

SCAN 7

AI and Students with Exceptionalities

Supporting the learning and wellbeing of students with exceptionalities and special needs - seen through a student lens, a teacher lens and a concerned parent lens

Prepared for the Youth AI Research Network

This seventh scan considers what AI can - and cannot - do for students with exceptionalities and special needs, and for their learning and wellbeing. It presents the question through three lenses, the student's, the teacher's and the concerned parent's, and grounds them in three sources: the disability-justice chapter of *AI Unplugged* (Murgatroyd & Couture, 2026), an executive evidence briefing on AI in K-12 special education, and a practitioner presentation to Edmonton Catholic School Division. It is framed by **Learning Well** and **Being Well**, and held to one principle above all: AI may support, but must not replace, the relational human work at the centre of supporting these students.

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Stephen Murgatroyd, PhD · Futures Leadership for Change

Contents

1. Purpose and Framing.....	3
2. How to Read This Scan.....	3
3. The Frame: Beyond Access to Liberation.....	3
4. The Student Lens.....	4
5. The Teacher Lens.....	4
6. The Concerned Parent Lens.....	5
7. Where the Three Lenses Converge.....	5
8. Linking to the YAIRN Work.....	6
9. Gaps and Closing.....	6
References.....	8

1. Purpose and Framing

This is the seventh and, for now, the final report in the Futures Leadership for Change series. It turns to the students for whom the stakes of AI are at once highest and most personal: students with exceptionalities and special needs. Around 13 to 15 percent of K-12 students globally are identified as requiring additional support through disability, exceptionality or neurodivergence; in the United States alone, some 7.3 million students received special-education services under IDEA in 2021-22, and the great majority of these students learn in regular classrooms (Murgatroyd & Couture, 2026). For them, AI offers real and sometimes transformative affordances - and real and serious risks.

Rather than weigh those in the abstract, this scan presents them through three lenses in turn - the student's, the teacher's, and the concerned parent's - before drawing them together and linking them to the Network's work. The choice of lenses is deliberate: it mirrors the disability-justice principle that those most affected by a technology should lead in judging it, and it keeps the report close to the people whose learning and wellbeing are actually at issue.

2. How to Read This Scan

The scan triangulates three sources. The *AI Unplugged* book (Murgatroyd & Couture, 2026) supplies the critical frame - disability justice, and the move beyond access toward liberation. A curated briefing resource developed for this project by the AI-Agent *Nebula* supplies a sober reading of the current evidence, whose central finding is that AI in special education is credible as a support layer, not a replacement layer, with workload relief its clearest near-term value and human review its non-negotiable condition. The practitioner presentation supplies the on-the-ground view, including its guiding principle that human intelligence is embodied, relational and moral, and that AI must serve, never supplant, the human work of teachers, educational assistants and specialists. Two cautions carry through: the evidence base is genuinely mixed and uneven, and the direct voice of students with exceptionalities themselves remains scarce in it.

3. The Frame: Beyond Access to Liberation

The disability-justice lens reframes the whole question. Conventional approaches treat assistive technology through a medical model - disability as a deficit for technology to fix - and design tools for disabled students, selected by administrators and imposed on students and families with little say. Disability justice, drawing on the work of Sins Invalid, insists instead on the leadership of those most impacted, on disability as difference rather than deficit, and on technology designed with disabled students rather than for them (Sins Invalid, 2019; Murgatroyd & Couture, 2026). It warns sharply against the shadow side of assistive AI: surveillance and the medicalization of ordinary variation, where tracking a student's "attention" or "stress" turns natural neurodivergent patterns into problems to be monitored rather than accommodated.

The practitioner principles point the same way and give the frame a usable North Star: human intelligence is embodied and relational; AI can help but must not replace the human work of support; the goal is to balance gains in learning with student and teacher wellbeing - learn well, live well. Held together, the book and the practice agree that the question is never simply whether AI can assist a student with exceptionalities, but whether it does so in a way that honours them as a whole person and strengthens, rather than substitutes for, the relationships around them.

4. The Student Lens

Seen from the student's side, the affordances are genuine and worth celebrating. AI can give a non-speaking student a voice through augmentative communication, render text accessible through speech and reformatting, adjust reading level, vocabulary and pacing to the learner, scaffold tasks in real time, support executive function with prompts and structure, and raise engagement through interactive and adaptive activities (Murgatroyd & Couture, 2026). For many students, these are not conveniences but the difference between access and exclusion.

But the student lens, read through disability justice, also sets the conditions. The student is a whole person, not a deficit to be corrected, and the same speech and language tools that promise inclusion often fail disabled, multilingual or racialized speakers because they were trained on standard, non-disabled speech, compounding exclusion under the banner of access (Murgatroyd & Couture, 2026). Wearable and tracking systems that promise support can tip into surveillance that medicalises a child's ordinary way of being. So, the student's wellbeing - the Being Well half of the frame - depends on AI that supports self-regulation and learning without watching, ranking or defining the child, and on preserving the student's right to refuse.

Two students

The practitioner presentation makes the lens concrete through two learners. Maya is gifted: she thrives on debate, robotics and self-directed inquiry, and her plan should offer curriculum compacting, enrichment and genuine challenge - exceptionality includes those who need more, not only those who need support. Noah has ADHD and autism: strong visual memory and deep interests in science and gaming, alongside real challenges with transitions, sensory load and executive function, calling for assistive technology, environmental adaptation and a team around him. For both, AI personalises well only when it serves a plan built around the whole child, with the child's agency intact.

5. The Teacher Lens

From the teacher's side - and that of educational assistants, specialists and consultants - the clearest value is not better pedagogy in the abstract but relief from administrative load. The evidence converges here: AI can cut the time to prepare reports, IEP-aligned supports, differentiated materials and family communications from weeks to hours,

freeing overstretched staff for the relational work only they can do (Executive briefing, 2026). In practice, this looks role-specific: teachers differentiate readings and generate scaffolded practice and alternate explanations; educational assistants prepare visual schedules, social stories, transition supports and regulation scripts; specialists convert assessments into accessible formats, draft IEP-aligned supports and summarise observations; consultants build shared prompt libraries, vet tools and monitor risk (Murgatroyd & Couture, 2026).

The teacher lens also carries the firmest cautions. AI output is a first draft at best, and in special education an error in a recommendation, accommodation or family message can cause educational, legal and relational harm, so every output must be reviewed by a professional before use. The practitioner guidance is concrete about how to work safely: treat AI as a colleague and thinking partner rather than a search engine, and where accuracy matters, use source-grounded, retrieval-based tools that work only from approved, evidence-based materials rather than asking AI to invent supports. Underneath it all sits the lesson of SCAN 4: the professional judgment and the relationship are the irreplaceable core, and the surest misuse of AI here is anything that deskills or displaces them.

6. The Concerned Parent Lens

The parent of a child with exceptionalities holds hope and worry in the same hand, and the parent lens is where the stakes feel most human. The hope is real: a tool that helps their child communicate, learn and belong, and that lightens a system the family often experiences as stretched and slow. Many families know first-hand the difference that committed teachers and educational assistants make - and would welcome anything that lets those people spend more time with their child and less on paperwork.

The worries are equally real, and the evidence treats them as central rather than peripheral. Parents are right to ask hard questions about privacy and compliance, because special-education records, IEP and 504 information, referrals and learning profiles are among the most sensitive data a school holds, and the operational rule is plain: student-identifiable information should never be entered into general-purpose AI tools unless governance and contracts are already in place. They are right to worry about error and bias reaching their child's accommodations, about surveillance and the medicalizing of their child, about whether a stretched school can check AI as carefully as a well-resourced one, and - most of all - about anything that would substitute a machine for the human relationships their child depends on. Trust, in special education, rests on family confidence, and that trust is easily lost. The honest reassurance is not that AI is safe in the abstract, but that the family is a partner in deciding where it is used, under what safeguards, and with what evidence - and that the answer to a tool that would define their child on someone else's terms can be no.

7. Where the Three Lenses Converge

Set side by side, the three lenses agree more than they differ. Each welcomes genuine support and each draws the same line against replacement, surveillance and unreviewed error. The table below distils them.

Lens	What AI can genuinely offer	What it must not do
Student	Communication, accessible formats, personalised pacing, executive-function scaffolds, engagement - and a sense of being supported as a whole person.	Reduce the learner to a deficit to be fixed; surveilled and medicalize ordinary neurodivergent variation; decide who they are.
Teacher / EA / specialist	Relief from administrative load - differentiated materials, IEP-aligned drafts, accessible formats, family communication - prepared in hours, not weeks.	Replace professional judgment or the relationship; pass unreviewed AI output into accommodations, assessments or family-facing work.
Parent	Real support for their child's learning, communication and inclusion, and a partner that lightens an overstretched system.	Put their child's sensitive data at risk, erode trust through error or bias, or stand in for the human relationships their child depends on.

The convergence is itself a finding: student, teacher and parent all want AI that augments human capacity in bounded, well-governed tasks and that leaves the relational, professional and family-facing judgment to people. That is precisely the executive briefing's defensible stance - cautious adoption within tight boundaries, governance before scale, evidence demanded by task rather than by product - and precisely the book's disability-justice claim that technology should serve liberation and self-determination rather than control.

8. Linking to the YAIRN Work

Students with exceptionalities are not a separate topic for the Network; they are a sharp test of its central commitment. The Network's lens - student agency supported by a teacher - is, for these students, almost identical to disability justice's first demand, the leadership by those most impacted. Everything SCAN 2 argued about co-creation applies here with extra force: tools should be built with the students and their families, not for them, and assessment and support should be designed around the whole person.

Three connections matter most. First, this scan extends the design-justice spine running through the whole series to its most demanding case, showing that the right to refuse - named in SCAN 5 - is most vital where surveillance and medicalization press hardest. Second, it intersects directly with SCAN 6: disabled Indigenous students are multiply marginalized, and intersectionality, the first principle of disability justice, means the Network cannot treat exceptionality and Indigeneity as separate files. Third, it names a clear participatory-research opportunity: the direct voices of students with exceptionalities and their families are thin in the evidence, and the Network is well

placed to gather them with care. Across all three, the Being Well frame is especially load bearing, because for these students, learning and wellbeing are inseparable.

9. Gaps and Closing

Two gaps stand out. The evidence base is mixed and uneven, strong on workload relief and bounded screening support but thin on durable outcomes for learners, so claims should be made by task and held to honest standards. And the voice most missing is the one that matters most - that of students with exceptionalities themselves, and of the families and support staff closest to them. Closing that gap, through participatory work led by those most impacted, is the natural next step.

With SCAN 7, the series completes its first arc: from students as creators, through co-creation, the student and teacher voice, the future, the Indigenous learner, and now the learner with exceptionalities. The thread that has run through all seven holds here most tightly of all. AI in schools is being made, not merely arriving; it can support the learning and wellbeing of students with exceptionalities, or it can reduce, surveil, and define them, and which it does depends on whether students, teachers and families help shape it. The task, as ever, is not to predict that future but to help create one worth inheriting, carrying these scans into the Network's own inquiry toward ICSEI 2027.

References

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