

Assistive Technologies

Assistive technologies (AT) play a crucial role in enhancing access, participation, communication, and independence for students with disability in Queensland special schools. With a focus on evidence-informed practices and current innovations, AT can be integrated meaningfully across educational settings—including classrooms, playgrounds, and work experience placements—to support inclusive and equitable learning environments. Assistive technologies include devices, systems, software, or equipment that help individuals with disability perform functions that might otherwise be difficult or impossible. They range from low-tech tools like pencil grips and visual schedules to high-tech solutions such as eye-gaze systems and speech-generating devices.

Evidence-Informed Use of AT in Special Schools

1. Classroom Applications

Augmentative and Alternative Communication (AAC)

Examples: Proloquo2Go, LAMP Words for Life, PODD (Pragmatic Organisation Dynamic Display) books.

Purpose: Support expressive and receptive communication for students who are non-verbal or have limited speech.

Why It Matters: Research shows AAC use improves student engagement, reduces frustration, and fosters peer interaction.

Universal Design for Learning (UDL) Tools

Examples: Touchscreen devices with accessibility features (e.g., iPads with Guided Access), text-to-speech software, interactive whiteboards.

Purpose: Provide multiple means of representation, expression, and engagement.

Why It Matters: UDL principles underpin Queensland's inclusive education policy and support diverse learning styles and cognitive needs.

Motor and Sensory Aids

Examples: Adaptive keyboards, switch-access tools, noise-cancelling headphones, sensory cushions.

Purpose: Accommodate sensory processing differences and motor planning difficulties.

Why It Matters: Helps students stay regulated, focused, and able to access the curriculum.

2. Playground and Social Settings

Social Communication Devices

Examples: Wearable AAC (such as GoTalk wearable devices), visual emotion cards.

Purpose: Promote social interaction and reduce isolation during unstructured playtime.

Why It Matters: Students with autism and intellectual disability often face challenges in initiating and sustaining peer interaction; supported communication increases inclusion.

Sensory Integration Tools

Examples: Vibrating mats, chewable jewellery, weighted lap pads in outdoor quiet zones.

Purpose: Support emotional regulation and provide calming input.

Why It Matters: Enhancing self-regulation leads to fewer behavioural incidents and more successful peer engagement.

Mobility & Navigation Aids

Examples: Power wheelchairs with joystick or head controls, GPS-enabled tracking bands.

Purpose: Facilitate safe and independent movement in the school environment.

Why It Matters: Promotes autonomy and ensures equitable access to all areas of the school.

3. Work Experience and Community-Based Learning

Task Adaptation Technology

Examples: Voice-activated devices for job instructions (e.g., Alexa reminders), step-by-step apps like Choiceworks or Ablelink Visual Impact.

Purpose: Scaffold sequencing and memory for vocational tasks.

Why It Matters: Builds confidence and functional independence in real-world settings.

Mobile Device Supports

Examples: Smartphones with simplified interfaces, communication apps, schedule reminders.

Purpose: Provide just-in-time prompts or support during work placement tasks.

Why It Matters: Empowers students to function with less direct supervision, aligning with supported employment goals.

Wearable Technology for Safety & Communication

Examples: Smartwatches with emergency SOS features, Bluetooth tracking tags.

Purpose: Enhance student safety and enable discreet communication with support staff.

Why It Matters: Encourages greater independence while maintaining safe access to help when needed.

Why Should Teachers Use Assistive Technologies?

✔ To Reduce Barriers and Increase Access

Ensures all students have equitable opportunities to engage in learning and social participation.

✔ To Promote Independence

AT supports can reduce reliance on adult prompting and supervision, building confidence and life skills.

✔ To Align with the Disability Standards for Education

Teachers have a legal obligation to provide reasonable adjustments, which AT can facilitate.

✔ To Personalise Learning

Enables differentiated instruction tailored to individual student needs and strengths.

✔ To Enhance Engagement and Motivation

Many AT solutions incorporate interactive and gamified elements that increase participation.

Implementation Tips

Conduct regular SETT (Student, Environment, Task, Tools) framework assessments.

Collaborate with occupational therapists, speech pathologists, and families.

Use data to evaluate effectiveness, including engagement levels and student progress.

Provide professional learning to all staff to build capacity in AT use.

Summary

Assistive technologies, when applied intentionally and aligned with evidence-informed strategies, are powerful tools for enhancing the educational experience of students with disabilities in Queensland special schools. They enable access, foster independence, and support meaningful participation in all facets of school life—from learning and play to work readiness.

EXPAND YOUR REPERTOIRE



Incorporate assistive technologies to support students with disability

Augmentative and Alternative Communication



- Speech-generating devices
- Communication apps
- Picture-based systems

Universal Design for Learning Tools



- Touchscreen devices
- Text-to-speech
- Interactive whiteboards

Motor and Sensory Aids



- Adaptive keyboards
- Switch-access tools
- Sensory supports

Task Adaptation Technology



- Step-by-step apps
- Reminders
- Wearable devices

