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Assistive Technology

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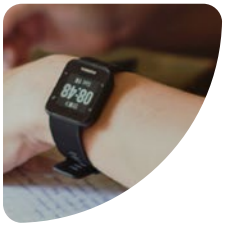
A guide to making reasonable adjustments and creating accessible learning opportunities



COGNITION & LEARNING

SENSORY &/OR PHYSICAL NEEDS

COMMUNICATION & INTERACTION

SOCIAL, EMOTIONAL, & MENTAL HEALTH NEEDS

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nasen House
4/5 Amber Business Village
Amber Close
Amington
Tamworth
Staffordshire
B77 4RP
www.nasen.org.uk

Empowering Tech Ltd
The Mansion
Heywood House
Park Lane
Westbury
BA13 4NA
www.empoweringtech.com

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Introduction

Accessibility is the cornerstone of participation and learning. To fully realise the abilities and potential of every learner, equity of access must be provided at every age and every stage.

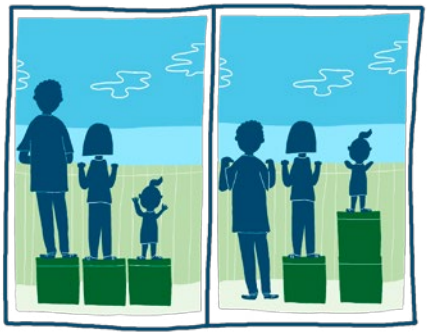
Fundamentals:

Everyone needs to be able to...

- Engage in play
- Continuously learn and grow
- Adapt to transitions and changes
- Cultivate self-care practices
- Attain personal independence
- Foster self-directed learning strategies
- Advocate for conditions that promote holistic well-being

The desire to be successful when developing new skills and abilities drives us. However, the level of challenge should never be so great that we cannot progress.

If learning differences and disabilities are not adequately supported, life-long repercussions to confidence, integrity, and ability to integrate are likely outcomes. Failure to recognise needs and provide timely and appropriate support often results in serious social and economic consequences for the individual and for society.



Equality Equity

Great teaching paired with assistive technology, provided as early as possible, is the accessibility success formula. Developing and maintaining your knowledge of tools that enhance capability can be transformational. Barriers can be removed when we understand and commit to providing equitable access.

The school SENCo is often the first point of contact for parents and teachers who are identifying barriers to learning, and there is an underlying expectation that they will have a knowledge of tools, strategies and implementation pathways that will translate into appropriate and immediate help.

SENCos are often tasked with developing best practices and providing training to support learners with SEND. Building teacher confidence in using assistive technology and promoting inclusive learning strategies is crucial for fostering independent and self-regulated learning.

The work is never complete; even when we have provided appropriate tools and set up effective systems, we must be responsive and aware of changing needs. Providing impactful support is a process of ongoing review and reflection. To ensure the sustained effectiveness of the support we provide, the key strategy is to foster a collective responsibility for accessibility and its maintenance.

About this miniguide

A Definition of Assistive Technology (AT):

AT is any device, software or service that can assist learners in the completion of, and participation in, learning and development activities.

This miniguide aims to raise awareness of how AT can:

- Provide solutions to the challenge of learner diversity with practical examples
- Help learners demonstrate their knowledge and skills
- Become a normal way of working and a normal way of teaching

By acting on the advice in this guide you will be able to:

- Develop strategies to achieve the successful implementation of AT
- Understand how to make reasonable adjustments at the point of need
- Explain why implementation of AT must be a shared responsibility
- Plan AT for implementation and anticipate ongoing AT support needs

Ponder Points:

- How do you currently integrate AT into your daily work, and how does this benefit both learners and the teachers who adopt this practice?
- How can implementing a strategy to normalise the use of AT bring about positive changes in a) your setting and b) your professional practice?
- What are the key factors for advancing equitable accessibility, and how can they be leveraged positively?

Chapter Headings:

1. Challenges and commitments
2. Working knowledge and the scope of AT
3. Assess, Plan, Do, Review
4. SETT Framework
5. What challenges do we need to support?
6. Essential for some, useful for most, and accepted by all
7. Important documents and helpful organisations

Are you considering providing a specific assistive technology strategy? Or perhaps you're planning to implement a school-wide technology rollout that would benefit all learners?
If so, this 4-step implementation plan will be helpful.

1. **Create the map**

Orientation: Assess the challenge and create a plan

Vision: Set up a secure working party to develop your vision with a focus on equity

Engagement: Obtain wider approval when developing new approaches

Identify who is taking overall responsibility and develop a team to help decide and implement action points.

Where possible, involve the senior leadership team, teaching staff, technical support staff, IT managers, eLearning leads, governors, and parents.

Finance: Find the funds and make decisions about the allocation of spending

2. **Develop the path**

Collaboration: Good tech companies will support your training needs

Expertise: Consider developing a team who will embed knowledge and expertise

Training: Build in regular training to establish confidence. Lead by demonstrating the use of AT as a normal way of teaching as best practice

Commitment: Gradually increase the capacity and responsibility of all

3. **Implement**

Adoption: Develop a culture where using AT is the normal way of working

Confidence: Encourage participation in pilot projects and case studies

Implementation: Discuss successful deployment pathways and use these strategies to scale up

4. **Momentum**

Resistance: Collect evidence, share good practices, minimise barriers

Impact: Recognise cognitive overload and accept the need to be flexible with some outcomes

Feedback: Obtain feedback, act upon it appropriately, keep planning documents live

Ponder Points:

- Who will support with planning and the realisation of the plan?
- When is the right time to introduce an AT-enabled approach?
- How can a wider commitment to AT-friendly practice be developed?
- How could home and school use of AT be developed?

Providing AT support for an individual

The SEND Code of Practice (2015) for England promotes the use of the 'assess, plan, do, review' cycle, also called the Graduated Approach. This helpful framework can be used to achieve positive outcomes when introducing AT solutions.

An adjustment passport pathway - parts of the map may already be in place

Transition documents can help track what has already been tried. Include information on what did and what didn't work.

Knowing about a system of tools and strategies that have been tried helps us to meet needs and know what support can be delivered.

Check to see if documents have already been created by professionals like Educational Psychologists (EP), Occupational Therapists (OT), Learning Support Advisory Teachers (LSAT) or Speech and Language Therapists (SALT).

Acknowledge that putting the right AT support in place can be challenging for some stakeholders. Anticipate the need for regular support, modelling, and adjustments. Be aware that a broad range of support is often available and have the confidence to experiment.

Consider taking a blended approach that incorporates accessibility features, AT devices and human support as this contributes to a more holistic package of support.

Passports

A Transition Passport is a document that recognises the need for specific accommodations for learners with SEND. Ensuring that information travels with the individual is crucial for well-being and future success. We have a moral responsibility to ensure that accommodations and AT support strategies continue. Always check for incoming transition information. Ensure that you have a plan to share your knowledge in a Transition Passport that travels forward and is available to the individual.

Disability Adjustment Passports help education providers and employers ensure that equity of access is in place from the outset. They normalise the use of AT to enhance productivity and success in the workplace and beyond. Embedding the idea of an Adjustment Passport Pathway must start in schools. They are essential to delivering equity of access to learning opportunities.

Ponder Points:

- Could individual learner QR codes provide information about accessibility? A QR code looks like this:

  They can be scanned by mobile phones and are a link to more information on a webpage.
- Why should a passport highlight strengths in addition to accessibility needs?
- What would be the challenges of implementing a passport QR code system?

Here are 7 good reasons why everyone should develop a working knowledge of AT:

1. To increase the extent to which all individuals can access and participate in the curriculum and meaningfully engage with opportunities.
2. To enable more learners to experience success and make it possible to maintain high expectations for all.
3. To understand how the needs of all learners - including those with SEND and those with English as an additional language - can be facilitated through a school-wide AT-enabled approach.
4. To support more learners through more effective accessibility plans.
5. To contribute to the aims of the Equality Act (2010), that we are 'versatile and flexible, ensure consistency and accessibility for all, work collaboratively, encourage personalisation, vary learning opportunities and embrace equality, diversity and inclusion'.
6. To contribute to improvements in assessment outcomes through enabling greater equity.
7. To ensure that an individual's normal ways of working, access arrangements and accommodations are known, straightforward and applied without challenge.

Why adopt a normal way of teaching approach?

Spotlighting is the barrier that stops learners from using the tools that they need. When AT use is normal, demonstrated and accessible to all, stigma is reduced.

The Literacy Toolbox Approach to raising levels of literacy

The Literacy Toolbox approach can be introduced into any classroom. Some tools are mid-tech, some are very low or even no-tech, but all can be used to support confidence and the development of reading skills.

- The 'box' is open, and the equipment is available for all to explore, use and choose at any time.
- The teacher regularly uses items in the Literacy Toolbox and models using them as the lesson develops.
- They are used in one-to-one teaching points, as part of demonstrations and to support explanations.
- Learners are encouraged and praised for exploring items in the box as part of their journey to self-directed support for learning.
- The teacher is modelling and utilising the use of these tools as their normal way of teaching.
- The learners are using the tools as their normal way of working.

For more information about the Toolbox Approach from Scanning Pens follow this link: **www.scanningpens.co.uk/Toolbox-Approach-SPUK.html**

Understanding the scope of assistive and adaptive technology

Often, the entry point to learning about assistive and adaptive technology is when it is identified in an Education, Health and Care Plan (EHCP).

Reports from EPs, OTs and Learning Support Advisors also identify effective strategies. These may advise the use of systems, programs and tools that will need to be explored before they are applied.

The landscape of available supports has evolved significantly over recent years with a wide range of tools, from low-tech and inexpensive to costly high-tech solutions.

If you are supporting a learner who is experiencing a challenge accessing the curriculum, there is probably a solution and implementation information available.

It is helpful to classify the types of support available into four areas:

1. Accessibility platforms and apps
2. Stand alone supports
3. Adaptive tools
4. Integrated tools

Accessibility platforms and apps

These are accessibility features and add-ons. They are available to anyone who is using a computer. They have been designed to support a diverse range of accessibility needs and can be customised to improve the user's experience and productivity.

Learners with visual impairments, including colour blindness, scotopic sensitivity and low levels of vision can use immersive readers which help with the processing of text. It is possible to change the colour of backgrounds, alter the appearance and make the viewing experience more comfortable. **Screen Magnifiers** and zoom-in functions can also assist with focus.

All the big platforms have standard accessibility features. **Microsoft 365** has inbuilt tools that can be permanent, temporary, or situational. They include a range of tools including dictation devices that will enable learners to talk to their device which will record what is being said as digital text. This is valuable if you are unable to type, have dyslexia or are developing talk-for-writing skills.

Read Aloud is a screen reader that will read back text enabling it to be heard, and for the user to read what has been written. This is helpful for reviewing and proofreading, particularly for low-vision users.

Live subtitles are helpful in applications like PowerPoint which enables **closed captions** to be inserted into presentations to support learners with hearing impairments. Presentations can also be given with live subtitles turned on to enable a better understanding of what is being said. English language learners can benefit from **translations** that can be read in another language.

AT toolbars work alongside any application on your system. This means that you can choose the tools you need to use at any time. Examples include **Texthelp** and **ClaroRead Plus**. **MatchWare MindView** supports mapping and organisation.

There are accessibility options that can meet a wide range of needs. If every teacher were confident to use accessibility options and demonstrated them as part of their normal way of teaching, this would make a very positive difference to learners with access needs.

- **Dark Themes** can increase concentration time and reduce visual stress. Microsoft Office has dark themes for Word, Outlook, Excel, and OneNote.
- If using Word on a tablet, you can also use **Voice Control** for speech recognition and **Read Aloud** to have work read back to you.
- Typing suggestions and **Word Prediction** can be used in any application to support learners with a specific learning difficulty to work efficiently.
- Explore **Screen Display** and preferred set-ups for those with sight issues.
- **Immersive Reader** supports text-to-speech.
- **Dictate** on the home tab in Word allows speech recognition.
- Notes (which comes as part of iOS) on an iOS device allows a microphone to be used for **Speech Recognition** and converts spoken content from speech to text.
- Google Docs has **Voice Typing** tools. To enable **Text-To-Speech** conversion, the addition of a ReadWrite toolbar could provide instant playback.

Stand-Alone Supports

These tools focus on performing one task extremely well. They may also integrate into computer-based systems where more features can be applied.

A good example of a stand-alone support for reading is the **C-Pen Reader 2™**. This hand-held device converts printed text to speech. It has a range of accessibility features that enable it to be personalised. Further personalisation is possible, for example, a user with a slower speed of processing or who is learning English as an additional language may benefit from a longer word pause to enable confident listening and understanding. The pens contain Oxford Primary and Collins dictionaries to enable learners to rapidly decode unknown words. This enables confident progression with learning because help is being received at the point of need.

Scanning Pens are Google Partners because the pens also work as a digital bridge. The scanned text can be imported to any application on a computer where the cursor is flashing. Support is provided discreetly via personal headphones. This means that learners can get the support they need and do so without drawing attention to the challenge that they are experiencing. The orange **C-Pen Exam Reader 2™** enables learners who have embedded the use of **C-Pen Reader 2™** as their normal way of working to use an examination-approved version of the pen when taking tests and formal qualifications.

For more information about Scanning Pens please navigate to: **www.scanningpens.co.uk** or follow this QR code to find out more.

There is such a wide range of tools that it is impossible to list them all.

This is a curated list of devices teachers could integrate into their normal way of teaching:

- **Scanning pens** for the rapid finding of key vocabulary support for reading.
- **Talking tins** and programmable buttons to record and play back speech.
- **AV1 telepresence robot.** When medical issues prevent learners from attending school, AV1 enables the learner to have a presence in the classroom and interact with the lesson via the AV1 app.
- **Memo timer** from Abilia gives a visual representation of time with a countdown when understanding time is difficult.
- **The lightwriter SL50** is designed to support literate users who are unable to communicate effectively through speech, for example, those with selective mutism.
- **Tiles** and smart tracking devices can help with locating and finding items.
- **MP3** players and dictaphones for audio recordings. Providing audio books or pre-recording instructions can provide essential audio support for dyslexic learners who would struggle with text instruction and reading tasks.

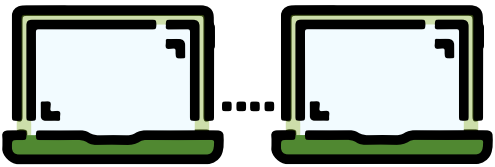
Adaptive tools

Many of these helpful tools are inexpensive and low-tech. Others are more specialised and are helpful to increase control and comfort for weak fine motor skills or gross motor difficulties.

- **Pencil grips** are inexpensive, low-tech solutions to holding a pencil yet transformative for being able to write legibly. Stabilo **Ergonomic Pens** may also be a good solution for learners developing cursive handwriting skills.
- **Writing slopes** can help with physical positioning and comfort when writing. Angled writing boards can be purchased, but the same effect can be explored by using a sloped lever arch file as a starting point.
- **Standing frames:** wheelchair users need time in the day for a change of position. Standing frames take up a lot of room. You may need to plan for storage and access.
- **Midline stability** is important for posture and positioning. AT devices such as switches should be positioned in the midline of the individual so that things remain in central view. Avoiding the crossover of arms beyond the midline increases comfort and access. Always consult an occupational therapist and physiotherapist before making positioning decisions or changes to posture.
- **Trays** are often forgotten when wheelchair provision is made. This is crucial for AT devices and hardware such as mounting trays for switches or joysticks with non-slip mats. Please ask the Occupational Therapist if your wheelchair user needs a tray. Essentially this is a table that can travel with the learner.

Integrated tools

Integrated tools connect internal and external applications, systems, and sub-systems into a single integrated solution. They allow assistive technology to work seamlessly across different types of equipment and software. If you are exploring integrated tools, it is likely that you will already be receiving support from an Occupational Therapist to meet the needs that have been identified in an EHCP and are trying to solve a very specific accessibility issue.



Providing AT access for learners with physical disabilities:

Screen sharing via the interactive whiteboard.

- Wheelchair users are often unable to access an interactive board because it's at the wrong height. This can prevent the sharing of work with the class.
- A helpful solution is to provide screen-sharing software that is available to all through PCs or tablets.

Dedicated screen-sharing software.

- AB tutor (classroom management software) can display work and enable interaction with the class. This can also increase accessibility for partially sighted individuals or wheelchair users.

Joystick access with on-screen keyboard

- Wheelchair users with physical disabilities may find a joystick control on their wheelchair that can connect via Bluetooth to their laptop helpful. This is an option available on some electric wheelchairs.

- Enable the learner to control both the wheelchair and the laptop without the addition of a bulky joystick on their tray. Using the joystick with an on-screen keyboard means the user can write with the joystick into any application. Wheelchair joysticks don't have left and right buttons, so the use of an adaptive software called **Dwell Clicker 2** can enable the user to have an on-screen menu to select all mouse operations visually.

  Eye gaze technology supports visual tracking and can be essential for supporting speech or mobility impairments.

  Grid Pad software centralises control and can be used with Eye gaze to provide environmental control (control of electrical equipment such as lights, heaters, and curtains) and control of communication tools such as augmentative and communication systems. The Grid also supports teaching and learning as well as email and texting tools.

Magnification for the visually impaired:

- Identify shortcut keys that the learner can use to switch on magnification options. For individuals with visual impairments, laptop screens can be very difficult to see.
- Accessibility options are available on Windows 10/11 and iOS changes can be made to make the system more customizable for visual needs.
- It is important to work with the learner on the best settings and to consult with any visual impairment services with which the learner is working. You will find them named in the learner's EHCP.
- More excellent information can be found via **Magnification for the visually impaired** at vitaltech.org.uk.

Graduated Approach:

Assess, plan, do, review, which is known as the graduated approach, can support the implementation of an AT introduction plan. It is a process of guidance that drives a cycle of personalised support and reflection.

The graduated approach can help organise our thinking and understanding of what is happening when we implement an AT as part of a learner's intervention package. The process should be driven by **SMART targets**: Specific, Measurable, Achievable, Realistic/Relevant and Time-bound. Routine record-keeping and monitoring are essential to help us understand the impact of the technology we have provided. This cycle can help to inform next steps, justify spending and contribute to provision mapping.

Education Health and Care Plan and the Annual Review:

Where specific support needs have been identified, for example, in an Education, Health and Care plan (EHCP), there is a legal duty to arrange the educational provision specified (Children and Families Act 2014). The Annual Review should ensure that AT supporting strategies are still relevant and impactful.

General advice:

If change is needed, make the change. Be responsive within cycles of assessing the effectiveness of an AT provision. Don't wait for the completion of a cycle before making changes. Wherever possible and if things are not working out as hoped for, it is better to work collaboratively to resolve problems.

Save as:

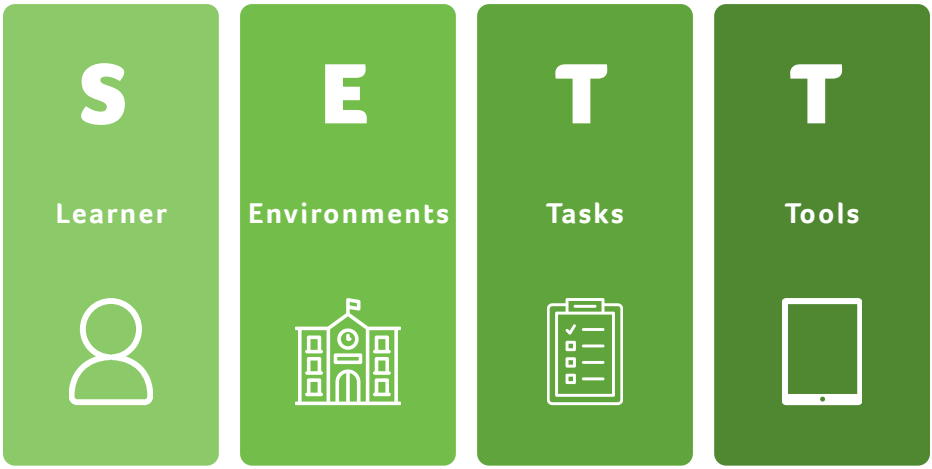
Treat documents that contain AT strategies as working documents. They need to remain 'live' and responsive to changing needs. As technology evolves or needs change, you may need to alter provision. Give your docs a version number and be prepared to 'save as' often.

Avoid freezing:

Rather than delaying putting a strategy into place because you are not sure if it will work - go ahead and try. Sometimes we delay because we are worried about doing the wrong thing. Nobody will blame you for trying something. Make a start by exploring the ways that a situation could be improved.

Ponder Points:

- Is there a plan for maintaining and managing the responsibility for equipment?
- How do you check that everything is working as it should?
- If problems with AT arise, how can they be addressed quickly and amicably?
- Could you make use of forms or online reporting to gather information?



Created by Dr. Joy Zabala, the SETT Framework organises information. It helps us to match learner strengths and needs with AT tools that optimise access. The framework helps us to define needs into four columns, Learner, Environment, Tasks and Tools (SETT). By following this framework, we can avoid prescribing an AT tool that we think will solve a problem. Instead, SETT helps us to understand, create conditions for intentional collaboration and achieve a learner-centred approach.

Learner

Identify areas of concern

Ensure that an investigation of needs has taken place before providing any AT solutions. Utilise screeners, external services, transition information and teacher knowledge. Where multi-disciplinary teams have been involved historically, review the information available for pertinent advice or signposts (for example, where a learner may have been discharged from a service but there is an expectation for monitoring to have taken place).

Gather information widely and review information related to concerns

The process of investigation should involve learners, carers and parents and take place in a setting where all parties feel comfortable.

Provide the support needed so that all stakeholders can effectively communicate their concerns (for example, where a parent may be dyslexic, pre-reading support may be helpful).

Although it is tricky to mitigate the unknown needs of the people involved in this process, it is simple enough to ask if any additional support is required and, if so, what that might be.

Environments

Where will the support be provided?

Ensuring accessibility is crucial regardless of the level of support required, encompassing people, locations, and equipment. For instance, relying on a text-to-speech feature or program on a computer for reading support may not be effective if there is no computer access available in a learner's home environment.

People:

Do we understand attitudes and expectations?
Have we explored knowledge and willingness to engage?
Are there needs and factors that may limit or hinder the process of providing support?

Location:

When evaluating decisions that may lead to separation instead of inclusion, it is crucial to consider the elements being eliminated or diminished.

For instance, removing a learner from classroom-based learning might decrease inclusion but potentially enhance specific skills. Has this matter been thoroughly discussed? Are all stakeholders in agreement?
In cases where a disability is multifaceted and demands specialised equipment, has the team examined the individual's everyday experience? For example, managing equipment, addressing personal needs, utilising learning tools, and fulfilling mobility requirements within various settings. Has the planning accounted for aspects such as travel, home life, trips, extracurricular activities, or work experience?

Equipment:

What is commonly used? Is it possible to create an approach where a variety of assistive and adaptive technologies are part of the fabric of the environments where we teach and learn?
For example, are there wi-fi blackspots that can hinder accessibility?

Arrangement of learning environments:

Is it possible to see, hear, or move out of the room to a breakout space? Is the lighting appropriate? Is ambient volume or temperature appropriate? What could be provided to support individuals who are struggling with the conditions of the environment provided?

Tasks

Which specific tasks will the learner encounter as they navigate their daily life experiences and learning journeys? These tasks may play a vital role in facilitating progress towards the successful attainment of goals and objectives. Consider communication, instruction, active participation, productivity, and the ability to exert control over an environment.

Tools

In the SETT Framework, we are advised not to voice solutions that we may initially think are appropriate. This is because it detracts from the identification process and can pull a conversation towards the worth of a particular tool. When this happens, we tend to lose sight of the bigger picture.

Ponder Points:

- Is SETT a tool that would work in your setting? If not, what is the alternative?
- How could peer-to-peer modelling improve the experience of AT users?
- What are the problems with a one size fits all approach?
- How many solutions could be implemented at one time while still ensuring that that they are mastered and appropriate in a range of environments?
- How is evidence on the impact of AT being explored and collected?

SEND and tools: a process of exploration and feedback

Schools often organise their structures for learning support around the four broad areas of need. These are broad areas under which primary needs are identified and which help to understand what action may be required. In practice, the challenges that individuals experience traverse across areas and needs may change over time.

Over the next few pages, a range of AT tools has been organised into a matrix by area of need and then by the challenge. Think about the SETT model and look at the area of concern that you are trying to address before looking at the examples of AT that may be able to support this challenge. Links to resources are embedded in the text. If you are reading the paper-based version of this document, you may wish to search online the key terms or refer to the digital version of this document available on the nasen website.

Questions to consider prior to a new technology being implemented:

- One solution may have been explored by the school but has the full range of solutions been considered?
- Are there e-safety implications for the AT being introduced?
- Can you recruit your students as digital and AT champions?
- Could this group pioneer and then support the delivery to the wider team?
- How can reluctant adopters be supported to utilise new technologies?
- What will be the training implications to staff and pupils?
- Will time be set aside to delivery of training?
- Who will do that training, in-house or supplier?
- Are we are going to run a small-scale pilot scheme?
- What staff will be involved? What learner groups should be in the pilot?
- Are there any time considerations or staff commitments to consider?
- Do we fully understand the problem that we are trying to solve?
- How will we collect evidence as the pilot runs?
- What will constitute a success and how can we evidence that?
- When and how will this AT be rolled out? If there are difficulties, who will address them?

Cognition and Learning

Specific Learning Difficulties (SpLD)	
Area for support	**Potential solution**
Dyslexia and reading support needs	Scanning Pens, ClaroScanPen, Spoken Content in Apple Products, Touch Type Read & Spell
Comprehension support	Texthelp Read & Write , RocketBook
Support for spelling	Typing suggestions in Windows 10/11
Dyscalculia and recognition of number	Number Quiz (iOS)
Mathematical reasoning difficulties	Symbol processors IXL Maths Matrix games 3 , Splash Learn, Numbershark
Dysgraphia and handwriting support	Echo Bluetooth Smart Pens with Clever Books, Optical Character Recognition (OCR) apps like Claro Speak Plus
Touch typing support	Microphone apps & predictive text software, Nessy Fingers, DanceMat , TypingClub

Specific Learning Difficulties (SpLD)	
Area for support	**Potential solution**
Development of organised thinking	Claro Writing Helper, iPad Apps for Learners with Dyslexia – Call Scotland
Recording of audio information	Glean, Digital Recording Devices
Organisation of audio information	Microsoft Stream, OneNote, Transcription techniques into Dragon Speech Recognition - Mobile solutions using Digital Recording Devices
Creation of idea maps to support personal thinking and planning	Mindmapping software ; Inspiration 10, MindView, Free Online - Mindmeister
E-Book reading support	Dolphin EasyReader, Marvin 3
PDF support for writing	ClaroPDF Pro – Text to Speech, Adobe Acrobat Reader for Docs, iAnnotate 4 – PDFs and More, GoodReader PDF Editor & Viewer
Artificial Intelligence (AI) - powered writing assistant	A rapidly developing technology that formulates and produces the required text

ADHD - Attention Deficit Hyperactivity Disorder	
Area for support	**Potential solution**
Concentration and time management	Tiimo
Managing impulsive behaviours	Accept tools, Good behaviour app
Turn taking and pro-social behaviour	Futabi
Active listening	Glean, C-Pen Reader 2 - engages simultaneous learning through visual kinesthetic and auditory reading
Developing individual responsibility	Remember the Milk, Class Timetable
Organising information effectively	Matchware - organising academic information into reports and projects

Communication and Interaction

Speech Language & Communication Needs (SLCN)	
Area for support	**Potential solution**
Speech development and the production of speech sounds	Talking Carl, Easy Dyslexia Aid
Word finding and language acquisition	Correct Spelling Checker, Splingo, Reader 2
Development of expressive language for thoughts and ideas	Splingo, Clicker 8
Responding appropriately to verbal cues and using appropriate language for social interaction	Choice Board
Using expressive communication in written or spoken structures	Clicker 8
Developing the language of choice and choosing skills	Choose it Maker, Choice Board

Communication and Interaction	
More profound communication difficulties would need a referral to Speech & Language & OT services. Solutions that support an individual's voice can include AAC (Augmentative & Alternative Communication Devices) and VOCA's (Voice Output Communication Aids)	
Autistic Spectrum Conditions (ASC)	
Understanding the use of non-verbal and verbal communication	Clicker Communicator, Sono Flex Lite, Proloque2Go
Understanding social behaviours and developing interaction skills	Avaz Clicker Communicator
Development of flexible thinking	realMyst
Development of coping strategies	Good Behaviour
Big picture thinking	Mindview Inspiration 10 Popplet Lite
Communication support & Language planning	Widgit Symbols LAMP TD Snap

Social, Emotional & Mental Health Needs (SEMH)	
Area for support	**Potential solution**
Support for wellbeing	Brain in Hand
Managing significant change including loss Developing a better understanding of the personal impact of stressful situations	Headspace, iView Health, Emmo
Support for anxiety	Tiimo - a prompt for reminders, Exam Reader 2 - reading support for examinations
Managing panic and physical responses to stressful situations	Smart Watch self-monitoring alerts as a discreet self-management tool: iView Health, Fitbit
Support for emotional regulation Creating a formalised system of rewards	Reward systems - apps that chart behavoiur targets set jointly e.g ClassCharts. Learners from Edukey Reward Charts by Stellar. Earn stars and stickers by doing simple tasks.
Obsessive-Compulsive Behaviours (OCD)	Mindshift CBT App, NOCD: OCD Therapy and Tools App

Sensory and/or Physical needs	
Area for support	**Potential solution**
Hearing Impairment (HI) Access to language that supports the understanding of concepts	Sono Flex Lite for communication Right Hear for navigation
Sign language and translation support	BrightSign Glove
Visual Impairment (VI) - support for reading	Siri, Alexa, Seeing Ai, Microsoft lens, Reader 2 - support for low vision readers
Sensory processing and integration	Moving Target, Tap the Frog Faster, Dexteria, Sensory App House
Cerebral palsy (CP) input support for switches, joysticks, and peripherals	Grid 3, Windows 10/11 with eyegaze built-in MyTobiiDynavox, Eyegaze at SmartBox (or other makers of eye gaze systems) Technology for switches include Crick USB Switch Box, Universal Switch Mounting Systems, Pretorian Switch for Android Tablet, Google Action Blocks for creating your own symbol/picture communication system.

Sensory and/or Physical needs	
Area for support	**Potential solution**
Motor skill accessibility support	COSMO – Accessibility buttons, training apps & versatile switches
Alternative communication support	Choice Board, Clicker Communicator, Synapptics Personal Communication Passports
Complex Additional Support Needs	Complex Needs iPad Apps Call Scotland
Physical Needs and use of AT including use of laptops: The challenge of providing a laptop, computer-based resources or access to assistive technology and services must be considered within a SETT approach. Additional barriers to accessing resources may be limited by mobility devices or require environmental adaptions	

Chapter 6
Essential for some, useful for most and accepted by all

When we explore accessibility standards we often come across the expression ‘essential for some – useful for all’. For everyone to benefit, normalising the use of support at the earliest phases of education as an embedded approach is the answer. When AT-supported learning is usual, stigma-related reluctance can be overcome. In the teen years, accepting help can take courage. A recognised and universally accepted pathway toward using support is needed. Perhaps we could add ‘accepted by all’ to remind us to work towards this goal.

Essential for some

AT helps everyone, including learners with special needs. Good software is good for everyone and can raise levels of achievement if implemented strategically. To achieve a universal pathway where AT becomes useful for most, we need to avoid making assumptions like, “they know how to use the technology.” Games and social media may be understood, but if learning tools and accessibility features have not been taught, modelled, or demonstrated they will remain unknown. We often assume that our learners are digital natives. Unfortunately this doesn’t mean that they are accessibility natives. Tools and approaches need to be explicitly taught.

Useful for most

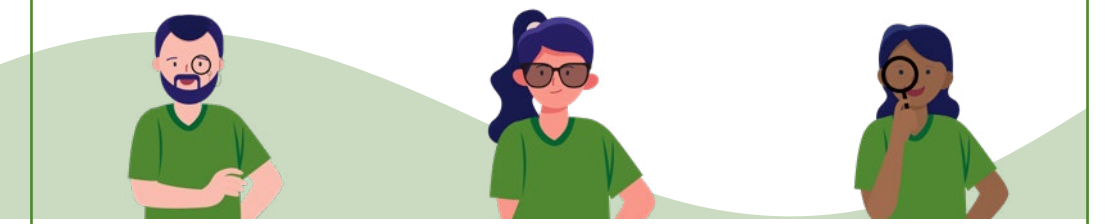
Universal provision means that most can benefit from the use of a tool and that it should be available as part of normal school provision for any learner.

Accepted by all

Explicit teaching of accessibility tools and the modelling of adaptive stand-alone AT solutions help everyone. It creates acceptance that AT is essential for some but useful for most learners. The culture of accepting technology used to support learning becomes the “normal way of working” enabling those who need it the most to use it with confidence and without stigma.

Reasonable Adjustments

Implementing reasonable adjustments is straightforward and cost-effective, yet their impact in the classroom, exam hall, and workplace can be transformative. Examples of such adjustments include prearranging equipment before a lesson, modifying seating positions, or incorporating rest breaks. Sensory sensitivities can be accommodated by adjusting uniforms, allowing flexibility in movement during busy times, and providing quiet spaces.



Leadership teams often rely on the knowledge of the Information Technology technicians to maintain the school's network and IT tools. In this team, it is rare to find a person with delegated responsibility for AT tools and equipment for learners with SEND. Often, maintenance and support of AT tools are the responsibility of the SENCo. Subsequently AT development can be overlooked when decision-making and procurement decisions need to be made.

In many schools, the IT team may not be aware of the additional equipment that is in circulation. This can lead to problems including:

- A general lack of awareness of how AT tools are being used.
- Not having relevant information to support budgeting for maintenance.
- Not seeing the full picture of the provision that is being made.
- Not recognising the need to develop skills or knowledge about AT.
- Not being aware of improvements to systems that could be applied.
- Bolt-on solutions being made to equipment that are not effective (problems often arise with compatibility, stability, and durability and can be costly to rectify - this is often true when adapting SEND-specific equipment).
- Lost opportunities to build accessibility tools into systems from the outset.

How can we develop an accessibility enabled culture?

To foster an inclusive culture that embraces Assistive Technology (AT), the initial step is to gather information.

Conducting audits of the IT, SEND, and teaching teams' skills can serve as a valuable starting point, offering insights into the teams' preparedness for the adoption of new technologies.

Additionally, this process presents an opportunity to identify and support individuals who demonstrate expertise in digital tools and accessibility, thus nurturing champions within your team.

Courses:

University of Dundee MSc In Educational Assistive Technology (EduAT)

This course supports understanding of a broad range of learning difficulties, physical disabilities and/or sensory impairments. These range from high incidence, lower impact disabilities (for example, dyslexia, dyspraxia) through to low incidence, higher impact disabilities (for example, cerebral palsy, autism).

This course has been developed to address a global need for the professionalisation of the 'Assistive Technologist' role within all levels of education provision.

Chapter 7 | Important Documents and Helpful Organisations

Professional Development:

- nasen A matrix of resources including AT & modular CPD courses
- National College of Leadership Professional Development Platform
- ATiA Assistive Technology Industry Association
- University of Dundee MSc In Educational Assistive Technology (EduAT)
- AbilityNet Accessibility and Inclusivity Training
- Microlink Assistive Technology Training
- Scanning Pens Education Services Implementation of Scanning Pens
- BATA British Assistive Technology Association

Documents that provide helpful guidance include:

- The SEND Code of Practice
- The Equality Act (2010)
- Supporting Learners With Medical Conditions (2017)
- Mental Capacity Act (2005)
- SEND and Alternative Provision Improvement Plan (2023)
- Dyslexia Commission Report (2022)

Helpful Links:

- AbilityNet A digital portal for AT
- Ace Centre Learning AT training opportunities
- BASE British Association for Supported Employment
- Call Scotland
- Disabled Learners Allowance (DSA) Support for assessment
- LendEd BESA Ed Tech Lending Platform
- NAACE The Education Technology Association
- nasen news Free AT resources
- National Careers Service Assessment Tools
- Natspec Techability The voice of specialist further education
- Patoss Dyslexia and Specific Learning Difficulties
- Scanning Pens Assistive Technology Devices and Resources
- SEND Group The SEND Guide
- SucceedWithDyslexia & Dyslexia Learning Festival
- The British Dyslexia Association Dyslexia and SpLD
- the SEND.ACADEMY Strategies to create inclusive learning environments
- Whole School SEND Information and free resources

Organisations that signpost AT and SEN solutions include BESA, BATA, and Microlink. Attending tradeshows will rapidly accelerate your knowledge. LendEd, BETT, nasen Live, Communication Works and the TES SEN Shows are reputable annual events.

Good AT companies will provide training and support and will help you to implement the tools that you have purchased. When investigating a solution, look for guided explanations, testimonials, case studies and training opportunities.

Final Thoughts

Accommodations for Assessments, Tests and Examinations

Ponder Points:

- Is access equitable for learners with reading difficulties?
- Do learners using AT as their normal way of working have what they need?
- Who is responsible for ensuring that reasonable adjustments are in place?

Example:

Jane has used a ReaderPen and coloured overlay to support her reading for the last two years. Her teachers confirm that this is her normal way of working in class and mock tests.
Because a file note was given to the Exams Officer, Jane was given the tools she needed for her exams. This was possible because the teachers, the SENCo and the Exam Officer joined the dots. Jane was tested on her knowledge of the subject, not on her ability to read the paper.

Advice on non-access arrangements and reasonable adjustments can be found in your exam board's handbook.

About nasen

We are the **National Association for Special Educational Needs (nasen)** – a charitable membership organisation that exists to support and champion those working with, and for, children and young people with Special Educational Needs and Disabilities (SEND) and learning differences.

We do this by providing free resources and support for all members, leading targeted programmes and projects to deliver widespread improvements, offering a structured programme of professional development, accredited training and conferences as well as a package of SEND services throughout the UK and internationally.

nasen
Helping Everyone Achieve

www.nasen.org.uk

About the authors

Myles and Julia met for the first time at the nasen live conference in Birmingham in 2019. They discovered a mutual drive to make accessibility issues and the power of Assistive Technology better understood. There was a crystalising moment when they realised how their combined knowledge could be harnessed by writing a miniguide for nasen.

We hope that you have found it helpful.

Scanning Pens
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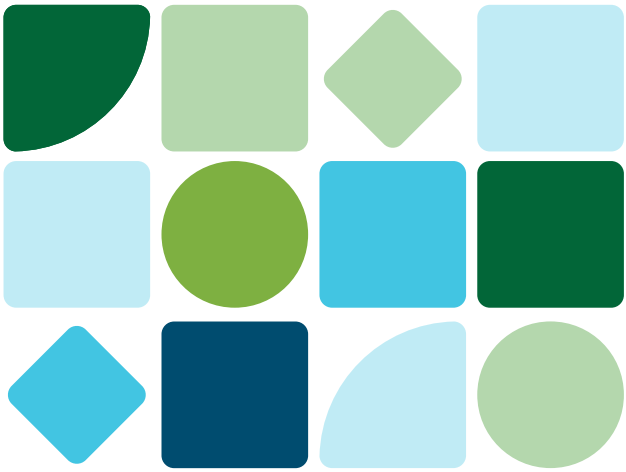
Julia Clouter
Head of Education & Training Provider for Scanning Pens
Succeed with Dyslexia Ambassador

Julia Clouter is Head of Educational Services for the Assistive Technology company Scanning Pens. She delivers training on a national and international level and advises on the use of assistive technology in the development of inclusive classrooms. She has been a long-serving SENCo and Designated Safeguarding Lead and has more than twenty years of teaching and leadership experience in Primary, Secondary, Mainstream and Alternative Provision. She regularly writes and speaks about SEN, dyslexia, hidden learning needs, behaviour, and Edtech solutions.

Myles Pilling
Specialist SEND ICT-AT Consultant
AccessAbility Solutions

Myles is a council member of the British Assistive Technology Association and an International Speaker, having spoken at the British Dyslexia Association Conference, PATOSS and PROSPECTS Union on the use of Assistive Technology in education and the workplace.



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