



ICT for Inclusion



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ICT for Inclusion

"Children are highly motivated by using ICT and when they are motivated we can better support their learning. But not everyone learns or works in the same way or at the same pace; if it is to be useful, technology needs to offer support for pupils with differing physical and sensory abilities and a wide range of learning styles."

NOF ICTS Module 2

Knowing how to provide suitable software and assistive technology puts teachers in a better position to meet the learning needs of all children.

To address Inclusion it is important to provide computer time as an integral part of a child's daily routine. This is preferable to simply earning time as a reward for good behaviour. The benefits are enormous when the technology helps a child to concentrate and learn. Here we present some ideas to better inform teachers on using ICT for Inclusion.

In this chapter we focus on 5 areas

1. Assistive technology
2. ICT in the curriculum for Inclusion
3. Focus on provision for Northern Ireland schools including LearningNI
4. Further professional development
5. Curriculum Websites

1. Assistive Technology (AT)

AT is used by anyone with a SEN or disability that makes 'standard use' difficult or uncomfortable. It's also often used by people simply because it makes using a computer easier or more comfortable.

It is the responsibility of each school to address accessibility needs for pupils. Your Education and Library Board has a policy regarding Assistive Technology for Pupils with SEN. Check with your Board for more information.

Accessibility settings on your computer allow you to make basic adaptations eg mouse pointer and speed, contrast, keyboard presses. **Start by making any changes by going to All Programmes – Accessibility Options.**

Keyboards Big keyboards, multi-coloured keys, keyguards, non standard keyboards including one handed are all available. In addition you can have an on-screen keyboard.

Mouse What if a pupil can't use a standard mouse? Try a rollerball, a touchpad or a joystick.. Download large cursors from Ace Centre – search for large pointers www.ace-centre.org.uk

Touch screens can be used for children at an early level of development or those with physical challenges. Consider touch screens for learners who cannot manage a mouse for physical or cognitive reasons. Eg, For a range see Inclusive Technology <http://snipurl.com/1ysqnb>

Tablet devices which allow multiple touch are intuitive, fun and an increasing variety of educational applications have been developed. Consider if the child will ever need to learn to use a mouse because using a touch screen may delay the development of mouse skills. Examples include: Inclusive Slate, iPad, iPod Touch, Samsung Galaxy, Kindle and many other tablet devices. It is intended that personally owned devices will be able to have internet connection via the school network.

Alternative Input – Speech to text software eg Dragon Naturally Speaking, Windows 7 and Windows Vista permit text to be input by speaking into a headset. The software needs training to recognise your voice and a certain level of fluency and ability combined with persistence.

Be aware that pupils may not wish to draw attention to themselves by using this software in class. Read more at CallScotland

<http://snipurl.com/1ytuam>

Speech Output Many programs are enabled for speech feedback useful to users with Dyslexia or cognitive difficulties eg Texthelp Read and Write, Penfriend XP, Textease, Clicker5, WriteOnline, Writing with Symbols and the Communicate series from Widgit.

Access Apps (Free) consist of over 60 open source and freeware Windows applications which run from a USB stick. The software can change screen background to reduce glare, read text aloud, adjust screen settings etc. Pupils should be able to run this software on any C2k laptop where they have privileged user rights ...or on any personal computer. From rsc-ne-scotland.ac.uk <http://snipurl.com/1ytuvl>.

Visual Impairment (VI)

Some key programs allow users with VI to access computers and the internet.

- **Zoomtext** See and hear everything on your screen
- **Kurzweil** makes printed and electronic text available via a scanner connected to the computer.
- **Jaws** is a screen reader for blind computer users. It provides access to software applications and the Internet. Jaws has an internal speech synthesiser and reads aloud information on the screen including system menus.
- These 3 titles are available to C2k school users.
- Please go to C2kexchange (Document A060) about getting the programs on your C2k computers
- Alternatively, **SuperNova** is used by some schools for screen magnification, speech and Braille support.

- The NI Regional VI Resource Base at Fortwilliam Centre has a remit for supporting the Boards to develop resources in appropriate formats to facilitate access to curriculum content for young people with a visual impairment. For more information please contact your local VI support teacher.

Websites for Accessibility:

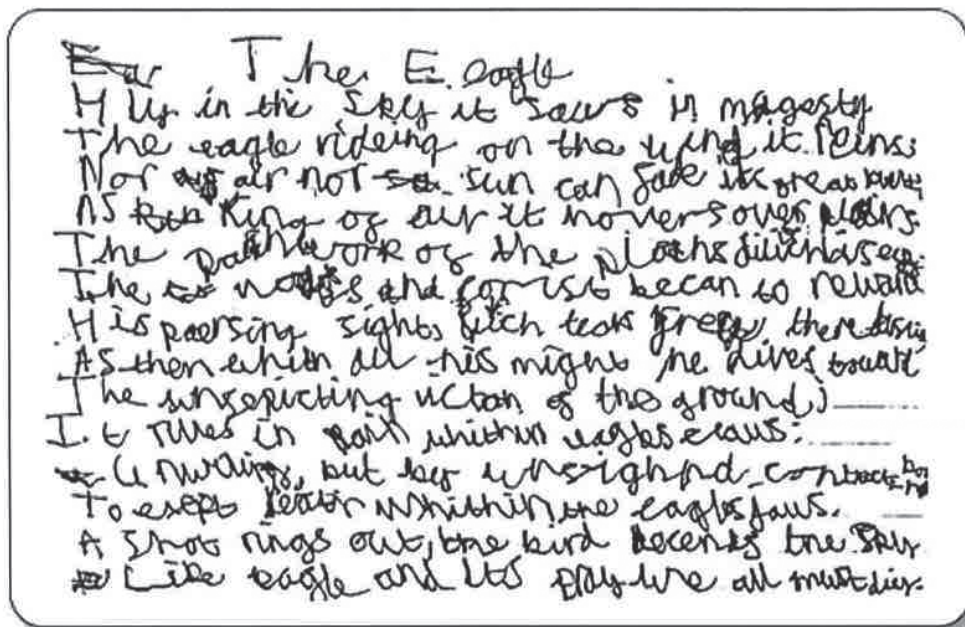
- Ability Net www.abilitynet.org.uk Look on the LHS of the website for some examples of equipment that is commonly used for physical, sensory and reading and writing problems.
- Ace Centre <http://www.ace-centre.org.uk/index.cfm>
Search for Introduction to Software
- Inclusive Technology www.inclusive.co.uk/articles/
- Accessibility for All:
<http://www.rogerdarlington.co.uk/specialneeds.html>
- Better Living through Technology <http://www.bltt.org/>
- Make Word and PowerPoint more accessible
(Regional Support Centre: Scotland North and East)
<http://snipurl.com/1y5kz5>

2. ICT in the Curriculum

Technology can offer exciting multimedia and interactive learning to children in your class, especially for those who need extra support for their learning. The visual, auditory and tactile feedback, along with the chance to embed skills through repetition, suits special learners including those on the Autistic Spectrum.

Adjustments and accessibility settings are often available in the background control menus of many educational programs. E.g. Blackcat software has a hidden teacher's menu accessible by pressing CTRL T.

Learners with dyslexia may need speech support for literacy activities eg talking books, spelling and phonic games and activities; talking word processors and on-screen word banks help to provide auditory repetition of text to support weak memory skills and increase independent learning.



Text to speech software to read text from any source eg Read and Write Gold, PenfriendXP, Textease, Clicker5, Writing with Symbols

Talking word processors, for users with VI, will read both computer commands and what is written eg Jaws, Zoomtext,

Talking Books <http://www.listening-books.org.uk>; Clicker5 and Microsoft PowerPoint can also be used to create talking books. These can also be used to create social stories <http://snipurl.com/1ysr0o> [www.thegraycenter.org]

Phonic and spelling games with sound – there are many eg Wordshark, Numbershark

On-screen word banks eg Clicker5, PenfriendXP, Texthelp Read and Write are programmes which present word banks and in some cases predictive text.

Wordbar is a toolbar that works alongside a word processor. It contains editable grids containing words which, when clicked, provide speech feedback and send the words to the document.

WriteOnline is the online version which schools can licence on an annual basis.

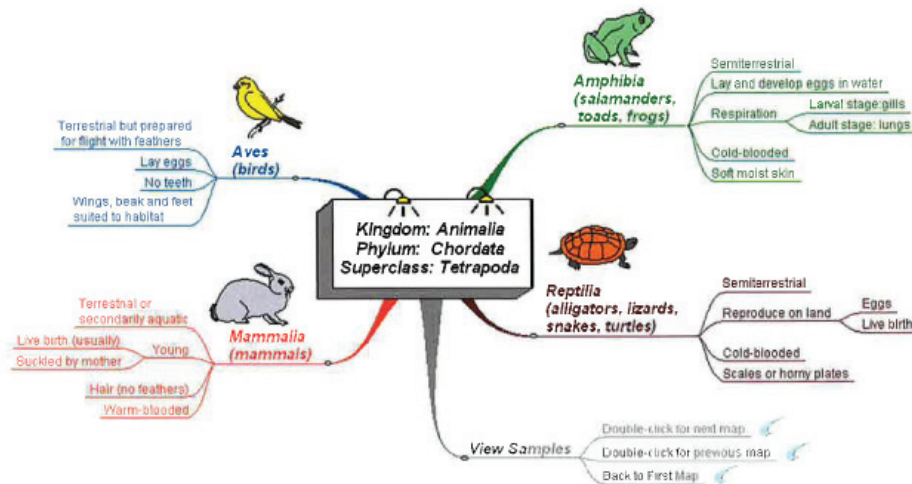
Clicker5 provides a variety of grids and talking book options. You can make your own grids, add images, record sound into pages and create your own materials for your pupils. Register free and download hundreds of additional curriculum grids from <http://www.learninggrids.com>. (Mainly for Primary schools)

Mind mapping

Mind maps, created by Tony Buzan, (<http://www.thinkbuzan.com>) use keywords to prompt memory and association, and encourage the use of colour and images. They can provide people, including those with dyslexia, a better way to organise and assimilate information. <http://snipurl.com/1y5o1o>

People use Mind Maps for

- **Planning** – projects, essays
- **Organising** – shopping lists, daily plans
- **Note taking** – lecture notes, capturing your next big ideas
- **Studying** – review and revise in preparation



Digital Mind Mapping tools are available free of charge and to purchase. Here is a selection in no particular order:

- Online thought bubbles www.bubbl.us - basic version is free
- Freemind
- Mindfull
- CMaps (on C2k post primary LAN)
- Kidspiration
- Inspiration
- Mindjet

New Technologies

Schools may wish to encourage parents to support their children by providing personal, portable touch devices. These can be used, for example, to support a pupil on the autistic spectrum by providing a portable visual schedule. They can be used as an alternative to a BigMac and can have some fun educational apps installed.

They could consider iPod, iPad, Nintendo DS (can record video), Android based tablets eg Samsung Galaxy Tab, Wii (good for coordination and physical development, Brain Gym, attention, turn taking, social and life skills). This mobile technology, which many pupils are already familiar with, is cool and motivating! Keep an eye out for new devices as this technology is rapidly developing.

Creativity through multimedia

Consider the use of multimedia tools which appeal to the senses. Many children with learning difficulties are motivated by multi-sensory activities eg moving image, sound and interactivity.

What do you already have in the classroom that could appeal and motivate?

- **A digital camera** can record evidence, photographed by a child, without the need for written explanation – a picture paints 1000 words!
- **A voice recorder** – handheld recorder, mp3 player, ipod or a USB microphone. All ideal for capturing voice and podcasting.
- **A video camera** is worthwhile considering. It provides motivation whilst developing communication skills, planning and collaboration.
You might consider something like a Flip Video camera with FlipShare software. There are similar USB video cameras which easily download the captured video to the computer via USB eg Digital Movie Creator.

Just starting out? Many digital still cameras can record short video, though not all have sound. This is a low cost introduction to start your pupils filming video clips. Use Movie Maker (PC) or iMovie (Mac) to edit.

Benefits of using creative multimedia

- Watch Year 10 pupils speaking Spanish at boxoftricks.net
<http://snipurl.com/1ytpq6>
- Top tools for digital creativity from helenabutterfield.net
<http://snipurl.com/1ytrdh>
- An example of podcasting:
<http://www.teachers.tv/videos/podcasting-in-the-classroom>

See also Section 3

3. Issues specifically for Northern Ireland schools

Inclusion Software available on C2k local network in schools.

More information is in the Software Zone on

<https://www.c2kexchange.net>

- Texthelp! Read and Write
- PenfriendXP
- Clicker5
- Writing with Symbols
- Dyscalculia Screener
- Wordbar (post primary)
- Zoomtext
- Kurzweil
- Jaws

Connecting other computers to C2k Networks, provides information on attaching other computers to a school system in order to access the internet. The owners must agree to have their current anti virus software uninstalled and to accept a new anti virus product. The device must have a built-in network point. i.e not wireless <https://www.c2kexchange.net> . Helpsheet A097.

Future: New technologies and provisions which allow users to have an internet connection from their personal devices within school.

MIS School management information software can help with the following:

- Managing SEN Student Data
- Maintain your SEN register
- Manage and track SEN Reviews
- Record Provisions for SEN pupils
- Link SEN documents to the pupil record
- Record Agents and Agencies involved with the pupil
- In SIMS.net you can analyse progress using Assessment Manager and record behaviour issues
- Contact your local C2k team for more information (or search for SEN in C2kexchange)

3a. LearningNI (LNI) is Northern Ireland schools regional learning platform – a secure online learning environment

By setting up an All Courses space for your class you can:-

- Present interactive links and resources for pupils to access anytime anywhere.

- Improve motivation; reach all students; create groups for your class (and beyond) for focussed learning and collaboration.
- Add new social tools such as a blog or a wiki webpage for collaborative work - very motivating for pupils - it's the 21st century way to communicate!
- Add a Digital Dropbox (Protected Workspace) for pupils to upload finished homework.
- Child not at school? You can provide work in the learning space for 24 hour access.
- Get started by searching in Learning NI for the "course" entitled **LearningNI for All!** You will find examples and ideas to get you thinking about how to use a secure learning environment to support and enhance pupil learning, including those who need extra support. Contact C2k Curricular services for more information. 028 9027 9030.

In addition you can access licensed content and resources:

- **LearningNI Library:** Curriculum library contains thousands of resources; Staff Library; a chance to publish; Search – which can be used as a safe search by your pupils.
- **LearningNI Newsdesk:** a daily online news site with attention-grabbing news features linked to the curriculum. Access it by text or podcast. Send in your responses via Have Your Say or Be a Reporter. Suitable for KS2 and KS3 including learners with special needs.
- **Video on Demand** (available in all schools). Did you know you can access free educational videos with a YouTube feel? You may need to enable it via the Personalise window in LearningNI. You'll find videos categorised by Primary, Post Primary, Special

and CPD. Eg Look under the CPD tab for videos relating to managing behaviour.

Adults can publish videos and this area will grow as the NI community adds more content. Why not create a class video project and publish it here? If you find useful videos you can publish them here (as long as you have permission).

- **Video Conferencing** Is a pupil unable to make it to school? Is bad weather affecting pupil attendance? You can keep in touch by video conference to support an LNI course (group) area. This is ideal for transitioning to a new school, Area Learning Partnerships and SENCOs. All schools have the facility to use video conferencing (provided by C2k). Find out more at Virtual Classroom
https://www.c2kexchange.net/c2k_services.html

A note of caution! Not all teachers or pupils may enjoy using the technology therefore appropriate training for staff and pupils is essential.

4. Further Professional Development

- **The Capacity Building handbook** and other professional development material is available digitally from **LearningNI library > Staff > Capacity Building for Inclusion**. You may search by sub topic for specific content.
- How to help **a child with Visual impairment** from Inclusive Consortium Training Syndicate. Click below to learn how basic ICT can help pupils with a visual impairment. In most cases the pupils will be accessing exactly the same curriculum as their peers, but will need to make extra use of technology.
<http://snipurl.com/1xtjo9>
- **This VI unit considers different media** (visual, auditory and tactile) and different technologies which pupils can use

for independent study. From Inclusive Consortium Training Syndicate. <http://snipurl.com/1xtk2n>

- **RNIB for mainstream schools** offers support and advice for teachers based on real-life examples and including early years, developing social skills, curriculum subjects and research. <http://snipurl.com/1xtbgw>
- Inclusive Consortium Training Syndicate (**ICTS**) **training units for SLD teachers** – written in 2000. However the general content is excellent and will provide information and know-how for any teacher who has a pupil with severe disabilities. Well worth exploring! <http://snipurl.com/1xt0sa>

The following programmes may be available in the LearningNI Staff Library> Capacity Building for Inclusion. DE will alert all schools when the materials are available. In the meantime they can be accessed through National Strategies.

- **Inclusion Development programme,** <http://snipurl.com/1xt0ws> from National Strategies DCSF England, is designed to increase the confidence and expertise of mainstream practitioners in meeting high incidence of SEN in mainstream settings and schools.

Contains teaching and learning resources, training materials, guidance on effective classroom strategies ,models of good practice for multi-disciplinary teams, information about sources of more specialist advice.

- It is free to sign up for these reflective self-study modules:
 - ▶ Dyslexia and speech, language and communication needs (SLCN). <http://snipurl.com/1xt306>
 - ▶ Supporting pupils on the autism spectrum. <http://snipurl.com/1xt3cr>

- Doorway Online is a collection of free learning activities originally developed with funding from Scottish Borders Council. The suite comprises highly accessible educational activities that learners will find easy to use independently.
<http://www.doorwayonline.org.uk/>
- Emotions colourwheel from Do2learn.
<http://snipurl.com/1xt1be>
- Educational Games from Woodlands Junior School Kent:
<http://snipurl.com/1xt1k3>
- SEN Teacher provides cost-free teaching & learning resources for students with special needs and learning disabilities.
<http://www.senteacher.org/>

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