Vision Impaired pupils accessing the curriculum and learning with digital support enabled by RM Education

The Background

It is estimated there are more than 25,000 young people (under 17 years of age) with a vision impairment in the UK and two thirds of them are educated in mainstream schools.

Pupils who have vision needs have experienced greater challenges in accessing learning as developments in the curriculum have caused learning to be much more visual in nature. A variety of means are used to support learning and access to the curriculum for pupils how have vision needs and these include Low Vision Aids, Large Print, the use of Braille, as well as technologies including tablet devices, laptops, digital learning resources, digital cameras and digital programs such as Fusion ZoomText and Supernova to provide greater accessibility functions for pupils.

South Lanarkshire Council's Vision Impairment Team (VIT) is based at Uddingston Grammar School and has been since its inception in 1982. The team provide support to Secondary School pupils who attend UGS on Specialist Placement for their moderate to severe vision needs; currently 20 pupils. In addition to this the VIT provide peripatetic support to all SLC Early Years children and babies who have vision needs and all SLC Primary and Secondary School pupils who attend Additional Support Needs schools or Bases and who have vision needs. The VIT Secondary Service provides peripatetic support to all NLC and SLC Secondary School pupils who have vision needs.

The school aim to minimise the effect, where possible, of a vision impairment in terms of the impact for learning and access to the curriculum and learning. The VIT's succinct and clear aims are for vision impaired pupils to have:

- the right support
- at the right time
- every time

And their mission statement is three-fold centred around "Having … Accessing … Being…", where pupils:

Have... the right equipment, ICT, assistive technology, low vision aids, adapted learning resources and a voice about their support and the things that matter to them.

Access... the curriculum and learning, the school's environment & the community of the school.

Be... at the centre of what we do, resilient, knowing the impact of their vision loss and enjoying their lives to the full.

The Service needs and the Challenge

There were some specific challenges the staff supporting the pupils wanted to address:

- Most pupils are provided with their own iPad, however, as part of the school wireless network policy the pupils were required to login every day and when devices timed out. The size of the logon box on an iPad made this more challenging.
- Each individual iPad had to be maintained and updated with specific apps to meet the individual needs of pupils.
- They had 60Gb of specific content for the pupils they support that had to be accessible from the iPad. This is, in effect, the entire school curriculum in digital format, from S1 to S6. This content was previously stored off site in a drop-box account, which required significant levels of checks to ensure the content was secure.

- In some subjects pupils had to sit at a specific PC to access the Assistive Technology programmes, such as 3rd party magnification and text to speech translators.

- For the pupils with the most severe vision impairment the school provides braille devices (such as the BrailleNote Touch) – these were hard to configure to the school's secure Wi-Fi networks.

- Staff also required access to braille printers – this hardware uses complex software that requires a bespoke configuration. This was a complex IT estate that couldn't easily be integrated with the wider infrastructure in the school. Staff were not able to utilise technology that should have been able to support the access to the curriculum and learning that was required for the pupils.

The Solution

In order to address the numerous challenges they were faced with, RM implemented a number of different solutions. So that the pupils didn't have to login to the Wi-Fi network every day with their iPads the RM team implemented a Mobile Device Management solution which automatically connected the iPads to the network every day. This also addressed the challenge of maintaining and updating individual devices, allowing staff to easily add apps to all devices.

The 60Gb of data that was used by the pupils supported by the VIT was moved to a secure and accessible location on the school's CC4 server from the current drop-box setup. A new secured storage area was then configured to allow the iPads to access the data. Pupils no longer had to download every document they required.

So that the pupils supported by the VIT could use any computer in the school, and not be limited to only one station in a lab of twenty, accessibility and assistive software was packaged up and rolled out across all computers in the school. Even though the school use RM CC4 (network management tool), which helps to automate and streamline rolling out packaged software across the IT estate, there were problems running accessibility and assistive software packages, as this type of software impacted display settings for other users. This involved working with 3rd party software providers, configuring the 3rd party software and making changes to the network policies.
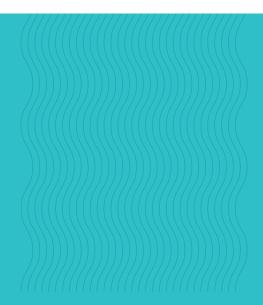
The software for the braille printers was also packaged so it could be rolled out across the school where required. The braille devices used by pupils were more challenging but the RM solution was to implement a new Wi-Fi network to allow the pupils supported by the VIT to connect only once to a personal device instead of every day. This used certificate based authentication and removed the need for users to provide logon credentials. This allowed pupils to experience seamless connectivity to networked devices).

The Results & Benefits

As a result of implementing a number of bespoke technology solutions RM has achieved the school's goal of delivering a consistent learning experience for all pupils, ensuring that the pupils supported by the VIT had access to the curriculum and learning.

While the pupils supported by the VIT have specific needs in terms of the tools they use, there is no reason those tools can't be utilised across all classrooms in the school environment.

The Head of Service for the South Lanarkshire Vision Impairment Team, Paul Telfer, is of the view that the partnership with RM has been crucial in developing improved access to the curriculum and learning for the pupils whom the team supports. He has said, "RM have taken the time to understand the needs of our pupils and the needs of the team in terms of access and digital provision. Their approach has been solution-focused with a commitment to supporting us in delivering the best digital approaches for pupils."

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