

# Getting IT Right for Pupils with Visual Impairments or 'Eye Right!'



ICT Policy and Practice Working Group,  
SAVIE - Scottish Association for Visual  
Impairment Education

## Foreword

For the young learner living with sight loss school can provide a number of significant additional challenges. One challenge, independent access to the curriculum and learning, is now being tackled in a variety of ways through recent developments in technology.

This document aims to highlight the need for greater cohesion and forward planning in the effective and efficient delivery of assistive technology to those living with visual impairments in Scotland's schools. It is devised as a guide and sets out the challenges identified by Teachers of the Visually Impaired across Scotland when supporting the technology needs of learners with visual impairments. More importantly, it outlines good practice with a view to encouraging Local Authorities and IT Managers to Get IT Right for Scotland's Children.

If we are to ensure improved access to the curriculum and prepare our children and young people for future employability and successful adult life then a number of issues need to be addressed to better support the aspiration to greater equality. We hope this guide will go some way to ensuring that happens.

Dominic Everett

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## Introduction

21<sup>st</sup> century Scotland aspires to be an inclusive society. In our schools there is a presumption of mainstreaming for all pupils including those with a visual impairment. Fundamental to their successful inclusion in the life and work of Scottish schools has been the development of ICT as a learning tool, enabling access to the curriculum. The latest technology provides the possibility of simultaneous access in large print, audio or Braille and therefore new independence for young learners with Visual Impairments (VI). Supported by a raft of recent legislation and guidelines; and stimulated by new and exciting developments in ICT offering unprecedented access to learning; all of us involved in visual impairment education have a responsibility to ensure that our pupils with VI make the most of these opportunities.

This is not a policy document: these already exist; nor does it set out to prescribe set solutions. Its purpose is to highlight issues which, unresolved, disadvantage pupils with a visual impairment and may result in discriminatory practices.

The document also demonstrates many successful examples of innovative ICT used in a range of Local Authorities in Scotland. However, the examples also catalogue a number of frustrations and areas of challenge as freedom of access comes into conflict with concerns for security.

As a child's life at school is relatively short we do not have the luxury of long term adjustments. The legislation is clear and the needs are urgent. The Warnock report dating from the 1980s and anti discrimination legislation since the year 2000 all indicate that inclusive education should have achieved maturity. The ICT revolution offers unprecedented opportunities for access and the exponential speed of change calls for a more flexible, radical and responsive approach.

Where there is a will there is a way. What we would like to see is that a pupil with visual impairment, along with every Scottish child, is included in the planning and preparation of policy. This should allow for the flexibility and imagination which will mean we **are** Getting **IT** Right for **Every** Child.

Mairi Graham, Chair of ICT Policy & Practice  
Working Group, SAVIE

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## The following policy statements and case comments come under the headings:

1. Procurement and Policy
2. Access to School Networks and Printers
3. WiFi and handheld devices
4. Assessment for ICT
5. Staff/pupil Training
6. Home/school Practices
7. Managing Change
8. The Motivating Power of IT

### 1. Procurement and Policy of IT Providers

#### a. Accessibility should be built in to all procurement processes to ensure that networks are accessible to learners with VI

*“I found the Microsoft Comfort Optical Mouse 3000 to be very useful for VI pupils where it was possible to use them. There were sometimes issues with using them on networked computers. These were found to be a cheap way of providing magnification on older windows systems.”*

*“In a primary classroom I worked with a pupil who was able to view the teacher's live interactive whiteboard from her own laptop. This was very successful. Unfortunately it was unable to be replicated in Secondary classrooms due to the pupils having to move from room to room. The pupil who used this mirroring technology was able to sit*

*where she wanted in class and still be an active participant.”*

*“More and more books are becoming commercially available on line but how to pay for these is a nightmare because of restrictive procurement practices. Are vouchers the answer?”*

**b. Roaming profiles (an individual profile created for the pupil) should remain on networks so that pupil settings can follow them around the school.**

*“I have experienced positive access to IT where VI pupils are provided with personal logins where accessibility settings are attached to individual pupil needs - this included larger icons and cursors. They were also provided with access to the magnifier as soon as they logged in. The Windows 7 magnifier appears to suit my children with VI far better than previous versions of the magnifier. This provided a degree of independence for the pupil as soon as they logged in.”*

*“Many problems even getting accessibility options set - this is removed for all pupils - took months to get this set up under a login for one pupil - each school seems to work differently.”*

**c. Regular collaboration between ICT management, procurement and the end users, eg, an ASN/ICT working group is invaluable**

*“We have a focus group for ICT for VI pupils for four Authorities. We meet with the ICT for ASN officers two times a year to discuss the management of new technologies, assess their usefulness usually with feedback from the pupils. We also have demonstrations of new technology when we can assess the equipment together from both the teaching and from the technical point of view.”*

*“In my local authority we have a multi-disciplinary ASN ICT group consisting of IT, ICT, ASN teachers from both primary and secondary sectors, occupational therapy and speech and language therapy. The purpose of this group is to develop an understanding of roles and to move forward ICT needs in ASN through a partnership approach.”*

## **2. Access to school networks/printers**

**a. Curricular access is required via school networks for tablets, braille note takers and laptops.**

*“An iPad can be linked to the Brailnote through Bluetooth. This allows Adam to control the iPad using the controls on the Brailnote and to read anything on the iPad in Braille on the*

*Braillenote. We are currently reading 'Morris and the Cat Flap', which is in iBooks on the iPad through linking the iPad with the Braillenote. This means any book available electronically is available to read in Braille immediately."*

**b. Learners need access to the school intranet (eg documents and subject folders.)**

*"Adam's laptop is linked to the Braillenote to be used as a visual display of the Braille he is writing so that the class teacher can read his work as he is writing it without having to rely on his support assistant or QTVI to translate it."*

*"... our Council currently in process of setting up separate network for portable devices".*

**c. Learners need access to printers via the network or WiFi as necessary.**

*"Access to school printers. Brilliant - we can have the driver for any printer within a school loaded onto any computer used within that school - as long as you ask for the driver for the printer to be loaded onto any particular computer. All schools have WiFi ... Superb!"*



**d. Existing security filtering needs to take account of the additional support needs of the pupil and their specialist teachers allowing access to special support websites.**

*“No access to useful apps or websites through network, Google App inventor blocked, YouTube blocked. Unable to add free useful software due to network policy.”*

*“The YouTube training videos by the RNIB on the use of the Ipad for VI users are clear and excellent. We have used them to train ourselves.”*

### **3. WiFi and handheld devices**

**a. Hand-held devices should be able to connect to the school’s WiFi to access the curriculum.**

*“Our council won’t allow iPad users to access the school network or internet.”*

*“We have a good system (WiFi) within the school separated out for laptops and iPads”.*

*“sometimes I have to walk along the corridor to find a connection onto the school WiFi - it can be very variable - and rather frustrating”*

**b. A mechanism is required to allow access to agreed commercial sites and transfer of data.**

*“One useful advancement in technology has been the introduction of Dropbox (Cloud technology). A child can save their work to Dropbox and if the teacher also has login details they can assess and save from and to the cloud. Easy way to ensure quick and regular information exchange.”*

*“Very often “Access Denied” to benign, useful sites. Use of Dropbox would be so useful, currently blocked”*

*“My Local Authority is will not allow Dropbox for transferring books but instead we use SHOWBIE which has an individual account for each pupil with a password-this seems to satisfy their security concerns”*

#### **4. Assessment for ICT Needs**

**a. Joint assessment with ICT officers, pupils and teachers for the best pupil outcomes.**

*“6th year pupil successfully used ICT throughout her school career after being assessed by RNIB technology officer in P7/S1. This, as far as I am aware, is no longer available to my Authority’s pupils because of costs.”*

*“Our council have a contract with CALL Scotland - we can refer pupils with VI/Complex needs for assessment and advice, their reports are invaluable.”*

**b. A working group to plan for an address ongoing pupil requirements for ICT.**

*“We meet with the Additional Support Needs officer for ICT twice a session to plan for future needs for the pupils on our caseload. Some of the equipment is very expensive and this help her to plan her budget spending also to discuss which is the best equipment to buy and to evaluate the ICT already in use”*

**c. A local authority policy for ICT for learners with ASN helps to standardise procedures for children who require technology.**

*“We have IT at 3 levels/categories of response: 12 hours/24 hours/longer. Any issue is raised as a ‘Call Log’ - Brilliant system”*

## **5. Staff/Pupil training**

**a. Both staff and pupils should feel confident using technology provided.**

*“I don’t feel confident about using technology - my*

*pupils are further ahead of it than I am.”*

**b. Training is recommended in the equipment, appropriate to the needs of teacher and pupil.**

*“We train the pupils on the IT so that they are competent to do their own personal research”*

*“I didn’t get any training on how to operate a Braillenote but have trained 2 pupils. Spent hours upon hours training myself from the handbook.”*

*“We had great training recently from Blind Ability, an English based charity, on using the accessibility options on our iPads”*

**c. Parents should also have access to training.**

*“We had two days of free training on use of our Braillenotes for both staff and parents”*

*“Parents are constantly asking us for training on iPad accessibility so they can support the pupils’ learning”*

## **6. Home/school practices**

**a. A Responsible Use Agreement is considered for pupils using equipment outwith school premises.**

*“When my VI pupil needs to take the Victor*

*Stream home for revision - she signs a contract with us and dates it. We introduced this after the occasion when she lost it and swore that she hadn't had it in the first place."*

*"We have a responsible use agreement signed by the pupil and the parent for any new device and a record is kept"*

**b. Pupils who require ICT to produce their work and for access to the curriculum use their equipment both in school and at home.**

*"One secondary is piloting a bring your own technology scheme, purchasing of apps is a bit of a nightmare."*

*"pupils freely use their handheld devices, laptops, iPads, Brailnotes etc between home and school - how else do they do their homework!"*

## **7. Managing change**

**a. Whilst recognising the financial and security constraints of corporate IT, consideration and collaboration between all stakeholders is essential to deliver full access to all areas of learning. Development of pathways such as this pave the way for robust and efficient mechanisms to address cost and impact of new**

**legislation whilst considering the specific needs of learners. Implications of legislation should be considered and included within the ICT Development Plan, including funding plans, within each local authority.**

*“Our service makes use of the RNIB loan scheme TELL - it allows the pupil to borrow the equipment and to take time to trial it. That way we can match the pupil to the appropriate ICT before purchasing!”*

*“... we meet annually - the ICT officer for ASN and our team - in advance of budget spending to review the needs of pupils and to plan - it helps spread the purchase costs”*

*“We have Office 2010 (Brilliant) and Windows7 (Excellent!)”*

## **8. The Motivating power of ICT for VI users**

*“ICT can be incredibly motivating for most pupils VI or not!”*

*“Many of my children use cameras to access the board. One successful use was for them to view the stage at any plays, assemblies or concerts. The children can have a friend and they can sit at the back of the hall out of the way and watch the*

*performance. My primary children loved this.”*

*“D... was reluctantly struggling with his braille reading. Since starting to read directly from his Brailnote linked to the iPad (which he manages himself) he is now an enthusiastic and motivated reader. A real transformation!”*

*“I have an iPad - the same as everyone else” (3<sup>rd</sup> year pupil)*

*“ since using her iPad her reading has dramatically improved. I think it is because she can now see the text easily and she is in control of the size!”*  
quote from one parent at a recent review meeting

*“two books in 6 weeks on a Kindle and before that he hadn't read a book in a year!”*

*“... when I can't see the board or the worksheet I take a picture and make it as big as I need.”*

## **Summary**

These 'case comments' reveal several clear messages arising from the current experience of visually impaired pupils and their teachers in Scottish Schools:

- **Variation in provision**  
There continues to be a widely differing variation in ICT provision and support among the Local Authorities.
- **Positive solutions do exist**  
Practical solutions exist and are being implemented in several Local Authorities providing a useful template to follow and an encouraging alternative to the negative experiences.
- **Communication is essential**  
Collaborative working between the ICT professionals, teachers and their pupils is key to success.
- **Need to plan for an inclusive future**  
A more proactive approach to the provision of ICT could provide future proofing in this area of rapid development. Providing merely a minimal response to provide equal access and meet the demands of legislation means that VI pupils will always lag behind and be at a disadvantage.
- **Main aim of ICT provision**  
Pupils with Visual Impairments are not only motivated by, but dependent on, the efficient provision of ICT in our schools. Then, they can become **successful** and **confident** learners who can make an **effective** contribution.



## References

CALL Scotland (2013) **ICT accessibility checklist: keeping it legal: are you meeting your obligations under the Equality and Disability legislation?** <http://tiny.cc/1aa7fx>

Equality and Human Rights Commission (2012) **Reasonable adjustments for disabled pupils: Scotland**

<http://www.equalityhumanrights.com/advice-and-guidance/education-providers-schools-guidance/key-concepts/reasonable-adjustments/>

Scottish Government (2014) **Planning improvements for disabled pupils' access to education** <http://www.scotland.gov.uk/Publications/2014/10/8011> (Appendices D and E particularly useful)

Scottish Sensory Centre (2012) **Review of assistive technology and environmental aids to pupils with a sensory impairment in Scotland** <http://www.ssc.education.ed.ac.uk/research/research12.pdf>

# Contributors

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