

## Building reading skills through assistive technology

Narrator: Reading draws on many different cognitive processes at the same time... decoding words, understanding what they mean, creating mental pictures, making inferences and many more.

This can be a difficult task for students with learning disabilities, or, LDs. Many of them have trouble identifying written words, which can lead to difficulties with other processes, like writing, spelling, and comprehension.

To see how assistive technology, or AT, can help students with LDs, we visited a demonstration school in Ontario. Demonstration schools provide programs for students with special education needs, who require intensive supports, such as students with severe LDs. Typically, students attend a demonstration school for 1 year and then return to their home boards. Here, AT is an important tool that helps students improve their reading skills, and their chances of a smooth transition back into high school.

Bonnie Grace: Their goal is to be able to read when they leave here, and we've had all of our students improve in their reading scores. So, between ourselves and the teachers and between a computer program, they get lots of opportunity to practice their reading.

Narrator: Assistive technology has proved to benefit both the students and the teachers in their learning processes.

Jake Lemieux: For students, I think the three big buzz words that's sort of connected and that's - enablement, or enabling, empowerment and access. So that's really what assistive tech does here for these students, it allows them to be able to access and participate in the curriculum, allows, evens the playfield if you be. It just allows them to communicate and get their ideas down.

Lowell: It has made it easier and faster than non-assistive technology.

Narrator: Assistive technology, like Google Read & Write, offers a variety of options that can support students with their reading in many different ways.

Lori French: You can use it to read tasks, kids can use the speech input to dictate their answers, they can use the dictionary, either picture or word to look up words and create study notes even. It can read pdf files to the kids or word documents. The assistive technology can look at websites and read websites, and define words on websites so there's a whole bunch of things that they can do. But also, I think it's important for the kids to see us modelling. So, if we're asking the kids to dictate, we model that and we've done a good job with that this year. So, we have our headset on at the beginning of a lesson and we are dictating answers if we're correcting

them. So, the kids see adults using it and it just becomes something they do and a normal thing.

Narrator: For the students and teachers at this school, Google Read & Write has proven to be the best AT that suits their needs.

Lori French: It's easy to use, I think. I think you can do a lot with it. A benefit for home boards, the student's regular school is that it's also available at home, which some other assistive technology is not. So, they get all this great technology at school, but when they go to do their homework, nothing is available for support. With Google Read & Write, you can take it - it's there, it's web-based, so as long as you have an internet connection, you're good to go. It's easy to organize too in their drives, it's easy to keep the kids organized, which is definitely an area of weakness for our students. And I think it's pretty intuitive, a lot of the kids have just discovered things on their own.

Jake Lemieux: I think it carries less stigma sometimes than other assistive technology. Google is considered - it's everywhere, a lot of able-bodied students and typical students will use Google so it doesn't carry the stigma that is sometimes associated with the other AT. It's affordable too, it's a lot cheaper than other options, so if parents want to purchase it at home, it's generally remarkably cheaper. It also too encompasses a lot of different features that are available with other AT, so it has speech to text, text to speech, it has voice notes that are available, it has highlighting features. It will read screenshot readers that will read a whole variety of different texts. I think that's really attractive to students as opposed to having to use at times multiple assistive techs, it's comprehensive.

Craig Quenneville: Google Read & Write, I can use it to teach the concepts to the students, I can use it for them to answer questions, so that's the comprehension of the content. I can use it to assess their knowledge, as I was doing today with the geography test. I have used it for textbook. For example, in math, when we we're covering our data management unit, it's very language based, there's a lot of words, and math is supposed to be universal, so it's one of those units where if the student isn't a good reader, they struggle with the reading itself, which becomes a barrier to the math.

Narrator: For some teachers, using assistive technology was a learning curve.

Lori French: So it was brand new to me. We had some initial training at the beginning of the year, just kind of showing us an overview of it, I would say, but then a lot of has been figuring things out as we go, as well as having teaching partners, teaching partners that use it. We're able to share knowledge amongst one another, so you can learn that way. Some of it too has been the kids discovering things, which is great because then it gives them an opportunity to feel like they're the leader in an area in which our students typically have not felt before.

Craig Quenneville: you have to go into with a mindset of “you’re gonna make a mistake”. And, when that mistake happens, hopefully there’s someone else who can tell you how to do it right. And, so far I’ve found that 100 per cent of the time, that’s been the case.

Narrator: Assistive technology, like Google Read & Write, has boosted student confidence, and has helped many students with LDs look towards their future careers.

Lori French: I’d say they’re really proud of their work. I think their experiences before, they would not be willing to share that with anyone, or covering it up, not wanting to display it in class. Now, however, they’re very proud of it, they want to show it off, they want it posted, they want to bring it home to their parents and I think that’s brand new. I don’t think our parents have received a lot of work at home. So, self-esteem improves, I think their own confidence. Most of ours, have talked about now building for the future.

Chase: It took a lot of stress out of my learning too because I don’t have to keep going back and making sure I spelled everything right, words are in the right place..

Bonnie Grace: So, a lot of the students are now considering a future of college. We’ve even had some talk about university but college right now seems to be at the forefront of a lot of our student’s minds, at least the opportunity to go, where it wasn’t necessarily before. And we know that a lot of the colleges offer assistive technology for the students, as long as they can provide documentation that they will get the support. And, we did do a class trip to the local college and went through all of the assistive technology and the support that they could get, then that also assisted them, the students to realize, wow, maybe I can go here.

Narrator: It is important to remember that while AT can offer support to students in many ways, it does not provide an unfair advantage to students.

Jake Lemieux: There’s sometimes a misconception among teachers, among other teachers and among other students, when they see a child using technology, that they have a leg up on others. And that’s certainly not the case. It doesn’t do the work for them. When you’re using technology, there’s still a learning curve that comes with utilizing that technology. So there’s work to be done with students using that technology, and even when they’re able to use it and utilize efficiently it doesn’t make their work better. They still have to come up with the concepts and the ideas. They still have to put it down and actually execute. So that’s sometimes the misconception I hear with technology, that kids that use technology, or assistive technology in particular, have an advantage over the other students and that’s certainly not the case, we’re just evening the playing field.

Narrator: Assistive technology can be beneficial not only for students with LDs, but for all learners.

Jake Lemieux: There's a whole bunch of different features that are beneficial to a whole variety of learners. I think what you'll find, is that when it comes to AT especially, at least we find, students will use what they need. So by providing that to an entire classroom per se, one of the benefits of doing that is - 1. Eliminate the stigma, so we're not just providing it for students with learning disabilities, we're providing for all learners. And what you find too, as well, is students that need or really need certain features, say for instance the speech to text feature will utilize that. The students that don't, that are capable of writing, will use other features that are more pertinent.

Bonnie Grace: I think if students can use the technology, they will become independent and they will meet with success. If they will try the technology and have the growth mindset, and just keep trying the technology and find out what works. I think it's the way that we're moving towards, the technology, by having access for everybody.

Narrator: Assistive technology is essential to the teaching process at this demonstration school, but it is available and can be used in similarly beneficial ways at school boards across the province. Learning how to use AT, with programs like Google Read & Write, increases students' self-esteem, and improves their reading skills, which will lead them to be successful further in their future.

For more information, visit our website at [LDatschool.ca](http://LDatschool.ca)