or cell phone to take pictures of writing and the software can recognize and search on the text, even hand written stuff.

<http://www.evernote.com/>

My all time favorite tool for critical analysis writing is Rationale. You can download a 30 day trial version.

<http://austhink.com/rationale>

Inspiration is a classic outline/graphic diagram writing support program and it comes with lots of templates. There is a 30 day trial version you can download.

<http://www.inspiration.com/>

Hopefully you and your daughter will find something in this that is useful.

□ **What World of Warcraft Teaches Us** posted by **dshowgirl** on Mar 27, 2008

Blizzard Entertainment's World of Warcraft has over 5 million subscribers worldwide, as of this writing. It's the most successful massively multiplayer game on Earth right now. This well-crafted game has put other games in its genre to shame. Blizzard is a great company, and I might even end up there some day, though this article probably rules out that possibility.

World of Warcraft

Before we get to World of Warcraft though, let's pause to learn from Raph Koster. Raph is no stranger to MMOs, as he was the design force behind Ultima Online and Star Wars Galaxies. He wrote an excellent book called A Theory of Fun that you all should read. I tend to put "fun" in quotes, because it's a pretty nebulous thing that I don't know how to define. Fun is like pornography; I know it when I see it. Raph was brave enough to attempt an explanation of "fun."

Fun is learning in a safe-environment.

Those few words have a lot of implications. Games are mini-worlds where we can try out all sorts of ideas and possibilities, and see what works and what doesn't. Games let us fail with little penalty and then let us try again. Games teach us how to time our jumps, how to aim, how to solve puzzles, and how to manage resources. They teach us strategy: when to attack, and when to avoid a fight. It would be great if they taught a wider range of lessons, but as Raph says, that's up to us game designers to make it happen.

Reflecting on Raph's ideas, I was initially very happy because it explained a lot of things. First, a lot of parents complain about [wow gold](http://www.mmorpg-depot.com) what impact games have on children, but those parents are generally only seeing the trivial surface of the game, rather than what the game is REALLY teaching. Chess appears to be vaguely about [wow gold](http://www.mygamesale.com) war (it has knights and castles and kings), but it's really a game of controlling space, of reading the opponent's mind, of trickery and tactics and so on. Grand Theft Auto appears to be about shooting cops and hookers, but it's actually a game of exploration and freedom. There is value to exploring a virtual world that lets you do things you can't do in the real world. Don't be fooled by the gangster facade.

Even more to Raph's point, I reflected on what Street Fighter taught me: an awful lot. Where to even begin? For starters, there's tactics and strategy. When should you attack and when shouldn't you? You have to understand the critical points in a match, the situations that blow the game wide open. If you are winning, you need to avoid these situations, if you're losing you need to create them. Street Fighter taught me about yomi: knowing the mind of the opponent. You can't just play the odds and do the textbook-correct responses, you have to adapt and anticipate your opponent's moves. The game is merely a medium through which you play against the other <a

<http://www.mmogcart.com>>wow gold player. Some players develop skills in planning, while others develop their skills at improvisation and adapting to any situation they are thrown into. I learned first hand that when all seems lost, if you push, push, push and never give up, it's still possible to win. And yet all that is only a tiny fraction of the lessons I've learned.

Street Fighter is a one-on-one game, so you must rely on http://www.wowgoldvip.com/news_list.asp>WoW gold yourself to win. You can't mill around while your friends do the work for you. Self-reliance and continuous self-improvement is the only successful road. And yet, I also learned that no man is an island. Our tournament structure has always been open to all comers, so that an undiscovered talent from Idaho who trained secretly in his basement can show up to our biggest tournament and win it all, if he has the skill. No need to qualify or be level 60 in an RPG or any of that. And yet, this mythical person never ever materialized in my 15 years of playing the game. The only way to become good is to play against others who are good. It takes a village to make a champion. You can't turn your back on the whole world because you NEED the community to improve. You must learn and train with them. It's pretty hard to do that without making some friends along the way, too. Another very important lesson was that winning at Street Fighter is a meritocracy. Your race doesn't matter. Your religion doesn't matter. The only thing that matters in a tournament is your ability to win. The <http://www.wowgold-sale.com>>wow gold community looks up to those who can win, regardless of ethnicity. There is no substitute for growing up in an environment that cares about results, rather than race. Nothing a teacher or parent could ever say measures up to that life experience about race-relations.

There are also a lot of things us Street Fighter players take for granted. They are truths so self-evident, that we never talk about them because it never even occurs to us that these aren't givens. Here's a few examples:

A fair game does not give <http://www.ige.cc>>wow gold material advantages to one player over the other. A fair game gives each player equal opportunity to bring whatever legal materials he wants (in our case, you can choose any character you want, no need to grind him to level 60. All players have immediate equal access to all characters.) It's ok (and the entire point!) to bring to the game a) more knowledge than your opponent about the nuances of the game, and b) more skill than your opponent.

Time invested should count for nothing in a fair game. It might take me 1 hour to learn a few nuances and gain a certain level of skill and you 1000 hours. The hours don't matter; only the knowledge and skill matter.

I'll say it again: winning is a meritocracy.

Finally, playing a fair game is what it's all about. It would never occur to us to play a game where one player gets <http://www.mmorpg-depot.com/world-of-warcraft-us-pl.asp>>wow power leveling to do 50% more damage because he has a level 60 Chun Li.

Raph's theory is really holding up for me. Street Fighter was so fun for me because there so many things to learn. Looking back, these are life lessons that I couldn't do without. From the strategy of the workplace to reading the mind of others, to a sense of fairness, I am rich with reward from my gaming background.

But lately, Raph's words have really started to scare me. I started to think "What is World of Warcraft teaching all these kids?" I've played the game since the "Friends and Family" alpha test two years ago, and I've read the forums ever since. I have a very good idea what the game is teaching, and it's downright frightening. Unlike the uniformed parents who are afraid that GTA is going to ruin our youth, I'm not afraid of the silly facade of World of Warcraft: I'm afraid of what's it's really all about, <http://www.ige.cc/power/wow-us/index.jsp>>wow power leveling deep down! That's a much more powerful and influencing thing than the mere surface (Street

Fighter isn't about cartoon fighting, that's just a surface, too).

So let's put the cards on the table. Here is what World of Warcraft teaches:

1. Investing a lot of time in something is worth more than actual skill. If you invest more time than someone else, you "deserve" rewards. People who invest less time "do not deserve" rewards. This is an absurd [wow power leveling](http://www.mmogcart.com/power-leveling/power-leveling.jsp) lesson that has no connection to anything I do in the real world. The user interface artist we have at work can create 10 times more value than an artist of average skill, even if the lesser artist works way, way more hours. The same is true of our star programmer. The very idea that time] skill is alien.

2. Time] skill is so fundamentally bad, that I'm still going to go on about it even though I started a new number. The "honor system" in World of Warcraft is a disaster that needs to be exposed for health and safety reasons, if nothing else. This system allows players to work their way through the ranks, starting at rank 0 and maxing out at rank 14. Winning in pvp gives you honor points, [wow power leveling](http://www.power-levels.com) and at the end of each week, your performance is compared to that of other players, and you gain or lose ranks. Now, losing also gives you points, but not as many. The system overwhelming rewards time spent playing, rather than skill.

What is the health and safety danger I spoke of? You might think that if you waltz into this honor system, and perform better (which in this case mainly means you played longer) than everyone else on your entire server, that you would become rank 14. Not by a long shot. Your gains are capped each week, [wow power leveling](http://www.mygamesale.com/power-leveling/) so it will take months and months to gain rank 14. Once you get up to rank 10, you are now competing against people who play the game 10 hours per day and up. There is no limit to how much a person can play, so players are driven to play every waking moment (forget having a job or social life) for fear that if they don't, some OTHER player will do so and be ahead in rank.

The idea that time] skill has gone from a merely fundamentally bad idea, to being actually dangerous, addicting people to the point of fatigue and death. No wonder China's new laws about MMOs are addressing this problem. MMO games must only award players full experience points for the first three hours of each day, half experience for the next two hours, and no experience after five hours. (Logging off for at least 5 hours will reset the system.)

3. Group] Solo. You can forget self-reliance, because you won't get far in World of Warcraft without a big guild. By design, playing alone (even if you are the best player in the world) will get you worse loot than if you always play in 5-man dungeons. If you always play in 5-man dungeons, you'll always get worse loot than if you play in 40-man raids. The player base has been hit over the head for so long [wow power leveling](http://www.wowgoldvip.com/wow-power-leveling.asp) with this notion of 40-man raids, that players are taking that as given. I see so many people who have been fooled into thinking this is justified, that it actually scares me. They think that you shouldn't be allowed to get good loot unless you do something with 39 other people, because that's harder. Coordinating 40 people is hard, but so is winning a Street Fighter tournament, which you have to do by yourself. Some personality types want to do things with 39 other people, but my personality type certainly doesn't. I have to wonder why the 40 person raids have good loot at all. To me, doing something yourself is far more valuable, and a much more interesting test than getting 40 people to coordinate fairly mundane tasks.

Unfortunately, the game offers no difficult solo content leading to good loot. (Note to picky readers: there is some, [wow power leveling](http://www.mmorpg-depot.com) but it's soooo far out of whack with raid rewards that we can safely ignore it, the same way Blizzard does.) The designers must be so extraverted, that they can't fathom the introvert point of view.

4. Group > Solo. I'm not done with this yet. As an introvert, I'm pretty outraged that this game is

marginalizing my entire personality type. The developers repeatedly confirm that 40-man raids deserve the most powerful items. Many of the players are brainwashed by this poor assumption, often saying "It's an MMO, of course you have to group with 40 other people do accomplish anything." Ironically, World of Warcraft was originally founded on exactly the opposite idea. The game started off by saying that EverQuest had that philosophy, and that Warcraft will not. So much for that.

Here's an obvious point that is taken for granted by posters on <http://www.wowatm.com/>, but completely lost on about half the World of Warcraft forums: playing by yourself in MMO is perfectly valid thing to do. You are part of the player-driven economy. You see a living world around you with people doing their business, laughing together, and arguing. You can group with people when you like, or not if you don't feel like it. It's an experience wholly different than a single-player game, and no serious person could think otherwise. The best way to put it is wow gold that it captures the concept of "being alone together" with other people. Going to a movie by yourself so you share the experience with the others in the audience. Going to a study hall where other people are studying, rather than staying in your room alone. There is a very big demand for the ability to "be alone together" in a shared social environment that allows grouping and social interaction, but does not force it by making almost all end-game content in the form of 40-man raids.

Warcraft—maybe accidentally—hit upon this concept, and now seems spit on it and all those who appreciate it. If a Blizzard developer read this, his PR department would say they are not spitting on this play-style, but unfortunately the game design speaks louder than words. "Spit on" is exactly how I feel. But far worse is the idea that millions of children are learning that doing things on your own is bad. Albert Einstein accomplished far more in the field of physics by himself during off-time as a patent clerk than a 40-man raid of so-so physicists ever would. I want little Johnny in Idaho to learn that lesson, but he sure won't find it in World of Warcraft. 40 mundane people with a lot of time would put Albert Einstein to shame any day of the week in this game.

5) Guilds. The tools for creating and maintaining a guild in World of Warcraft seem benevolent enough. After all, they encourage cooperation. Unfortunately, they create a social situation completely alien to me in the real world: a constant "us vs them" mentality. In the real world, I am part of many different communities, and I have varying levels of influence and seniority in each. I'm fairly prominent with Street Fighter players, and have a lot of influence in how national tournaments are run. I'm known by about 0.01% of Magic: the Gathering players, but I do put my toe into their pond a fair amount. Meanwhile, in Warcraft, I live in a world of "guild-only events." You're either with a guild, or you're nobody to them. I can't imagine being in only one IRC (chat) channel at a time, or choosing only one gaming community, yet I can only join one guild at a time. It's a very weird social environment with the same dangers as nationalism and flag-waving.

6) The Terms of Service. The very idea of using the terms of service as the de facto way to enforce a certain player-behavior goes against everything I've learned. A game should be a system of rules [wow power leveling](http://www.powerlevelings.com) that allow the player to explore. If the player finds loopholes, then the game developer should fix them. It's never, ever the player's fault: it's the game developer's fault. People who currently make deals with enemy faction (Horde or Alliance) to trade wins in battleground games are not really at fault. They are playing in a system that forces anyone who wants to be rank 14 to do exactly that. A line in the Terms of Service saying that you shouldn't behave this way changes nothing, and teaches nothing. Or consider the humorous example of Lord Kazzak. He is an "outdoor raid boss." That means he's a big monster that wanders round the world, and you need 40 people to kill him. You don't get to go into your own instanced dungeon to fight your own personal copy of this guy; there is one wandering around the server and you all compete to kill him so you can get his good loot. When Lord Kazzak was added to the game, Blizzard also added a list of Terms of Service rules that would make your head spin. None of these rules were hard-coded; they were all "squishy" rules added on top of the actual game rules. And now for your reading enjoyment, the Lord Kazzak Official Rules of Engagement (I did not make these up; they are real!):

This policy is an extension of the current in-game harassment policies.
PvE Ruleset.

When a group of players has engaged Lord Kazzak, any other players interfering in the encounter may be given a warning, regardless of faction, as in the examples below:

A group of Alliance characters has legitimately engaged Lord Kazzak and a Horde character engages Lord Kazzak as well (Horde player receives a warning).

A group of Horde characters has legitimately engaged Lord Kazzak and a Horde character engages Lord Kazzak as well (the second Horde player receives a warning).

PvP Ruleset.

When a group of players has engaged Lord Kazzak, any same-faction players interfering in the encounter may be given a warning as in the examples below.

All other possibilities to join the battle are allowed.

A group of Alliance characters has legitimately engaged Lord Kazzak and Alliance engages Lord Kazzak as well to disrupt this raid without any PvP solution for the Alliance group (the second Alliance player receives warning).

Here's some more things that will get you banned:

"Playing too much," using a rogue/warlock combo to lure bosses too far from their spawn points, fighting on rooftops, entering unfinished areas (why are they accessible at all?), buying gold or items on eBay (eventually the courts will probably overrule them on this), collaborating with the other faction in battlegrounds, "using terrain exploits to your advantage," player-created casinos (that merely use the in-game "/random" command), player-created bingo games, profanity (even though there is an in-game language filter, to say nothing of free speech), posting on forums about whether a guild is full of Blizzard employees, posting on the forums about why you were banned for posting about something seemingly constructive, advertising a gay and lesbian friendly guild that's a safe haven from the endless use of the words "gay" and "fag" in the general chat channels, having a name such as "JustKidding," "CmdrTaco," "TheAthiest," or "roflcopter"... and a whole lot more things, too.

These examples go on and on, but the basic idea here is that Blizzard treats the players like little children who need a babysitter. There are mountains of rules in the terms of service that tell you that you shouldn't do things that you totally can do in the game if you want. Why they don't just alter their design and code so you can't do these things is beyond me. But this mentality is drilled into the players to the point that they start believing that it's ok. They start believing that it's not ok to experiment, to try out anything the game allows in a non-threatening environment. Well—that's a dangerous thing. That's the point at which the game stops being "fun" by Raph Koster's definition, and it's also the point at which the game can no longer teach. The power of games is that they empower a player to try all the possibilities that he can think of that the game rules allow, not that they have pages of "rules of conduct" that prevent you from creative thinking.

But we all know that World of Warcraft hasn't really stopped teaching. Although it's ability to teach is highly impaired by the entire "Terms of Service" approach, it's still teaching literally millions of children that time spent is more important than ability and that group activities are strictly superior to personal improvements and self-reliance.

This problem is so troubling, that I feel a personal need to take action. The only thing I can think to do, though, is to design an MMO that teaches the right things. Look for that on store shelves in 2012 or so. For my next trick, I will write a proper Terms of Service for an MMO. Stay tuned.

- **Re: What World of Warcraft Teaches Us** posted by **David Davis** on Mar 28, 2008

This one will be fun. I am not so sure that time spent isn't more important than ability. Or, to be more specific, I believe we are in the process of redefining what abilities are important (time spent being an ability in itself) and that goes to the root of part of this entire discussion. My daughter just walked in and we have been talking about this. She finds doing repetitive mundane things comforting so for her time spent can be more important than a skill, depending on the context or circumstance.

World of Warcraft aside for a moment, there is a second generation of digital natives emerging. We addressed some of the skills of the first generation of digital natives by looking at things like text messaging, MySpace, blogs and podcasts, etc. The second generation is growing up in a virtual 3D environment where they are learning to live. Young children now have webkinz pets and epets with immersive 3D apartments to furnish and keep up. JumpStart World is a virtual 3D learning environment for K-2. The WII is hugely popular. Edusim provides free immersive 3D software for interactive whiteboards. Teens can design and ride virtual skateboards on MTV's virtual site. Teens and adults can create new worlds in Second Life. And then there is the progression towards a metaverse based Internet.

For me there are two really big things going on in all of this. The first is a shift to an emphasis on visual spatial brain development. This isn't a planned emphasis but it is happening due to the visual spatial nature of 3D games. It will change how students think, problem solve, and relate to their environment. The second is the psychology. I currently have three avatars in Second Life and each one has a different personality. It is kind of like a writer creating different characters, except in this case you actually get to interact with others as that character. I can't imagine what it will be like to grow up with this type of capability, but we have students now who are doing just that.

As far as games are concerned, the two most interesting to me are SPORE and Portal. Portal is currently out and really pushes the envelope of visual spatial skill development. SPORE is coming out this fall and offers incredible opportunities for learning, writing, and story telling within the science curriculum.

I hope you are able to complete an MMO. It will be great to see what you develop.

- o **Re: What World of Warcraft Teaches Us** posted by **AmyM** on Mar 28, 2008

For kid and adult friendly fun online, try neopets.com. It has battles and competitions, you can own and run a store, you can collect stuff in your gallery, go shopping in other's stores, be in a guild (club), and there are a lot of games that can be played inside. It is a whole virtual world. Games for young and old!

And if you really want the ultimate in my opinion, in virtual SIMS, try SIMS2. I am addicted to it, you can add stuff to suit your own fancy, and even on basic levels, it is great about ng animals on it. My 14 year old loves to design the houses. My 16 year old loves to play with the teens' families and the college kids. I like to play the Open For Business scenario, and be my own boss! It can suit about anyone. If you like the dark side, there asre aliens and vampires, the grim reaper, and various ways to kill off your sims. Or you can try to make them rise to the top of life, and actually play the game. Or, as my son does, he builds houses and decorates them. He likes building castles.

Just some more ideas on the comptuer that can teach you something!

Amy

- **Re: What World of Warcraft Teaches Us** posted by **David Davis** on Mar 28, 2008

Thanks, those are great resources and examples of using these types of programs. You may want to look at SPORE when it comes out. It is the "next big thing" from Will Wright, the creator of The Sims.

□ **Thank YOU** posted by **LM** on Mar 28, 2008

Hi All,

Thank you for inspiring me, helping me clarify what I already am doing is on the right path, providing me with resources and for the intelligent and thoughtful comments. This journey has been a pleasure to be a participant. Hope to catch you again somewhere along the road. Take care!

□ **Here is the handout: thanks for all the incredible discussions!** posted by **David Davis** on Mar 31, 2008

Folks,

Ya'll have been great and the discussions have been awesome. You can download the Toolkit in WORD or PDF format at:

<http://www.efdlrs.net/docs/fctdToolkit.doc>

<http://www.efdlrs.net/docs/fctdToolkit.pdf>

Thanks for all the resources and tools.

David

- **Re: Here is the handout: thanks for all the incredible discussions!** posted by **Ron L** on Mar 31, 2008

David,

What an incredible example of collaborative learning!! I can't thank you enough. Can we distribute the Toolkit broadly or are there intellectual property rights to consider? For my part, I'd of course provide attribution.

Again, thanks to you and to the others who provided these valuable suggestions. Also thanks to the Family Center! This was one of your all-time best!

- **Re: Here is the handout: thanks for all the incredible discussions!** posted by **David Davis** on Mar 31, 2008

We did this to pull together and share information so please feel free to distribute and share it. And please let me know if you find any typos or errors. I will fix them in the online versions.

- **Re: Here is the handout: thanks for all the incredible discussions!** posted by **Ellen** on Mar 31, 2008

THANK YOU THANK YOU THANK YOU!!

My head is swimming with all the new resources to check out and explore!! I had initially dismissed the virtual world discussion but really appreciated the conversation. It has me thinking!!

again..

thanks everyone for some great conversation.

I wish I had been able to participate more.. Spring break, IEP's, you know the schpeil!!

Ellen

- **Re: Here is the handout: thanks for all the incredible discussions!** posted by **David Davis** on Mar 31, 2008

You are really welcome, and to everyone my thanks with Ellen for all the conversation.

- **Thanks for creating a terrific resource!** posted by **Jackie Hess** on Mar 31, 2008

The Family Center on Technology and Disability thanks David Davis for his exemplary service as online discussion moderator this month. He has set the moderator bar at a new high!

We also thank all of you who have participated and offered thoughtful comments, interesting questions, and valuable resources. (David's organization of the resources is truly "valued added.")

In addition to being available on David's website, the Family Center will make the Performance Technology Toolkit available on our website homepage. Of course, this month's discussion will remain accessible in our online discussion archive as well. Please feel free to distribute the resource, either electronically or in print, to your respective networks.

These discussions are funded by the U.S. Department of Education's Office of Special Education Programs.

We hope to see you in May when we'll be hosting another discussion.

Resources

Technology Tools

http://www.paec.org/fdlrweb/resourcekit/start_here.html

A collection of technology tools in a package known as the Incredible Teacher Resource Kit. This webpage includes links many Internet links to online resources and vendor links including links for free and demo versions of software.

The Incredible Teacher Resource Kit: Great Ideas for the Classroom

<http://www.paec.org/fdlrstech/handouts.htm>

This site is a collection of handouts and Power Point resources. In particular check out the Math Toolbox Handout in the form of a PDF.

David's Desk

<http://www.paec.org/david/>

An older website created by David Davis with links to a variety of instructional materials.

EdTech Solutions: Teaching Every Student

<http://teachingeverystudent.blogspot.com/2007/06/free-technology-toolkit-for-udl-in-all.html>

This site features a BLOG page (online web journal) with a conversation centered on Universal Design for Learning and free technology tools divided by category.

Toolkits for the consideration and evaluation of Assistive Technology

The University of Kentucky Assistive Technology Toolkit

<http://serc.gws.uky.edu/www/ukatii/>

The UKAT Toolkit provides users with a variety of assistive technology paperwork tools to help with the consideration process.

Tools for Evaluation

<http://www.ldonline.org/article/6240>

An article by LD Online with links to tools for evaluation of assistive technology.

Journal Articles

Constructing an Assistive Technology Toolkit for Young Children

<http://jset.unlv.edu/20/JSETv21n4.pdf> (pg 18)

An article in ERIC published by the Technology and Media Division of the Council for Exceptional Children. The article describes meeting the needs of young children using an assistive technology toolkit approach.