Accessing the curriculum

Video CALL Scotland

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Video Transcript

Some children face significant challenges accessing the curriculum.

Malcolm needed all his books to be provided in an accessible format. That format aimed to improve performance in independent reading, and in writing which is affected by his cerebral palsy. Accessing maths presented particular physical challenges.

Adopting a SETT framework helps us to think through how best to offer Malcolm support, starting by looking at what he **could** do…

 …considered as **student skills**.

He appears to have good cognitive skills, is highly motivated and communicates enthusiastically. The mismatch was between competence and performance.

Challenges were to compensate for poor hand control, articulation of speech and both fine and gross motor abilities.

Addressing these would raise performance to match more closely his true competence**.**

Next we considered his **Environment**.

Malcolm attended his local mainstream school. He was included in a mainstream class following the same curriculum as his peers.

Technology available is basic the same as that for other pupils.

To compensate for the areas of difficulty he experiences because of cerebral palsy he will definitely require assistive technology.

First we consider the tasks he will use technology for.

Tasks will involve reading, writing, drawing, maths and other activities. We'll look at Maths.

Doing maths required him to open the book, go to the correct page, navigate to a question, read it, write an answer and go to the next page.

A typical page may have 20 or more questions to complete.

Pupils were expected to fill in their answers using a pencil, something Malcolm could not control because of his cerebral palsy.

Using the first three assessment themes of SETT we better understand Malcolm's competences of cognitive ability and great motivation. His performance is limited by poor hand control, articulation and fine motor control. Technology has an important role in levelling up performance.

How might Technology compensate?

CALL focused on not only the assistive technology but also curriculum materials he needed to access.

His maths books were published in Adobe PDF format. The digital version of the book was our starting point.

PDF is a universal design tool – accessibility is designed in. For each question in every one of his maths books, we added answer boxes, set tab keys for quick navigation and set other parameters.

With his digital maths books now accessible, attention turned to more tailored solutions.

One option built-in to the Windows operating system offered immediate benefit – an OnScreen Keyboard. That together with a special joystick improved performance.

Specialised Assistive Technology included Click 'n Type NumberPad.

By providing his maths books in a more accessible format; adopting universal design solutions; and applying tailored Assistive Technology tools, Malcolm's performance could more readily match his true competence. Attainment in maths improved quickly.

The system-wide solution allowed him to be part of the class.

Using his joystick to navigate Click 'n Type on his laptop…

…he clicked to select numbers.

…typed them…

… into the answer boxes.

…and tabbed to the next answer.

Universal design for learning solutions like the free Adobe Reader provide versatility where accessibility tools can be applied to individual solutions that can then be scaled up to larger populations.

Other pupils were identified as potentially benefiting: for example those with a visual impairment; with autistic spectrum disorder; dyslexia and physical disability.

Work continues to add many more books to make them available to teachers in Scotland. Changes to law and policy were bought in; other CALL Scotland accessibility tools applied. Significant improvements resulted.

A secure database of Scottish curriculum textbooks was established, resulting in many more accessible books being made available.

To find out more, visit the Books for All website and the Books for All Scotland database.

A big thank you from CALL Scotland to all those involved in this work.