Resistance is Futile...
Assistive Technology and Students with Learning Disabilities

By Marlene McIntosh

Assistive technology (AT) can help students with learning disabilities to read, write and spell. Research shows that assistive technology can not only help these students in their academic pursuits, it can be a lifeline for them to obtain and maintain gainful employment (Hasselbring & Bausch, 2005). There are many teachers who have tried to use assistive technology with students with learning disabilities (LD), yet some of these students did not want – or even refused – to use it. Other students used the technology for a while; then they stopped using it altogether. This often causes some to believe that assistive technology is neither worth the cost nor the effort. However, research shows that assistive technology can be a lifeline for many students with LD. It can mean the difference between success and failure. So if this technology is so great, why do students resist using it?

I have worked with adults with learning disabilities for about 10 years in a Transition to College Program (TCPG) at Cambrian College. Students come to our program via various pathways. Some have graduated from high school but have never written tests, written essays, read textbooks, nor completed work independently; they feel under-prepared and not ready for postsecondary education. Others have dropped out of high school and want to return to further their education. A third group of students with LD have tried postsecondary education but were unable to complete it successfully. In our TCPG program, we work with these students and teach them how to use learning strategies and assistive technology in combination with school subjects, such as English and math. I will share some of my experiences with you and offer suggestions that I hope will be helpful to, not only foster student success, but to help you to convince students to use assistive technology – and keep using it!

REASONS WHY STUDENTS RESIST

Training

> "I hated the stuff. Some guy came in and sat in front of a computer for an hour clicking buttons and talking. Then, he left and there I was – alone with my computer. I had no clue what to do."
>
> *Brian, a student*

When I speak to students with LD who come to our college, many express their dislike of assistive technology. They dislike the voices in the AT programs and don't like to use the software. One of the key reasons is because the students were not trained properly. Most tell me that someone came to train them once for about an hour. Then, they were left on their own to use the program. One can only surmise that since students with LD have difficulty learning in the first place, a short training session is not a great idea. The students told me that they experienced more frustration getting the computer and software to work properly, or they didn't know what to do with it, so they stopped using it altogether.

Differences

> "I was told that I was stupid for so long that I started to believe it. I couldn't read without my computer, and there was no way I was going to use it when everyone was watching. I had to go to the back of the classroom to use the computer. It was humiliating. So I didn't use it."
>
> *Stewart, a student*

Another reason why students don't want to use assistive technology is because of the perception of differences. Students often do not want to stand out or appear different from their peers. This is especially true in high school where teenagers want to belong – they want to be part of a group. Individuality is frowned upon; uniqueness is avoided. Fitting in, belonging to cliques, and being one of the crowd are some of the things that teenagers want. So, if students with LD are using specialized computers or specialized software, they stand out. They are different.

Cheating

> "When I read with the computer, it does the reading for me. All I have to do is sit back and listen. Is that really reading? I'd like to be able to sit and read on my own. I do it, but I have to pick easy books to read otherwise I can't figure out what it means."
>
> *Patricia, a student*

Other students think that using a computer or AT means they are cheating. This, I believe, is because students with LD want to do things like everyone else. They want to be able to read with their eyes and write with their hands. They feel that reading with their ears and writing with their voice is not the same as what everyone else does, and they want to be like everyone else. This attitude also stems from what parents believe as well. I don't know how many times that I've heard this phrase from parents, "He'll get lazy if he reads with the computer." I believe, generally, that parents want their children to be able to do things as others do. Using a computer and specialized programs add another complicated factor to an already complicated learning difficulty. No one wants their child to have to struggle. Using a computer and spending extra time is another complication for parents who are already struggling trying to navigate the school system as it is. Thus, parents may try to discourage their children from doing things differently, and this attitude leads children to believe that unless they are able to read and write like other children do, they are cheating.

Amount of Effort

> "I'm articulate. I like school; I just don't like school work. I mean I love learning; I love reading and being in classes. I just hate writing and trying to organize myself and writing papers and stuff" (Higgins, Raskind, Goldberg, & Herman, 2002, p. 13).

Students with LD who use technology have a lot of work to do. The computer does NOT speed up the process. In fact, students with LD have to work much harder to complete assignments as do their non-disabled peers. The computer may allow them to complete the work, but it also adds time. Let me give you an example. A student with LD has a writing assignment. The student writes the assignment on paper or types it and gives it to me. I circle the errors, hand the paper back to the student, and the student rewrites or types it and gives it back to me. I check it again, and the student fixes it again. Voila! It's done. However, if students use assistive technology, here's how I get them to do their written assignment. The student types the assignment. The student then starts a program – let's say textHELP Read & Write. The student runs the spell check and corrects as many errors as he or she can. Then, the student reads and listens to each sentence to check for various errors: subject and verb agreement, fragments and run-ons, missing words, missing suffixes and prefixes, etc. Now, the student checks for homonym errors. As the student is working, the student will highlight any word that

he or she doesn't know how to fix. After that, the student will listen and read the entire document again to listen for flow and meaning. When this process is complete, the student hands the document to me for final proofreading. This entire process is quite lengthy, but it allows the student to learn to become a much more independent writer. However, it is a lot of work for the student – as you can see. Since the workload increases, some students feel that it's not worth the effort – the reward, the marks, nor the praise. They aren't going to use technology.

Negative Experiences

> "I think as I indicated to you, the most difficult time was fourth through eighth grade because the kids made fun of me" (Higgins, Raskind, Goldberg, & Herman, 2002, p. 7).

I have also noticed that some students refused to use assistive technology because of negative experiences they had in the past. For example, I have tried to get students to train to use Dragon NaturallySpeaking (voice recognition software). Some of my students have broken down and cried in my office because I was asking them to read aloud during the training phase. They spoke about painful experiences that they had as a child; they had been laughed at in class because they had to read out loud. Now, I was asking them to repeat this potentially embarrassing procedure again. I could feel their pain. It's difficult to get students to try something new if they are afraid of repercussions.

Stages of Grief

> "I want to be like everyone else. Why can't I read like my friends do? Why does this kind of thing have to happen to me? I'm so tired of being teased and struggling. I'm ready to give up."
>
> Tara, a student

When people find out they have a disability, they often go through similar stages of grief as one does when someone close to them dies: denial, anger, bargaining, depression and acceptance. They mourn the loss of "normalcy" and also deal with the impact of education on someone who has a learning disability. Psychologists suggest that when someone with a learning disability finally comes to terms with their disability, they enter into the stage of acceptance. They are then ready to learn how to cope with their disability, and only then can they open themselves up to using technology or any other compensatory strategies (Higgins, Raskind, Goldberg, & Herman, 2002). Now, if you look at this in the context of families coming to terms with a disability, you may often see the father at one stage, the mother at another and the child at still another stage! This can lead to conflict in the household as the family tries to determine how to "solve the problem" using the resources they have available to them. Introducing assistive technology at this stage can lead to more conflicts as the family works through the grieving process.

Some students with LD are in denial about their learning difficulties, as mentioned above. They believe that the marks that they are getting in school are ok; they don't think that they have a problem. Often, these students will think that they're "better" than other students with LD. Because of these beliefs, these students will not use technology because they don't think they need it, whether they do or not. "I'm ok with a 65. There's nothing wrong with that."

SUGGESTIONS

I am going to approach this section by targeting three separate groups: students, parents and educators.

Students

> "I wrote my test using the software at school, and I got an A! I'm so excited! I've never gotten an A before!"
>
> Theresa, a student

Students must see the value that assistive technology makes in order for them to buy into its use. We can show its value to students with LD in several ways; here are some suggestions.

One – Show the student what difference AT makes. Use the student's current test or assignment marks. Teach them how to use the technology and compare the result with the next test or assignment mark. Did it improve? Why? Why not? What could the student do differently next time? Was it the right technology? Etc. This collaborative approach allows students to be part of the process, and because of this, they are more likely to try or continue to use technology because they will see the difference it makes.

Two – Combine the technology with a learning strategy that is suited for it. This integration makes the technology a useful and more effective tool – not just a computer sitting in the back of the classroom. This means more work upfront, but it will pay off when the student becomes more independent. For example, if a student is using Kurzweil 3000 for reading a textbook, the student will need to know what to study from the textbook. I will teach the student how to recognize what is important, and we'll use the highlighting feature to highlight that information. Then, the student will extract those highlights and study that information. The strategy that I might use for this is SQ3R (which can be mastered in grade 3) (Gilbert & Gilbert, 1992). Since the student can use the technology for more than just "reading," Kurzweil 3000 becomes a more valuable tool. When students with LD experience success and develop more independence, they are more likely to continue to use assistive technology.

Three – Normalize the technology. In our classroom, everyone learns how to use Kurzweil 3000. Everyone learns how to use Inspiration; everyone learns how to use textHELP Read & Write. We give everyone access to the tools. Since the technology is available to everyone, then no one person stands out. Students who don't need it, tend not to use it – after all, I mentioned before that it is more work to use it than not. Students who need it can use it and not stand out.

Four – Knowledge is power. Students with LD need to educate others about their LD, but they need to learn about it first. Teach all students in your class about learning disabilities. Most of my students were in shock to discover that students with LD have average to above average intelligence. "No – I'm not dumb. I have a learning disability that affects my ability to read. That's why I use Kurzweil 3000. It speeds up reading for me." This knowledge can help students to understand that they are not cheating. Many Learning Disability Associations have workshops that they offer to facilitate this training.

Parents

> "It's not that I don't want my son to do well. Lord knows that we've struggled together for a few years now. I just don't want him to have to rely on the computer. Isn't there anything else we can do? What if he studied more?"
>
> Frank, a parent

Parents may have difficulty understanding and accepting the fact that their children have a learning disability. This may result in parents rushing to the school and demanding that their children get computers and software and calculators and extra time and a reader and a scribe and… Again, the feelings that parents experience when coming to terms with the fact that their children have a learning disability are complicated. Parents may feel at a loss. What can they do to help/protect their child? They want something done NOW!

Other parents feel that if their children would just try harder, they would be ok. They are afraid that their children will become dependent on technology and will not be able to do "normal" things, like reading with their eyes or writing with a pen. They want their children to be like everyone else. They may want someone to blame because if their child "was taught properly" all of this would go away.

I believe that one way that we can help parents is by educating them. What is a learning disability? What tools are out there? What can they try? Who can they go to for help? Again, the Learning Disability Association is a great place to start. Also, there are assistive technology professionals in disability offices in postsecondary institutions that have resources and knowledge that they are more than willing to share.

Educators

> "Successful AT programs utilize preassessment, collaborative problem-solving, effective implementation, and systemic evaluation" (Marino, Marino, & Shaw, 2006, p.18).

All students with LD will not benefit by using the same software. This means that not all students with LD will benefit from using Premier Suites or Kurzweil 3000. It means that there must be several tools that students can have access to and a trained professional to help to determine the best fit. It means trial and error. It means changing software and tools as children with LD progress through the system. There are several tools that may be of use to determine which technology is useful in certain situations. One example of a good assessment tool is on the Special Education Technology – BC Website (SETBC): Making it Work: Effective Implementation of Assistive Technology Guide. Another is the Functional Evaluation for Assistive Technology tool (The FEAT). These tools give educators a systematic approach when choosing and evaluating tools that work – not just using what they have access to in their schools.

Here is another interesting observation from research. Students with LD are less likely to use technology if they sense that their teacher has a negative attitude towards its use (Levin & Wadmany, 2008). Often, out of a desire to help, we say things like "OK John, see if you can read it this time without the computer." What does that say to a child who struggles with reading and would do it without a computer if he could in the first place? It says - you aren't trying hard enough. I know that isn't what the teacher means, but that's how students may interpret that statement.

Also, general education teachers often rely on the special education professionals to provide training and support of classroom materials and technology. Today, we can't rely on one or two teachers in a school to take care of all students with LD. If every teacher uses technology, it is more likely that their students will use it. Of course, this requires teachers to get training, so they can use the software as well. One of the great things is that most of the assistive technology software today works with regular products like Microsoft Office and Corel WordPerfect. This means that if teachers type an assignment or test, there is no extra work. The student simply opens the file in the program and carries on from there – assuming the student knows how to use the software of course.

Where can educators get training? Most AT software manufacturers offer training. As well, there are many consultants who provide training. There are also training guides for many of the software programs to allow those who do not have access to training or who do not want to give up a day for training to learn on their own. Many AT software manufacturers have built in tutorials to their software or offer those online. My point is that the training opportunities are available.

How much training is required? Does the teacher need to become the expert? In a perfect world, I would say yes, but I'm trying to be realistic. Teachers should be familiar enough with the software to start it and do some minor trouble shooting, "I can't remember how to highlight," or "How do I start the spell check?" That amount of knowledge is sufficient to start. The more that students and teachers use the software together, the more "natural" it becomes. It no longer is an oddity; it becomes part of the process. In addition, both students and teachers will learn together and become experts.

Finally, we can try to understand what school is like for our students who have learning disabilities. I think this is the best thing that we can do for them. Kindness, empathy and time are things that we can give to our students who struggle. Reward the effort, not just the end product, but be truthful – don't give praise unless it's due.

CONCLUSION

Students with learning disabilities may require the use of assistive technology in order to allow them to become more independent and successful learners. However, students, parents and educators can be the actual hindrance in the implementation and continued use of technology. I'm hoping that this article has given you some useful suggestions that can help. We can't give up. Together, we all win!

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