



School Speech Language and OT Services

Technology to Support Learning in the Classroom

Students with learning issues can benefit from the introduction of technology into the classroom. By using tools that play to their strengths and work around challenges, we can work towards leveling the playing field with classroom peers. Increased use of assistive technology devices during cooperative learning activities can enhance the participation of students with learning disabilities by circumventing specific disability related barriers. This leads to more frequent assignment completion and increased motivation.

Assistive technology (AT) is just that– assistive. It does not take away the need for remedial instruction aimed at alleviating deficits . For example, a student could be in a reading skills group and also listening to audio books for classroom assignments.

Consider the goal of your teaching task when deciding if AT use is appropriate.

- Students with fine motor challenges can benefit from learning to type. The goal of typing is to reduce the amount of mental energy required to produce legible work, and increase the child's ability to focus on the content of their writing. When the task involves minimal printing (e.g. generating a list, writing in an agenda) continue to have your student print. When more output is required (writing a story, a science report etc.) then allowing your student to type will allow them to show you their best work.
- When a student struggles decoding text, there is little mental energy left for comprehension. Auditory books or software allowing websites to be read, are an effective use of AT when the goal of the reading task is to gain knowledge, start discussions about ideas, vocabulary development, and/or understanding the big picture of a story. Continue to work with your student on decoding rules and activities to strengthen their ability to read.

Fairness does not mean giving everyone the same thing, fairness means that everyone gets what he or she needs.

Richard Lavoie



Writing tasks

Did you know that writing tasks are amongst the most complex neurological tasks that we ask of students? In order to write a passage you need to be able to:

- Know how to spell words
- Know how to form letters, including which ones are above the line and which ones dip below
- Know how to space between letters and between words
- Have an understanding of grammar so that your sentences make sense
- Have a large enough vocabulary to make your writing interesting
- Know how to punctuate your sentences

And while your brain is figuring all that out, you are supposed to have something left over for creativity!

Consider speech to text....

Dictation can:

- ♦ allow create juices to flow— when you are not worried about how to form letters and how to spell words, you have more brain power to write a story with all parts included
- ♦ decrease anxiety during writing tasks (related to spelling errors, neatness of their printing, and the readability of their work)
- ♦ increase independence with writing tasks in the classroom.
- ♦ allow students with motor skills issues to write more comfortably and accurately (this includes students who have trouble typing on a keyboard)
- ♦ Allow those students who think faster than they can write by hand or type on a keyboard to more easily get all their thoughts into words.

Learning to dictate takes practice—your students will be frustrated if asked to dictate academic work without instruction and practice to master the skill...

Basics include:

- ♦ Speak clearly (like a newscaster not a robot)
- ♦ Use a steady pace
- ♦ If you have to think about what you are going to say, wait in silence, don't use fillers
- ♦ Use headphones and a mic. Turn off the mic when not in use

Articulation errors don't mean that speech to text software is out of the question....

The most full-featured dictation technology is found in software programs for desktop and laptop computers. These programs can adapt to how a child speaks, which makes them more accurate the more a child uses them. Examples of dictation software include Dragon for PC, Dragon for Mac and WordQ+SpeakQ.

Consider typing...

Generally speaking, typing is faster and more efficient than writing. It provides an alternative way to get ideas down on paper for all students, including those who may struggle with components of written output including: grasp, letter formation, legibility, motor planning, coordination, spelling, and page organization.

Typing benefits students with motor challenges. By reducing the mental energy required to produce legible work, the focus can turn to the content of the writing...

Does keyboarding mean we are giving up on writing?

Absolutely not!

Think of printing and typing developing in parallel—similar to a child learning to ride a scooter and a bike. The rules about cars, helmets and stop signs are the same and both are means of transportation that children enjoy. The effort and balance required might differ.

Typing and writing are both socially acceptable ways to produce written work. Children need to know how to do both. Although computers are widely accepted in our society, it is not always possible, desirable or convenient to use a computer. Children will always need to be able to write their names, their homework lists or reminder notes with some proficiency. They do not, however, need to produce every science project or English essay in neatly formed handwriting. A healthy balance needs to be achieved between the content that is to be learned and the written product that results. For example, if the goal is to improve handwriting then the product should be handwritten, if the goal is to display the learning that has been mastered, there is no necessity for it to be handwritten.

Practice is important!

We have to practice a new skill many times, before it will start to feel familiar... Eventually with lots of practice, a pattern will develop in the brain and this skill will become more and more firmly established in our memories.

It isn't until after lots of repetition that the skill becomes automatic. Think....you wouldn't expect a person to learn to play a new instrument in just a few sessions, it requires daily practice. Typing is the same. If we want students to be successful, they need that practice time.

Watch this 5 min video titled *How to practice effectively– for just about anything*

<https://www.youtube.com/watch?v=f2O6mQkFiiw>

Beyond typing and dictation....

- ◆ [Worksheet completion apps](#) for tablets (e.g. snaptypes)
- ◆ [Letter formation apps](#) (e.g. writing wizard)
- ◆ [Text to speech software](#) supports students with reading problems—it allows them to ‘read’ what their peers are reading.
- ◆ [Graphic organizers](#) within software packages allows for visual organization support— a key for students with language impairment, or executive functioning disorders.
- ◆ [Word prediction software](#) can help improve grammar and writing style as well as support weak spellers

Talking to families about AT for their child.

Remind families that:

- ◆ research studies have demonstrated the efficacy of AT for individuals with learning disabilities
- ◆ AT doesn’t cure or eliminate learning difficulties, but it can help your child reach her potential because it allows her to capitalize on her strengths and bypass areas of difficulty
- ◆ AT can increase a child’s self-reliance and sense of independence. This may decrease the parents’ need to be beside their child for every assignment that comes home
- ◆ it is no different than using eyeglasses or hearing aid to support a weakness
- ◆ they are using AT every time their phone predicts words as they text

[Technology is always changing—](#)

if you had a bad experience a few years ago with one student...

[Be willing to try again!](#)