Use technology to support written expression

Summary

Written expression can be particularly challenging for students with diverse learning needs. Teachers are frequently concerned that making adjustments to written expression tasks may not meet the requirements under the Australian Curriculum. In this practice we explore how to make adjustments with expert advisory teacher, Jeff Souter.

By making adjustments using technology you will:

- Support students to focus on their writing and worry less about letter formation
- Choose from a range of technology features to assist with written expression:
    - word prediction
    - homophone detection
    - text-to-speech
    - a web-based dictionary to clarify words
    - a vocabulary list

The content of this practice has been developed in consultation with Dr. Jill Ashburner, Autism Queensland.

Australian Professional Standards for Teachers related to this practice

- 1.6 – strategies to support the full participation of students with disability
- 2.5 - literacy and numeracy strategies
- 4.1 - support student participation

For further information, see Australian Professional Standards for Teachers AITSL page

Preparing to Teach

Learning activities requiring students to use written expression are challenging for those students with handwriting difficulties. In this practice, Jeff Souter, explains a wide range of adjustments that teachers can make to provide all students with equitable access.

> *'Use technological tools in place of the physical act of writing, such as speech-to-text or audio recording. Assess the student based on their knowledge of a subject, not their handwriting.'* — The Nationally Consistent Collection of Data on School Students with Disability (NCCD)(link is external)

If you are considering assistive technology as an adjustment for a student in your class, it is important to consult with external specialists such as occupational therapists and speech-language pathologists.
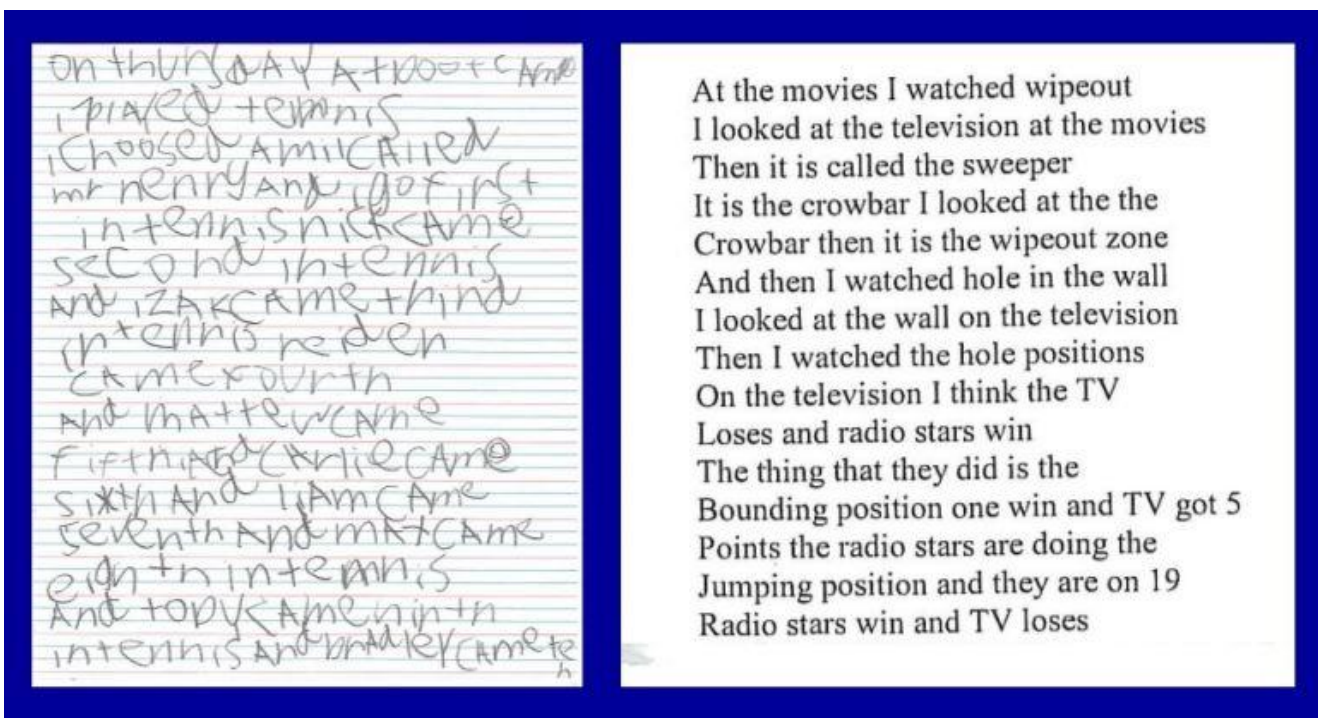
Specialists can help you to determine important information about students so that you can plan appropriate adjustments:

- **Can they use a keyboard independently and will this increase their speed?** When learning to type, a student won't necessarily produce written work more quickly. However, the use of a keyboard in the mid-term may mean they are less fatigued, particularly if software options such as predictive text are available.
- **Would they benefit from speech-to-text software?** Students can use this software to dictate their composition before editing what they have written. Students will not have the opportunity to learn how to conclude their story or summarise their argument if they never get to the end of the written piece of work.
- **Would they benefit from predictive spelling?** This may not be appropriate for students during a spelling test but may be highly appropriate when the purpose of a piece of work is to showcase vocabulary and structure of written work.

While some schools focus on technology, others lack access to WiFi and to equipment such as iPads and laptops. As a result, some students have very little experience in using technology and poor keyboarding skills. Many years are often spent teaching students to handwrite, but relatively little attention is given to teaching them to keyboard and to use technology.

The literature suggests that these skills should be explicitly taught. Students should be able to keyboard at least as fast as they can handwrite and should learn the touch-typing method if possible.(Freeman et al. 2005)

Handwriting, written expression and the Australian Curriculum

> At the movies I watched wipeout
> I looked at the television at the movies
> Then it is called the sweeper
> It is the crowbar I looked at the the
> Crowbar then it is the wipeout zone
> And then I watched hole in the wall
> I looked at the wall on the television
> Then I watched the hole positions
> On the television I think the TV
> Loses and radio stars win
> The thing that they did is the
> Bounding position one win and TV got 5
> Points the radio stars are doing the
> Jumping position and they are on 19
> Radio stars win and TV loses

This example of a student's written work illustrates how technology can assist you to gain an accurate picture of a student's text composition skills.

In the classroom

Introduction to adjustments

A range of adjustments exist which can provide students with equitable access to written tasks.

Knowing *when* adjustments can be made to learning tasks, formative and summative assessments is important.

Key points

- Consult with external specialists such as advisory visiting teachers, occupational therapists and speech-language pathologists
- Speech-to-text software enables students to dictate their composition before editing what they have written
- Handwriting supports including pencil grips, keyboard guards, joysticks and eye-tracking can be used to support written expression
- Students may need support students to learn typing skills

Adjustments using technology including Speech-to-Text.

If students never get to the end of a written piece of work, they will not have the opportunity to learn how to conclude a story or summarise an argument. Speech-to-text software enables students to dictate their composition before editing what they have written.

Did you know?

Adjustments such as predictive spelling can be turned on in Microsoft Windows.

Recent versions of Microsoft Office also have a text-to-speech option. Students using text-to-speech should wear headphones. See here for more details.

Read&Write software is one of a number of options available to support written work. See here for more details.

Materials informing this practice

You can read about the Autism CRC project called Overcoming Written Difficulties on inclusionED. This project focused on overcoming the written expression challenges of students on the spectrum that arise from challenges with handwriting and written composition due to language and conceptual issues.