

Digital assistive technology for children with special needs

Digital assistive technology (DAT) refers to equipment and devices that are electronic in nature (ie computers, tablets and all related software and hardware) and can enable a person with a disability to access a range of functional activities (communication, play, academic work, leisure, environment control).

When to introduce DAT

If there are any limitations in participation due to delay in acquiring skills or due to an existing disability, DAT should be introduced as early as possible.

What to consider

1. **Purpose of the technology** eg communication, literacy, typing, gaming, environmental control, etc.
2. **Functional needs of the child or young person**, such as the type of communication they use, their physical ability, sensory problems, behaviours, cognitive skills, etc.
3. **Positioning** required, eg chairs, desktop, specialist mounting, etc.
4. **Training** required for learning and updating the new system.
5. User's **preferences and trials**.
6. **Other people involved** — parents, siblings, teachers, teaching assistants, carers, therapists, etc. Bring them into the discussions and assessments every time.

What device should I recommend?

- Make a list of all essential factors required: size, weight, purpose, memory size, battery life, price, ease of use, preferences, compatibility with other school systems, etc. Choose a device that ticks most boxes, usually a compromise between all relevant factors.
- Try to set up a **trial** (or several) with the user beforehand, particularly if the equipment is costly.



Easy changes to make

Things you can change to meet the needs of the user and which are usually standard as part of the equipment (they might be found in 'settings' or 'ease of access centre'):

- Mouse settings
- Keyboard settings
- Visibility/contrast/size of information presented on the screen
- Text to speech/narrators/screen readers
- Speech recognition/dictation
- Switch accessibility

Train the child (and people helping him/her)

- Develop mouse and keyboarding skills, from an easy to hard sequence, and practice each skill individually (i.e. clicking, dragging, double click, drop-down menus, etc.)
- At times, additional software, hardware or apps may be required for specific difficulties (ie larger keyboards, trackerball mouse, typing skills/literacy software, apps to teach drawing or letter formation, etc)
- Develop touchscreen skills when using an iPad or other touch screen device (ie swiping, banging, tapping, pointing, dragging, releasing, turning pages, etc).



- Remember that placing items flat on a desk might not work for everyone. Get knowledgeable about mounting solutions and 'cases' that will support your equipment at a better angle for viewing and access.
- Don't just teach typing: increase Word processing skills as well! Show them strategies to use other function keys on the computer to edit, organize, present and save their work the right way.
- Switches or simple forms of technology may be required for children with more significant difficulties. Again, a training period may be required for them to learn their use.
- Do not insist on touch typing (using the correct fingers for every key) for children with significant motor difficulties. At times using just two fingers for the whole keyboard is just as effective.
- Keep up to date with technology available and how to make it work for a variety of users/situations. If in doubt, look online or ask for help from your local AT or AAC teams.



Further information and suppliers

- Inclusive technology: www.inclusive.co.uk
- ACE centre: www.ace-centre.org.uk
- Ablenet: www.ablenetinc.com
- OTs with apps: www.otswithapps.com
- Activities page: www.helpkidzlearn.com
- Applications: www.appsforaac.net