

How can I help students achieve success in their written work through the use of assistive technology?

Tracy McConnell



Biography

Tracy McConnell is currently a full-time Learning Resource Teacher (L.R.T.) at two rural schools in the villages of Windham Centre and Teeterville. In this position, she spends 2 ½ days a week at each school.

Abstract

This article is about an attempt to help students achieve success in their written work through the use of assistive technology. The software that I used was: Kurzweil and Readplease (text to speech software), All the Right Type, Co:Writer and SMART Ideas.

How it all began

In the fall of 2004 I assisted in Mind Shift (an educational change fund project for the GEDSB), one of the focuses of this conference was to teach students with learning disabilities to use assistive technology. I was keen to begin implementing some of the strategies that I had learned. Thankfully, both of my schools had purchased Kurzweil (text to speech software) and one of my students from Windham had attended this conference so we were ready to go. Not long after, in December there was a request from Peggy Blair asking for teachers who were interested in conducting some Action Research on Balanced Literacy. I jumped at the opportunity.

Defining the question

As a full-time L.R.T. spending approximately half of my time at Teeterville (with primary and junior students) and the other half at Windham (with intermediate students) I found myself wondering how I could effectively service students and help them achieve the highest literacy level possible. My question then became “how can I help students achieve success in their written work through the use of assistive technology?”

Philosophy

According to Allington and Cunningham (1999) in their book *Classrooms that Work: They Can All Read and Write*, “What is common among the very best remedial and special education programs is that children spend most of their time actually reading and writing in a way that supports classroom success.” There appears to be differing opinions on the best way to assist students to achieve success. Some believe that students should rarely be withdrawn from the classroom while others believe that there are times that students benefit from time intensive remedial support. As a L.R.T. I do withdraw students from their regular class to assist them with their work. Although this is not necessarily my preferred method of support there are different reasons for doing this. Students do need to have

direct instruction on how to use assistive technology and therefore they may need to be withdrawn until they have developed these skills. However, I am often concerned that students will miss learning opportunities in the classroom or fun activity. In the book, *Schools That Work*, Richard Allington and Patricia Cunningham (2002) mention that having special programs for students has caused many classroom teachers to believe that it is not their responsibility to teach all children. Also it is important to recognize that special instruction replaces some part of regular instruction. As a result students may experience what Allington and Cunningham describe as curriculum/planned fragmentation, children who leave the class miss the instruction offered while they are absent. At the same time, children who struggle need to have high quality instruction. Instruction that includes modeling, explaining and demonstrating. This is crucial.

What did I Learn About Using Technology

Kurzweil

Kurzweil is text to speech software. Once text is scanned the computer will read it to you. It has many useful features. It allows the user to highlight key facts, look up words in the dictionary or thesaurus, attach text and sticky notes which are excellent strategies to assist with reading comprehension. Also, worksheets can be scanned and students can complete them right on the computer. For those who have weak graphomotor (fine motor) skills this is a great tool. This program is quite simple to use and students almost always produce work that is more detailed in considerably less time than if they were to do it by hand.

Readplease

Readplease is text to speech software that can be downloaded for free from the internet. It too is relatively straightforward, all you have to do is highlight the text that you want read and copy it into Readplease. The text will then be read to you. This was used successfully by students when researching on the internet for projects.

All the Right Type

In order to use word processing programs successfully students need to have keyboarding skills. If they struggle with typing then they seem to prefer completing their work by hand, even if the quality of work is not as high. Students benefit from having specific time scheduled in their day to develop their keyboarding skills.

Co:Writer

Co:Writer is word prediction software that is Ministry-licenced. As soon as the student begins typing the computer will predict the word that they want to use by giving approximately four words for the student to choose from. The student then selects the word they want or finishes typing it. Therefore the number of keyboarding strokes is reduced and as long as the student recognizes the word they will spell it correctly. When the sentence is completed it is then exported to the word processing program that you are working in. This is an excellent tool for students that struggle with spelling,

Work Sheet 1 - Prediction

"Mr. Gilligan's Goat"

Look carefully at the title at the beginning of the piece. What do you think this text will be about? Explain your predictions with ideas from your past reading and your own experiences.

at first I thought it was a goat and a men but when I read the book I found out what it really happened. I was really all about its is a but a goat and a man. And after the men and the goat is the mascot.

Student C's written work before using Co:Writer

Book conference

You need to read to succeed in life. If you know how to read you can go places. Then if you don't know how to read, that's what I learned at the book conference. The first thing we did we went to see Ted Striner.

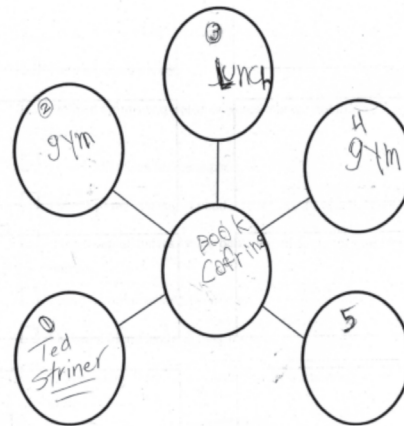
And then we went to play football we won nine to seven.

Kyle's written work after using Co:Writer

At first I thought it was a goat and a men but when I read the book I found out what it really happened. I was really all about its is a but a goat and a man. And after the men and the goat is the mascot.

Student C's written work after using Co:Writer

Planner 2



Kyle's Writing Plan

Planner 2



C's Writing Plan

keyboarding, reading and writing in complete sentences.

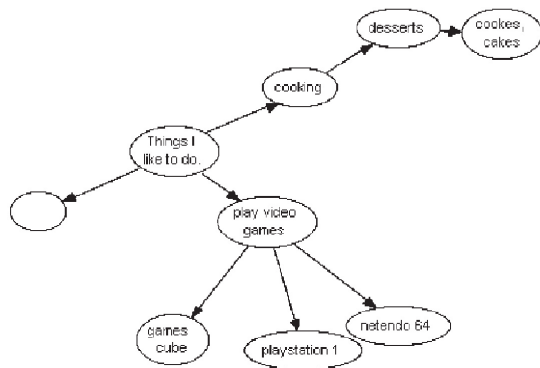
African Zoo sufrey

I started on the bus for a class trip to the zoo. Win I got there I looked at all the animals and took pictures of them. After that I went to the gift shop. Then I gonad my teacher in the shade to eat with my class. Win I was done I watch a elephant take a bath and do tricks. When that was done I got on the bus to go back to school.

C's final copy using Co:Writer

Smart Ideas

SMART Ideas is computer software program that uses graphic organizers. It too has been licenced by the Ministry of Education. This is an effective tool for students who have difficulty organizing their thoughts or whose written work contains limited knowledge. Basically, students begin organizing their thoughts by creating a web and then elaborate on those ideas in the outline view. They can then export their work to a work processing program where they may complete the editing process, using CoWriter at the same time.



Main

there are many things I like to do.

play video games

games cube

Play station 1

Nintendo 64

cooking

desserts

cookies, cakes

Final Thoughts

At the Intermediate level there were eighteen identified students, ten of whom were identified with learning disabilities. At this age many of these exceptional students are reluctant to and/or refuse to work with the LRT. That does not even take into consideration those students who are considered to be at-risk and who are struggling to meet the academic demands of the curriculum.

I wanted to see how we could use assistive technology as a tool at the intermediate level. However, in early April my position changed and from then on until the end of the year, I spent only 1 1/4 days at the intermediate school. Therefore I decided to concentrate more on how assistive technology could be beneficial for learning disabled students in Grades 4 and 5.

On April 19, 2005 I had the pleasure of attending Dale Willows', Balanced Literacy Diet conference.

Essentially she believes that students who struggle

just need more time on the balanced literacy diet. Specifically students need to be doing "real writing", which is engaging children in writing for real things for authentic purposes. She also confirmed my

belief that the use of technology is one of the most effective forms of instruction for students with learning disabilities.

Although there is evidence to support that students are more successful when they use assistive technology this alone is not motivating enough for them to use it consistently. Often when I would check in on students I would frequently see them completing worksheets or answering questions by hand or just sitting there because the task seemed overwhelming and they did not know where to begin. I would often say, "this would be a great time to use the computer". Most times they would then move to the computer but not always. Indeed students need to be prompted by their teachers to use technology as they will often choose to use pencil and paper as they feel that it is quicker that way.

Over the course of the four and a half months there have been some frustrating times. At one point Kurzweil was not working at one school and it took some time (about a month or more) to get it running again. Therefore it is sometimes difficult to teach students to use technology consistently when it cannot be relied upon. But we can also view such occurrences as challenges and part of the learning process.

Teachers and students are positive about using assistive technology. When teachers are asked what they think of the technology they are enthusiastic. "It's so neat! This will be good for so many students" (J. Savage, Journal Entry, June 2005). "It gives them confidence to write like everybody else. They've got help all they way through an assignment. It's the great equalizer." (S. Sterczer, Journal Entry, June 2005). When students are asked if they like using assistive technology they are quick to respond "Yes!". When asked "Why?". Kyle enthusiastically responds, "It helps me a lot. It saves me a lot of time. I like how it reads the words to me. I don't have to guess if I'm right or wrong, it tells me". C. responds, "It's interesting. It helps me write certain words like animals and interesting.". These are observations that cannot be ignored. I will definitely continue to use and promote the use of assistive technology in the classroom.

References

Allington, Richard L. & Cunningham, Patricia M. (2002). *Schools That Work: Where All Children Read and Write*. Boston, MA: Allyn and Bacon.

Allington, Richard L. & Cunningham, Patricia M. (1999). *Classrooms That Work: They Can All Read and Write*. Reading, MA: Longman.