

Discussion paper

Teaching practices to support Autistic students and students with ADHD

May 2026



The Australian Education Research Organisation (AERO) is Australia's national education evidence body, working to achieve excellence and equity in educational outcomes for all children and young people.

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AERO acknowledges the Traditional Owners and Custodians of the lands, waterways, skies, islands and sea Country across Australia. We pay our deepest respects to First Nations cultures and Elders past and present. We endeavour to continually value and learn from First Nations knowledges and educational practices.

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List of abbreviations

Abbreviation	Full term
AADPA	Australasian ADHD Professionals Association
ADHD	attention-deficit/hyperactivity disorder
AERO	Australian Education Research Organisation
ASD	autism spectrum disorder
CAI	computer-assisted instruction
IDD	intellectual and developmental disabilities
NCCD	Nationally Consistent Collection of Data on School Students with Disability
PAL	peer-assisted learning
PECS	picture exchange communication system
PMI	peer-mediated instruction
POVM	point-of-view video modelling
QED	quasi-experimental design
RCT	randomised controlled trial
SCD	single-case design
SFA	sound-field amplification
SRSD	self-regulated strategy development
SSD	single-subject design
STAT	Schedules, Tools and Activities for Transitions
VBI	video-based intervention
VM	video modelling
VSM	video self-modelling
VT	verbal-tangible

Summary

This discussion paper synthesises recent research (2014 to 2025) on teaching practices that support Autistic students and students with attention-deficit/hyperactivity disorder (ADHD) in school settings. It outlines what the current evidence indicates for these cohorts, what is emerging and the implications for policy and practice in Australian schools.

The paper was developed drawing on multiple project activities, including an umbrella review, targeted searches of recent literature, expert input and scans of relevant policy and system settings. This approach supports a balanced interpretation of findings and highlights areas where further work is needed.

What the evidence indicates

- **For Autistic students, the strongest signal of effectiveness is for explicit teaching**, with positive effects reported in literacy, numeracy and science. Other practices – such as feedback, peer-assisted learning, rules and routines, visual supports, technology and environmental adjustments – show promise in enhancing learning outcomes, often in studies where multiple practices are used in combination. Many studies were conducted in specialist settings, so mainstream application should be approached with care.
- **For students with ADHD, cohort-specific classroom evidence is very limited.** Where studies do exist, outcomes mainly relate to engagement (such as on-task behaviour and transitions) rather than direct academic achievement. Evidence relating to students with co-occurring autism and ADHD is minimal. In total, of the 53 articles, only 6 included students with ADHD, some of which were co-occurring autism and ADHD.
- **Outcome and context:** Many studies use single-subject or small-group designs and often examine combined practices, making it difficult to isolate individual effects. Only 3 of the included empirical studies were conducted in Australia. These features highlight the need for further research in mainstream Australian classrooms.

Implications for policy and practice

- **Strengthening universal approaches:** Findings reinforce the value of embedding explicit teaching universally, while adapting its intensity and combining it with supports such as visual scaffolds and technology where appropriate.
- **Using promising practices with care:** Practices such as providing feedback, peer-assisted learning, rules and routines, visual supports and environmental adaptations can be used alongside universal approaches, with attention to monitoring both academic and engagement outcomes in classroom contexts.
- **Supporting diverse needs:** Effective adjustments are responsive to individual student needs rather than diagnostic labels, consistent with neurodiversity-affirming principles and AERO's [model of learning and teaching](#).

Next steps

Future efforts could support a stronger evidence base and more effective use of evidence-based practices. Areas for further consideration by policy and system leaders include:

- **building a clearer picture of current classroom practice** and the conditions that enable learning success for Autistic students and students with ADHD
- **understanding how evidence-based practices work in different contexts**, including the factors that influence their impact
- **supporting flexible, tiered approaches** that allow adjustments in intensity and individualisation to meet diverse needs, and undertaking larger-scale studies to investigate how tiered approaches support learning outcomes for these students
- **exploring opportunities to address evidence gaps**, including building the classroom evidence base for ADHD (including for students with co-occurring autism and ADHD), progressing co-designed work with First Nations communities to generate cohort-specific classroom evidence, and ensuring implementation aligns with neurodiversity-affirming principles.

Confidence statements

Confidence labels in this paper refer to the **confidence in the evidence base for each practice (for these cohorts)**, rather than ratings of the practices themselves. Confidence reflects study design, methodological rigour and relevance to classroom practice.



Image: iStock.com/DGLimages

Introduction

This discussion paper provides an overview of evidence-based classroom teaching practices that support Autistic students and students with ADHD. It draws from an umbrella review synthesising reviews of school practices for improving the outcomes for Autistic students and students with ADHD, and targeted literature searches of evidence-based teaching practices focused on learning outcomes, alongside a focused search of international First Nations research on Autistic students and students with ADHD. Combined, these reviews offer a deeper understanding of the evidence into effective classroom teaching practices for this cohort.

It is not intended to provide a fulsome overview of the evidence on the learning processes for Autistic students or students with ADHD, but to present the available evidence from classroom contexts (Australian and international), contributing to understanding about combining evidence-based teaching practices with relevant adjustments to support learning for Autistic students and students with ADHD. It outlines what the current evidence indicates for these cohorts, what is emerging and the implications for policy and practice in Australian schools.

Autism and ADHD are relatively common neurodevelopmental conditions among Australian school-aged children. Recent estimates suggest that around 4% of Australian children have an autism diagnosis (Ranjan, 2023), while between 6 and 10% have an ADHD diagnosis (Sawyer et al., 2018). Co-occurrence is also common, with 2 recent meta-analyses reporting ADHD among Autistic children in the range of 26 to 38% (Mutluer et al., 2022; Rong et al., 2021). These conditions present diverse strengths and support needs, and students with the same diagnosis are likely to require different adjustments in the classroom.

Many of the practices considered in this paper align with AERO's [model of learning and teaching](#) (grounded in cognitive science) and may need to be adjusted to individual needs, intensity and context. Throughout, we note where studies are derived from specialist settings, where outcomes relate mainly to behaviour or engagement and where transferability to mainstream classrooms requires caution.

Purpose and scope

This paper examines a **pre-selected set of widely used classroom practices** (for example, explicit teaching; modelling, scaffolding and prompting; peer-assisted learning; feedback; rules and routines; visual supports; technology; and environmental adaptations) and the outcomes of these practices for Autistic students and students with ADHD. These practices were identified **through an initial scan of evidence-based approaches and selected for their relevance, feasibility and alignment with classroom application** (refer to [Appendix A](#) for additional details on the selection process). Where cohort-specific studies were limited or absent, the paper draws cautiously on broader evidence from the general student population and notes limits on transferability. The aim is to summarise what the evidence indicates, where it is emerging and the implications for policy and practice for Australian teachers, school leaders and system partners.

How this paper was developed

This discussion paper draws on several activities undertaken across AERO's disability and inclusion project:

- an umbrella scan of practices
- literature review of neurodiversity-affirming principles
- targeted literature searches on specific practices (2014 to 2025)
- a review of First Nations literature.

These activities shaped the selection of practices, interpretation of findings and identification of gaps and next steps.

Context: Supporting diverse needs in Australian schools

Australian schools must meet obligations under the Disability Discrimination Act 1992, and the Disability Standards for Education 2005, and plan supports and resources accordingly to meet diverse learner needs. The Nationally Consistent Collection of Data on School Students with Disability (NCCD) (Australian Government, n.d.) records the adjustments schools provide to support access and participation, based on teacher professional judgement and documented evidence. The multi-tiered system of supports (de Bruin et al., 2024) is outlined in many jurisdiction guidance documents to organise universal, targeted and intensive support according to assessed student needs. These frameworks shape how teachers and school leaders implement and adapt the practices examined in this paper. They provide context for application but do not determine the strength of the evidence for any single practice.



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Terminology used in this report

Statement on language: AERO uses the terms Autistic students and students with ADHD to reflect common preferences, while recognising that language is personal and evolving. Many Autistic people prefer [identity-first language](#), seeing autism as an integral part of who they are (AutismCRC, n.d.)¹ while many people with ADHD prefer [person-first language](#), viewing ADHD as just one aspect of their identity (Australasian ADHD Professionals Association [AAPDA], 2022; Australian Government Department of Health, Disability and Aging, 2025; Monk et al. 2022).²

Academic outcomes: Outcomes related to literacy, numeracy and subject-specific knowledge achievement (measured through tests or grades).

Behavioural or engagement outcomes: Indicators such as on-task behaviour, transitions, participation and classroom engagement.

Learning outcomes: Includes academic outcomes (such as literacy, numeracy and subject-specific achievement) and learning-related behavioural and classroom and/or task engagement outcomes that directly support students' participation in learning. Studies reporting only general behavioural or compliance-based outcomes were excluded.

Adjustments: Actions taken to enable a student with disability to access and participate in education on the same basis as their peers (see [Context: Supporting diverse needs in Australian schools](#))

Confidence statements: Confidence labels in this paper refer to confidence in the evidence base for each practice (for these cohorts), not ratings of the practices themselves.

Methods

This discussion paper brings together insights from a targeted review of recent literature (2014 to 2025) to understand how a set of widely used teaching practices support the learning of Autistic students and students with ADHD. A total of 53 studies met the inclusion criteria. Further detail on the search strategy, screening process and included studies is provided in [Appendix A](#). A separate search exploring evidence relating to First Nations Autistic students and students with ADHD is summarised in [Appendix B](#).

The paper focuses on a preselected group of classroom practices, many of which align with AERO's [model of learning and teaching](#) and are commonly used to support diverse learners. These practices were identified through an initial scan of evidence-based approaches and selected for their relevance, feasibility and alignment with classroom application. The targeted literature search then examined the extent and nature of evidence specific to Autistic students and students with ADHD for each practice.

¹ For more information, see AutismCRC's statement on language choices.

² We have drawn from the following documents to inform this statement: the [National Autism Strategy](#); the [AADPA's Talking About ADHD Language Guide](#) and [Monk et al. \(2022\)'s The Use of Language in Autism Research](#).

Across the included studies, designs and settings varied. Many were conducted in specialist school environments or evaluated multicomponent approaches, reflecting real-world classroom practice while limiting the ability to isolate single practice effects. Confidence labels in this paper refer to the confidence in the evidence base for each practice (for these cohorts) rather than ratings of the practices themselves. This assessment was made using [AERO's Standards of Evidence](#).

Neurodiversity-affirming principles

When implementing teaching practices for Autistic students and students with ADHD, it is important to align them with neurodiversity-affirming principles. These principles, grounded in the social model of disability,³ foster inclusion by recognising and valuing differences rather than framing differences as deficits (Stenner et al., 2025).

Key principles

- Support authentic self-expression by enabling students to communicate and participate in ways that reflect their identity.
- Accommodate sensory, social and cognitive differences.
- Provide flexible, individualised adaptations to facilitate access and participation in learning.
- Include neurodivergent voices in practice and policy by embedding co-design principles with meaningful input from students and their communities.

These principles complement evidence-based practices by guiding how they are applied in classrooms. They help ensure that teaching practices are used in ways that respect individual differences, promote autonomy and dignity, and support students to participate meaningfully in learning. They do not replace evidence-based practices – rather, they provide a lens for implementing them in responsive, inclusive ways.

An example of a teaching practice aligning with neurodiversity-affirming principles includes environmental adaptations that provide quiet spaces, enabling students to have control over their sensory environment and respecting student autonomy and choice (Thom-Jones et al., 2025). Prioritising modifications that support sensory needs, rather than interventions aimed at reducing sensory-avoidant behaviours, fosters inclusion and participation (Wagland et al., 2025).

Neurodiversity-affirming practice is an emerging area across many disciplines, including education. Although this report highlights the importance of considering these principles when implementing a specific teaching practice, it does not provide complete guidance on this. Further research is needed on the real-world implementation of these practices and alignment with principles of neurodiversity-affirming practice.

3 See People with Disability Australia's [social model of disability resource](#) for more information.

Considerations for First Nations students

There is a significant gap in evidence on classroom-based teaching practices that support learning outcomes for First Nations Autistic students and students with ADHD (see [Appendix B](#) for a full description of methodology). A literature search identified 52 articles and reports, including 13 focused on Australian First Nations populations. None of these examined classroom teaching practices. Most addressed topics such as barriers to diagnosis, access to services, family perspectives and cultural attitudes to autism and ADHD (Bailey & Arciuli, 2020; Lilley et al., 2020; Loh et al., 2016, 2017; Long, 2015).

Insights from First Nations families emphasise the importance of culturally safe, respectful and inclusive environments, strong school–community partnerships, and practices that affirm cultural identity alongside individual learning needs (Lilley et al., 2019, 2023). These insights can inform how teachers adapt evidence-based practices in local contexts.

Given the absence of cohort-specific classroom studies, this paper does not assume that findings from the broader (predominantly Western, non-Indigenous) literature automatically transfer to First Nations learners. Instead, this is identified as a priority for co-designed research and guidance, developed in partnership with First Nations communities, to understand how classroom practices can be adapted in culturally responsive ways that support learning and wellbeing (see [Cultural Safety](#) for more information).

Findings by practice

Research on teaching practices for Autistic students and students with ADHD indicates a growing evidence base across a range of instructional approaches (Stokes et al., 2017). Several reviews have examined the effectiveness of these practices for supporting academic skills, on-task behaviour and social outcomes (Bond et al., 2016; Macmillan et al., 2023; Moore et al., 2018; Richardson et al., 2015). While outcomes are often interconnected, this paper focuses on evidence relating to learning outcomes. Many of the practices summarised in this section align with AERO's [model of learning and teaching](#) and reflect principles of cognitive science. These practices support [how students learn](#) and retain new information, while allowing for adjustments based on differences in areas such as executive function, attention, and processing speed. These adjustments may include providing additional processing time, pausing before repeating instructions, or adapting the mode of presentation for students who require it. For practical guidance on supporting diverse learners, refer to AERO's [supporting the diverse needs of students](#) practice guides.

Many studies examined practices as part of multicomponent interventions – for example, combining video modelling with peer tutoring (Kahveci & Altun, 2019) or integrating systematic instruction with technology or visual supports (Spooner et al., 2019). This reflects real-world classroom practice, where teachers often combine approaches to support learning. However, it also means findings for individual practices might be better interpreted in terms of their combined use.

Across all practices, the evidence base varies in strength and depth. Each practice in this section is accompanied by a confidence label, which represents the confidence in the evidence base for that practice for these cohorts, as assessed using AERO's [Standards of Evidence](#). Individual studies ranged from medium to very high confidence (one paper only). A medium rating means that a causal relationship has not been identified, but that research associates the practice with positive effects. Further detail on included studies for each practice appears in [Appendix C](#).

The following subsections present each teaching practice with:

- a brief description of the practice
- a summary of what the evidence indicates specifically for these cohorts
- key considerations for classroom application
- further resources on the practice (i.e., not cohort-specific) to support adoption.

Confidence labels signal the reliability of the available evidence for Autistic students and students with ADHD.

Effective instruction for these cohorts requires teachers and school leaders to draw on a repertoire of evidence-based practices and use professional judgement when selecting and adapting strategies, including adjusting intensity, frequency or individualisation (Finnegan & Mazin, 2016; Locke et al., 2022).

Finally, none of the included studies comprised a sample consisting of both Autistic students and students with ADHD. While a small number of studies included students with co-occurring diagnoses, most examined Autistic students, and only a few focused exclusively on students with ADHD. Only 3 of the included empirical studies were conducted in Australia, teachers and leaders should therefore consider how and when to apply these practices based on individual student needs and local classroom context.

Teach explicitly – Break up and explain

Description

The phrase 'teach explicitly' is used to describe the related practices of explicit instruction, systematic instruction and direct instruction. While these practices differ in terminology and format, they share core principles of structured, teacher-led, sequential instruction, designed to build mastery and manage cognitive load (Lemons et al., 2016). Teachers clearly explain new concepts, model skills, and guide practice in small, sequenced steps, chunking information to reduce cognitive overload. Responsibility is gradually released through approaches like 'I do, we do, you do' (Archer & Hughes, 2011) and feedback provided until mastery is achieved (Rosenshine, 2008). Explicit teaching forms the foundation for universal instruction. Adjusting the intensity, frequency and level of individualisation allows teachers to meet the needs of students who require additional support.

Evidence summary for Autistic students and students with ADHD

Most studies examining explicit teaching for these 2 cohorts reported academic outcomes across literacy, numeracy and science, with a smaller number also reporting engagement-related effects. In many evaluations, explicit teaching was delivered alongside other practices (such as visual supports or technology), so findings reflect the combined approach used in classrooms.

Key findings

- Explicit teaching improves academic outcomes across:
 - **Literacy:** Enhanced writing, reading and comprehension skills (Cadette et al., 2016; Finnegan & Mazin, 2016; Garcia et al., 2025; Rodgers & Loveall, 2023; Sartini et al., 2020; Vidovic et al., 2021; Whalon et al., 2019).
 - **Numeracy:** Higher standardised test scores and improved problem-solving abilities (Apanasionok et al., 2021; García-Moya & Blanco, 2024; Spooner et al., 2019).
 - **Science:** Combining explicit teaching with supplementary supports (e.g., e-texts, graphic organisers) promoted engagement and conceptual understanding (Apanasionok et al., 2019; Barnett et al., 2018).
- Explicit teaching was examined alongside visual supports or technology in various studies (Barnett et al., 2018; Bishop et al., 2015; García-Moya & Blanco, 2024; Sartini et al., 2020; Whalon et al., 2019).
- This makes it difficult to isolate the unique contribution of explicit teaching. However, it reflects real-world practice and shows that structured, visually supported instruction enhances independence and skill mastery.
- Only one paper included both Autistic students and students with ADHD (Garcia et al., 2025).

Evidence specific to students with ADHD is limited, and no studies examined effects for students with co-occurring autism and ADHD. One study included Autistic students, some of whom had a co-occurring diagnosis of ADHD (García-Moya & Blanco, 2024).

Implications for practice

- Explicit teaching should be used as a universal practice, adjusting frequency, intensity and duration as necessary for students who need more support.
- Explicit teaching should be combined with visual supports for greater impact.

Confidence in the evidence base

Medium-high (based on one meta-analysis, 6 systematic reviews, 7 primary studies).

Resources

- AERO explainer: [How explicit instruction optimises learning](#)
- AERO practice guide: [Teach explicitly](#)
- inclusionED: [Use task analysis for skill development](#).

Teach explicitly – Model, scaffold and prompt

Description

Modelling, scaffolding and prompting are essential and interconnected components within the practice of teaching explicitly that support success and independence for Autistic students and students with ADHD (Archer & Hughes, 2011; Frampton et al., 2021). These practices support skill acquisition by making thinking visible and guiding students toward independence (Archer & Hughes, 2011). Modelling involves demonstrating a skill while using a ‘think aloud’ to show reasoning. Scaffolding provides temporary supports that are gradually removed as students gain competence, and prompting uses verbal, visual or gestural cues to activate prior knowledge and guide responses.

Evidence summary for Autistic students and students with ADHD

Most studies reported academic outcomes (e.g., writing, mathematics problem-solving), with engagement-related findings in some cases. Where modelling or prompting formed part of multicomponent approaches (e.g., embedded within explicit teaching or video-based packages), reported impacts reflect the combined approach.

Key findings

- Modelling improved writing and mathematics problem-solving skills for Autistic students (Pennington et al., 2018; Rodgers & Loveall, 2023; Yakubova et al., 2020).
- Prompting increased engagement and on-task behaviour for students with ADHD in classroom-based trials (Harrison et al., 2022).
- Video-based modelling (including video self-modelling and point-of-view modelling) showed promise for teaching academic skills and supporting independence (Kahveci & Altun, 2019; Schatz et al., 2016; Yakubova et al., 2020).
- Scaffolding was not examined independently but it is widely recognised as an integral component of explicit teaching (Swanson, 2000).

Evidence specific to students with ADHD is limited, and no studies examined effects for students with co-occurring autism and ADHD.

Implications for practice

- Combine modelling and prompting with breaking up and explaining to maximise impact of explicit teaching.
- Use video-based modelling to support independence and skill generalisation.

Confidence in the evidence base

Medium-high (one meta-analysis, 5 primary studies focused, one ADHD-focused RCT rated high confidence).

Resources

- AERO practice guide: [Scaffold practice](#)
- inclusionED: [Structure tasks using work systems](#)
- inclusionED: [Use instructional sequences](#)
- inclusionED: [Create assignment exemplars](#).

Use of peer-assisted learning

Description

Peer-assisted learning (PAL), also called peer-mediated instruction or intervention (PMI), refers to a broad range of practices where learners actively support each other's learning. While one-to-one peer tutoring may be the most recognised form, PAL encompasses multiple models that vary by factors such as age and stage of participants, group size, ability levels, curriculum content and characteristics of both tutors and tutees (Topping & Ehly, 1998). Literature on peer tutoring (a variant of PAL) shows that it is most effective when used to consolidate learning rather than introduce new material and when all students receive structured training to engage successfully with peers (Evidence for Learning, 2021). PAL works by actively engaging learners in the process, fostering motivation through collaboration and providing frequent opportunities for interaction and feedback.

Evidence summary for Autistic students and students with ADHD

Across the literature, PAL studies report a mix of academic outcomes (e.g., literacy and numeracy performance) and engagement outcomes (e.g., participation, academic engagement) for Autistic students. Many evaluations take place in inclusive or mainstream settings for Autistic students and reported effects reflect how PAL is enacted in those contexts.

Key findings

- PAL improved academic engagement and achievement across literacy and numeracy while fostering positive social interactions (Bene et al., 2014; Haas et al., 2020; Mahoney, 2023; Mahoney & Davis, 2024).
- Peer tutoring and cooperative learning were the most common models (Mahoney, 2023).
- Some primary studies reported mixed individual outcomes (Carter et al., 2017), but the overall body of evidence supports PAL as a promising practice for Autistic students.

Evidence specific to students with ADHD is sparse relative to autism. Conclusions for ADHD remain tentative pending additional classroom studies. Only one study examined Autistic students with an additional diagnosis of ADHD. No studies examined students with ADHD exclusively.

Implications for practice

- Consider PAL as a low-cost strategy to actively engage all students to consolidate learning.
- Monitor students for misconceptions in learning, provide feedback and offer additional support as needed.

Confidence in the evidence base

Medium-high (one meta-analysis, 3 systematic reviews – one rated as high confidence – and 2 primary studies).

Resources

- Evidence for Learning: [Peer tutoring](#).

Use of feedback

Description

Feedback gives students information about their performance to help close the gap between current understanding and intended learning (Hattie & Timperley, 2007). Effective feedback is clear, specific, actionable and promptly delivered.

Evidence summary for Autistic students and students with ADHD

Across the literature for these cohorts, studies most often report engagement or behavioural outcomes (e.g., on-task behaviour, smoother transitions), with fewer direct measures of academic attainment. Effects can vary by modality (verbal, non-verbal, visual) and by frequency or specificity of delivery.

Key findings

- While praise and tangible rewards can motivate students (Royer et al., 2019), their impact on intrinsic motivation varied depending on factors such as sincerity, perceived competence and individual characteristics (Knochel et al., 2021).
- Behaviour-specific praise for Autistic students increased on-task behaviour, with the strongest gains occurring when praise was delivered at a high frequency (approximately 4 or more statements per minute) (Kranak et al., 2017).
- Non-verbal feedback (using stickers) resulted in a quicker time to adapt to new rules within a task when compared to verbal feedback (generic praise such as ‘good job’) for Autistic students (Reed, 2023).
- Combined verbal and tangible reinforcement facilitated smoother transitions and reduced disruptive behaviour for students with ADHD (Gal & Ryder, 2025).
- Feedback was most effective when precise, scaffolded and paired with visual supports (Tay et al., 2019).

The evidence base on effective feedback for these cohorts is limited, with no systematic reviews focused on feedback. Since evidence specific to students with ADHD is limited and context-dependent (e.g., type of reinforcement), the implications for students with ADHD should be viewed as emerging.

Implications for practice

- Use precise, scaffolded feedback paired with visual supports.
- Focus on behaviours or learning goals rather than general praise.
- Consider how to adapt the frequency of behaviour-specific praise for mainstream classrooms.
- Consider using non-verbal feedback as well as tangible reinforcements.

Confidence in the evidence base

- Medium (5 primary studies).

Resources

- AERO practice guide: [Monitor progress](#)
- AERO video: [Acknowledgement and praise](#)
- inclusionED: [Provide feedback on learning and behaviour](#)
- inclusionED: [Actively supervise your class](#)
- Education Endowment Foundation: [The impact of feedback on student attainment: a systematic review.](#)

Use of rules and routines

Description

Rules and routines create predictable, structured learning environments that support all students (Archer & Hughes, 2011). Rules are explicit statements, while routines are step-by-step procedures for recurring classroom activities that are explicitly taught and practised to become automatic.

Evidence summary for Autistic students and students with ADHD

Rules and routines for Autistic students primarily focus on transition related outcomes, with a focus on preventing or reducing disruptive behaviour with limited impact on academic skills.

Key findings

- Studies focused on transition practices only.
- Antecedent-based interventions, that adjust what happens before a behaviour to prevent challenges, were most commonly used to support transitions (Tullis et al., 2015).
- Structured transition programs, such as STAT (Schedules, Tools and Activities for Transitions), were feasible and reduced disruptive behaviour, although they did not significantly improve academic engagement (Iadarola et al., 2018).

The evidence base for using the practice with Autistic students was limited. No systematic reviews or primary research identified for students with ADHD.

Implications for practice

- Transition planning should be an intentional part of classroom routines.
- Students should be prepared for upcoming changes to prevent difficulties before they occur. Visual schedules and environmental adaptations can support this practice.
- Structured transition programs can be effective for supporting transitions.
- Transition supports can be integrated with broader instruction.

Confidence in the evidence base

Medium (one systematic review)/high (one primary study).

Resources

- AERO explainer: [Establishing and maintaining rules](#)
- AERO explainer: [Teaching routines](#)
- inclusionED: [Establish classroom rules](#)
- inclusionED: [Establish classroom expectations \(Secondary\)](#)
- inclusionED: [Consistently use routines and schedules.](#)

Use of visual supports

Description

Visual supports are tools that make information clear and predictable for students. They include symbols, pictures, physical objects and written words (Schlosser et al., 2020). Common examples are visual schedules, task cards, timetables, flashcards and storyboards. These supports help students anticipate upcoming activities, follow established routines and engage more effectively in learning. They are often combined with other practices such as video modelling or peer-mediated interventions. Formats vary and can include digital tools (e.g., iPads), book layouts and traditional linear designs (Brodhead et al., 2018; Bryan & Gast, 2000).

Evidence summary for Autistic students and students with ADHD

Visual supports – such as schedules, task cards and timetables – are associated with reductions in challenging behaviour, improved classroom engagement and greater independence and smoother transitions for Autistic students.

Key findings

- Visual supports combined with practices such as video modelling and role-play were associated with large effects on reducing challenging behaviours (e.g., out-of-seat time, disruptive behaviours) and improving classroom engagement and cooperative behaviours (Watkins et al., 2019).
- Teachers rated visual schedules, task cards and timetables as highly effective for helping students comprehend routines, stay on task and work independently (Tatell, 2025). Individualised visual schedules improved independence and reduced transition-related difficulties in mainstream classrooms (Macdonald et al., 2018).

Evidence of visual supports was found for a range of engagement related outcomes for Autistic students. No studies were found that examined outcomes for students with ADHD or co-occurring autism and ADHD.

Implications for practice

- Embed visual supports into daily routines.
- Combine visual supports with other evidence-based practices.
- Consider using individualised visual schedules, visual timetables and task cards.
- Visual supports should be used judiciously to avoid cognitive overload.

Confidence in the evidence base

Medium (one meta-analysis and 2 primary studies).

Resources

- inclusionED: [Use visual schedules](#)
- inclusionED: [Use visual schedules \(Secondary\)](#).

Use of technology

Description

Technology refers to the strategic integration of digital tools, software and devices to enhance learning. These include assistive technologies, educational apps, video-based interventions and computer-assisted instruction. When combined with evidence-based teaching practices, technology can provide personalised, interactive and multisensory learning that improves engagement and independence for students with diverse learning needs (Lawan et al., 2023). Teachers report that technology can save time, allow flexible pacing and enable tailored content for students who need additional processing time (Rusli & Kheng, 2025). With technology use becoming more widespread in schools, careful consideration is required to ensure safe, ethical and educationally effective products are selected.

Evidence summary for Autistic students and students with ADHD

Some technology-supported approaches show promise for improving engagement and learning for Autistic students. Video-based modelling interventions supported learning outcomes, while other forms of technology were found to improve engagement and on-task behaviours.

Variability in outcomes highlights the need to carefully select technology and monitor its use.

Key findings

- **Video-based interventions (VBI):** Video modelling, video self-modelling and video prompting were effective for teaching academic skills and improving on-task behaviour. VBI allows repeated viewing and consistent language, supporting skill acquisition in mathematics and literacy (Hughes & Yakubova, 2019).
- **Tablet and app-based tools:** Assistive technology combined with structured practices improved writing quality and engagement (Ozdowska et al., 2021). Rusli & Kheng (2025) reported increased student engagement when technology was integrated into lessons, highlighting its potential to support participation and motivation. A meta-analysis of iPad interventions showed most had positive effects, particularly for mathematics, though results varied (Larwin & Aspiranti, 2019).
- **Computer-assisted instruction (CAI):** Findings for CAI were mixed. Some programs improved early numeracy and writing skills, while others showed no significant gains compared to traditional instruction (Jimenez & Besaw, 2020; Nally et al., 2021; Pellecchia et al., 2020).
- **Co-designed educational games:** Evidence suggested potential for increasing engagement and subject-specific knowledge (Bossavit & Parsons, 2018).
- **Additional examples:** Tools such as Proloquo2Go reduced support needs during classroom activities (Collette et al., 2018). Technology-based interventions have also been associated with improvements in on-task and task completion behaviours (Rosenbloom et al., 2019) and motivation (Correia & Halabi, 2021).

No studies examined outcomes for students with ADHD or co-occurring autism and ADHD.

Implications for practice

- Use of technology needs to be thoughtfully considered and used alongside effective universal teaching strategies.
- Consider using VBI to teach targeted academic skills.
- Integrate technology, particularly tablet or app-based tools, with structured practices.
- Consider using technology for flexible pacing and personalised instruction.

Confidence in the evidence base

Medium (one meta-analysis, one systematic review and 10 primary studies).

Resources

- Education Endowment Fund: [Using digital technology to improve learning](#)
- inclusionED: [Use technology to support written expression.](#)

Use of environmental adaptations

Description

Environmental adaptations involve modifying the physical or sensory aspects of the classroom to support learning and wellbeing. These can include changes to visual, auditory and physical environments, as well as practices to reduce sensory overload and improve accessibility (Mallory & Keehn, 2021). Research suggests that classroom environment factors can influence academic progress for all students (Barrett et al., 2013).

Evidence summary for Autistic students and students with ADHD

Environmental adaptations primarily for Autistic students show potential for improving task engagement and reducing sensory-related stress, but individual responses vary. Further research is needed to confirm consistent effects across settings.

Key findings

- **Noise reduction:** Reducing background noise improved task engagement for Autistic students in classroom settings (Dargue et al., 2021).
- **Noise-cancelling headphones:** Some studies reported increased on-task behaviour and reduced stress when headphones were used, though concerns about dependency were noted from parents and teachers. However, these concerns were not examined further (Kulawiak & Schussler, 2021).
- **Sound-field amplification:** A randomised controlled trial found that amplifying the teacher's voice above ambient noise improved phonological processing for Autistic students more than for their peers (Wilson et al., 2021).

Evidence specific to students with ADHD is very limited, and no studies examined outcomes for students with co-occurring autism and ADHD.

Implications for practice

- Reduce background noise in classrooms wherever possible (e.g., use soft furnishings, close doors).
- Consider noise-cancelling headphones as an option during high-noise activities.
- Consider using sound-amplification systems to ensure the teacher's voice is audible above ambient noise.
- Combine auditory supports with other evidence-based practice, such as visual supports.

Confidence in the evidence base

Medium-high (one scoping review, one systematic review and one Australian RCT – rated as very high).

Resources

- Practice guide: [Supporting students' diverse needs – Sensory differences](#)
- Practice guide: [Supporting students' diverse needs – Physical needs](#)
- inclusionED: [Organise your classroom](#)
- inclusionED: [Organise your classroom \(Secondary\)](#)
- inclusionED: [Improve your classroom acoustics](#)
- inclusionED: [Improve your classroom acoustics \(Secondary\)](#).

Limitations of the evidence base

The reviewed research offers valuable insights into teaching practices for Autistic students and students with ADHD. However, several limitations should be considered when interpreting the findings:

- **Study design:** Many studies used single subject designs (SSD), which are useful for examining individual responses but involve small, non-random samples that limit generalisability. Reliability improves when effects are replicated across multiple participants, but building a robust evidence base requires systematic replication across settings and behaviours (Horner et al., 2005; Kahveci & Altun, 2019; Odom et al., 2005).
- **Lack of systematic reviews for some practices:** For practices such as feedback, rules and routines, and environmental adaptations, no systematic reviews were identified, making it difficult to draw comprehensive conclusions where individual studies vary in quality and scope.
- **Context of studies:** Much of the evidence was generated in specialist settings. Application in mainstream classrooms should therefore be considered with caution, particularly where classroom environments, staffing structures or instructional routines differ. Limited specific reference to neurodiversity-affirming principles in the review research warrants caution in assuming these practices are affirming.
- **Gender representation:** Participants were predominantly male, limiting insights for female students and those with diverse gender identities. Male samples have been common in autism and ADHD research due to males having higher diagnostic rates in childhood, leaving females understudied and underrepresented (despite research now showing the sex ratio is closer to 1:1 by adulthood) (Nordahl, 2023; Platania et al., 2025).
- **Population focus:** Most studies focused on Autistic students, far fewer examined students with ADHD and none examined students with co-occurring autism and ADHD. Classroom evidence relating to First Nations students was also absent, with located First Nations studies addressing diagnosis, access and family perspectives rather than classroom teaching practices.
- **Combined interventions:** Many studies assessed multicomponent approaches, meaning reported effects may reflect the combined package rather than an individual practice. This mirrors real-world teaching but makes it harder to isolate the impact of specific practices (e.g., video modelling with peer tutoring, systematic instruction with technology and visual supports) (Kahveci & Altun, 2019).

These limitations highlight the need for caution when translating findings into practice and reinforce the value of further classroom-based research in mainstream settings, particularly for students with ADHD, students with co-occurring diagnoses, and First Nations students.

Conclusion

Findings from this paper indicate opportunities to strengthen policy and practice by embedding universal evidence-based teaching practices that align with how students learn, while allowing adjustments that respond to individual strengths and needs. In practice, this often involves increasing the intensity, frequency or individualisation of support to optimise learning conditions for Autistic students and students with ADHD.

Explicit teaching, widely recognised as effective for all learners, remains the most robust evidence-based practice for improving learning outcomes. Modelling and prompting, as integral components of explicit teaching, also show consistent positive effects. Other practices, such as feedback, peer-assisted learning, rules and routines, visual supports, technology, and environmental adjustments, are promising. However, their impact depends on careful adaptation to individual needs and classroom contexts. Multicomponent approaches that combine 2 or more practices, reflect the complexity of real-world classrooms and may deliver greater impact than single practices.

Across the findings, effective teaching can be supported through tiered approaches that allow adjustments in intensity, frequency and individualisation, complemented by practical tools such as visual supports and technology. While the evidence base for Autistic students is growing, classroom evidence for students with ADHD remains very limited, and there are no studies isolating learning outcomes for students with co-occurring autism and ADHD. Classroom evidence specific to First Nations learners is also absent. These gaps highlight priorities for future work.

Next steps

The findings highlight several areas for further consideration by policy and system leaders, including:

- **building a clearer picture of current knowledge, confidence and practice** by mapping how schools are currently using these practices and the conditions that enable success for Autistic students and students with ADHD (e.g., instructional routines, staffing, assessment and monitoring) to identify scalable enablers and barriers
- **understanding what works, where and how** by examining implementation in diverse school settings (e.g., primary/secondary, regional/urban) and classroom factors that influence impact, particularly where practices are used in multicomponent packages
- **promoting flexible, tiered approaches** that allow adjustments in intensity and individualisation, while monitoring both academic and engagement outcomes, to ensure adaptations continue to deliver positive results across contexts
- **addressing priority gaps by exploring opportunities to:**
 - **build the classroom evidence base for ADHD**, including for students with co-occurring autism and ADHD, particularly in mainstream Australian schools
 - **support further co-designed work with First Nations communities** to understand how practices can be adapted in culturally responsive and contextually grounded ways and to generate cohort-specific classroom evidence
 - **include alignment of practice implementation with principles of neurodiversity-affirming principles.**

Strengthening the evidence base around effective classroom practices to inform practical implementation supports will help schools use these practices, ensuring that all students can access high quality teaching that meets their learning needs.

References

- Apanasionok, M. M., Alallawi, B., Grindle, C. F., Hastings, R. P., Watkins, R. C., Nicholls, G., Maguire, L., & Staunton, D. (2021). Teaching early numeracy to students with autism using a school staff delivery model. *British Journal of Special Education*, 48(1), 90–111. <https://doi.org/10.1111/1467-8578.12346>
- Apanasionok, M. M., Hastings, R. P., Grindle, C. F., Watkins, R. C., & Paris, A. (2019). Teaching science skills and knowledge to students with developmental disabilities: A systematic review. *Journal of Research in Science Teaching*, 56(7), 847–880. <https://doi.org/10.1002/tea.21531>
- Archer, A., & Hughes, C. (2011). *Explicit instruction: Effective and efficient teaching*. Guilford Press.
- Australasian ADHD Professionals Association. (2022). *Talking about ADHD language guide*. Retrieved March 5, 2026 from <https://aadpa.com.au/talking-about-adhd/>
- Australian Government. (n.d.). *Nationally Consistent Collection of Data on School Students with Disability*. <https://www.nccd.edu.au/>
- Australian Government Department of Health, Disability and Aging. (2025). *National autism strategy*. Retrieved March 5, 2026 from <https://www.health.gov.au/our-work/national-autism-strategy>
- AutismCRC. (n.d.). *Language choices around autism and individuals on the autism spectrum*. <https://www.autismcrc.com.au/language-choice>
- Bailey, B., & Arciuli, J. (2020). Indigenous Australians with autism: A scoping review. *Autism*, 24(5), 1031–1046. <https://doi.org/10.1177/1362361319894829>
- Barrett, P., Zhang, Y., Moffat, J., & Kobbacy, K. (2013). A holistic, multi-level analysis identifying the impact of classroom design on pupils' learning. *Building and Environment*, 59, 678–689. <https://doi.org/10.1016/j.buildenv.2012.09.016>
- Barnett, J. H., Frankel, A. J., & Fisher, K. W. (2018). Systematic review of evidence-based interventions in science for students with autism spectrum disorders. *Education and Training in Autism and Developmental Disabilities*, 53(2), 128–145. <https://doi.org/10.1177/215416471805300203>
- Bene, K., Banda, D. R., & Brown, D. (2014). A meta-analysis of peer-mediated instructional arrangements and autism. *Review Journal of Autism and Developmental Disorders*, 1(2), 135–142. <https://doi.org/10.1007/s40489-014-0014-9>
- Bishop, A. E., Sawyer, M., Alber-Morgan, S. R., & Boggs, M. (2015). Effects of a graphic organizer training package on the persuasive writing of middle school students with autism. *Education and Training in Autism and Developmental Disabilities*, 50(3), 290–302. <https://doi.org/10.1177/215416471505000305>
- Bond, C., Symes, W., Hebron, J., Humphrey, N., Morewood, G., & Woods, K. (2016). Educational interventions for children with ASD: A systematic literature review 2008–2013. *School Psychology International*, 37(3), 303–320. <https://doi.org/10.1177/0143034316639638>
- Bossavit, B., & Parsons, S. (2018). Outcomes for design and learning when teenagers with autism codesign a serious game: A pilot study. *Journal of Computer Assisted Learning*, 34(3), 293–305. <https://doi.org/10.1111/jcal.12242>
- Brodhead, M. T., Courtney, W. T., & Thaxton, J. R. (2018). Using activity schedules to promote varied application use in children with autism. *Journal of Applied Behavior Analysis*, 51(1), 80–86. <https://doi.org/10.1002/jaba.435>
- Bryan, L. C., & Gast, D. L. (2000). Teaching on-task and on-schedule behaviors to high-functioning children with autism via picture activity schedules. *Journal of Autism and Developmental Disorders*, 30(6), 553–567. <https://doi.org/10.1023/A:1005687310346>
- Cadette, J. N., Wilson, C. L., Brady, M. P., Dukes, C., & Bennett, K. D. (2016). The effectiveness of direct instruction in teaching students with autism spectrum disorder to answer “wh-” questions. *Journal of Autism and Developmental Disorders*, 46(9), 2968–2978. <https://doi.org/10.1007/s10803-016-2825-2>

- Carter, E. W., Gustafson, J. R., Sreckovic, M. A., Dykstra Steinbrenner, J. R., Pierce, N. P., Bord, A., Stabel, A., Rogers, S., Czerw, A., & Mullins, T. (2017). Efficacy of peer support interventions in general education classrooms for high school students with autism spectrum disorder. *Remedial and Special Education, 38*(4), 207–221. <https://doi.org/10.1177/0741932516672067>
- Collette, D., Brix, A., Brennan, P., DeRoma, N., & Muir, B. C. (2018). Proloquo2Go enhances classroom performance in children with autism spectrum disorder. *Occupational Therapy Journal of Research, 39*(3), 143–150. <https://doi.org/10.1177/1539449218799451>
- Correia, A.-P., & Halabi, A. L. (2021). Tablet devices in the classroom: Their instructional role with children on the autism spectrum. *Journal of Educational Technology Systems, 50*(2), 273–293. <https://doi.org/10.1177/00472395211047930>
- Dargue, N., Adams, D., & Simpson, K. (2021). Can characteristics of the physical environment impact engagement in learning activities in children with autism? A systematic review. *Review Journal of Autism and Developmental Disorders, 9*(2), 143–159. <https://doi.org/10.1007/s40489-021-00248-9>
- de Bruin, K., Killingly, C., & Graham, L. J. (2024). Multi-tiered systems of support: what are they, where did they come from, and what are the lessons for Australian schools? In L. J. Graham (Ed.), *Inclusive education for the 21st century: Theory, policy, and practice* (2nd ed., pp. 157–175). Routledge. <https://doi.org/10.4324/9781003350897-11>
- Evidence for Learning. (2021, June 30). *Peer tutoring*. <https://evidenceforlearning.org.au/education-evidence/teaching-learning-toolkit/peer-tutoring>
- Finnegan, E., & Mazin, A. L. (2016). Strategies for increasing reading comprehension skills in students with autism spectrum disorder: A review of the literature. *Education and Treatment of Children, 39*(2), 187–219. <https://doi.org/10.1353/etc.2016.0007>
- Frampton, S. E., Munk, G. T., Shillingsburg, L. A., & Shillingsburg, M. A. (2021). A systematic review and quality appraisal of applications of direct instruction with children with autism spectrum disorder. *Perspectives on Behavior Science, 44*(2–3), 245–266. <https://doi.org/10.1007/s40614-021-00292-0>
- Gal, C., & Ryder, C. H. (2025). A comparative analysis of verbal versus combined verbal–tangible reinforcement for students with behavioural difficulties. *International Social Science Journal, 75*(257), 709–720. <https://doi.org/10.1111/issj.12581>
- Garcia, R. G., Mosen, J., & Bustos, M. T. A. (2025). How the science of learning can strengthen inclusive literacy instruction in the Philippines. *International Journal of Developmental Disabilities, 71*(6), 896–918. <https://doi.org/10.1080/20473869.2025.2544158>
- García-Moya, M., & Blanco, R. (2024). Arithmetic problem-solving routine for students with autism. *Education and Training in Autism and Developmental Disabilities, 59*(4), 416–428. <https://doi.org/10.1177/215416472405900405>
- Haas, A., Vannest, K., Thompson, J. L., Fuller, M. C., & Wattanawongwan, S. (2020). Peer-mediated instruction and academic outcomes for students with autism spectrum disorders: A comparison of quality indicators. *Mentoring & Tutoring: Partnership in Learning, 28*(5), 625–642. <https://doi.org/10.1080/13611267.2020.1859330>
- Harrison, J. R., Evans, S. W., Zatz, J., Mehta, P., Patel, A., Syed, M., Soares, D. A., Swistack, N., Griffith, M., & Custer, B. A. (2022). Comparison of four classroom-based strategies for middle school students with ADHD: A pilot randomized controlled trial. *Journal of Attention Disorders, 26*(11), 1507–1519. <https://doi.org/10.1177/10870547221081108>
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81–112. <https://doi.org/10.3102/003465430298487>
- Horner, R., Carr, E., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children, 71*(2), 165–179. <https://doi.org/10.1177/001440290507100203>
- Hughes, E. M., & Yakubova, G. (2019). Addressing the mathematics gap for students with ASD: An evidence-based systematic review of video-based mathematics interventions. *Review Journal of Autism and Developmental Disorders, 6*(2), 147–158. <https://doi.org/10.1007/s40489-019-00160-3>

- Iadarola, S., Shih, W., Dean, M., Blanch, E., Harwood, R., Hetherington, S., Mandell, D., Kasari, C., & Smith, T. (2018). Implementing a manualized, classroom transition intervention for students with ASD in underresourced schools. *Behavior Modification*, 42(1), 126–147. <https://doi.org/10.1177/0145445517711437>
- Jimenez, B. A., & Besaw, J. (2020). Building early numeracy through virtual manipulatives for students with intellectual disability and autism. *Education and Training in Autism and Developmental Disabilities*, 55(1), 28–44. <https://www.jstor.org/stable/26898712>
- Kahveci, G., & Altun, H. (2019). The effectiveness of a comprehensive intervention on word problem solving for elementary school students with ADHD: POVM + schema based word problem solving. *Journal for the Education of Gifted Young Scientists*, 7(4), 1055–1073. <https://doi.org/10.17478/jegys.609603>
- Knochel, A. E., Blair, K.-S. C., & Sofarelli, R. (2021). Culturally focused classroom staff training to increase praise for students with autism spectrum disorder in Ghana. *Journal of Positive Behavior Interventions*, 23(2), 106–117. <https://doi.org/10.1177/1098300720929351>
- Kranak, M. P., Alber-Morgan, S. R., & Sawyer, M. R. (2017). A parametric analysis of specific praise rates on the on-task behaviour of elementary students with autism. *Education and Training in Autism and Developmental Disabilities*, 52, 453–464.
- Kulawiak, P. R., & Schussler, D. (2021). Academic benefits of wearing noise-cancelling headphones during class for typically developing students and students with special needs: A scoping review. *Cogent Education*, 8(1). <https://doi.org/10.1080/2331186X.2021.1957530>
- Larwin, K. H., & Aspiranti, K. B. (2019). Measuring the academic outcomes of iPads for students with autism: A meta-analysis. *Review Journal of Autism and Developmental Disorders*, 6, 233–241 (2019). <https://doi.org/10.1007/s40489-019-00165-y>
- Lawan, A., Ibrahim Yarima, K., Ibrahim Usman, H., Isah Abba, S., Usman Yakubu, H., & Garba Musa, A. (2023). A systematic literature review on the efficacy of emerging computer technologies in inclusive education for students with autism spectrum disorder. *OBM Neurobiology*, 7(2). <https://doi.org/10.21926/obm.neurobiol.2302172>
- Lemons, C. J., Allor, J. H., Al Otaiba, S., & LeJeune, L. M. (2016). 10 research-based tips for enhancing literacy instruction for students with intellectual disability. *TEACHING Exceptional Children*, 49(1), 18–30. <https://doi.org/10.1177/0040059918758162>
- Lilley, R., Sedgwick, M., & Pellicano, E. (2019). We look after our own Mob: Aboriginal and Torres Strait Islander experiences of autism. Macquarie University. <https://apo.org.au/node/275846>
- Lilley, R., Sedgwick, M., & Pellicano, E. (2020). Inclusion, acceptance, shame and isolation: Attitudes to autism in Aboriginal and Torres Strait Islander communities in Australia. *Autism*, 24(7), 1860–1873. <https://doi.org/10.1177/1362361320928830>
- Lilley, R., Sedgwick, M., & Pellicano, E. (2023). A hard slog road: Aboriginal and Torres Strait Islander women talk about loving and supporting their autistic children. *Disability & Society*, 38(4), 561–586. <https://doi.org/10.1080/09687599.2021.1947193>
- Locke, J., Hernandez, A. M., Joshi, M., Hugh, M. L., Bravo, A., Osuna, A., & Pullmann, M. D. (2022). Supporting the inclusion and retention of autistic students: Exploring teachers' and paraeducators' use of evidence-based practices in public elementary schools. *Frontiers in Psychiatry*, 13, Article 961219. <https://doi.org/10.3389/fpsy.2022.961219>
- Loh, P., Hayden, G., Vicary, D., Mancini, V., Martin, N., & Piek, J. (2016). Australian Aboriginal perspectives of attention deficit hyperactivity disorder. *Australian and New Zealand Journal of Psychiatry*, 50(4), 309–310. <https://doi.org/10.1177/0004867415624551>
- Loh, P.-R., Hayden, G., Vicary, D., Mancini, V., Martin, N., & Piek, J. P. (2017). Attention deficit hyperactivity disorder: An Aboriginal perspective on diagnosis and intervention. *Journal of Tropical Psychology*, 7, Article e2. <https://doi.org/10.1017/jtp.2017.1>
- Long, C. (2015). Disadvantage undiagnosed. *Australian Educator*, 88(Summer), 22–24.

- Macdonald, L., Trembath, D., Ashburner, J., Costley, D., & Keen, D. (2018). The use of visual schedules and work systems to increase the on-task behaviour of students on the autism spectrum in mainstream classrooms. *Journal of Research in Special Educational Needs*, 18(4), 254–266. <https://doi.org/10.1111/1471-3802.12409>
- Macmillan, C. M., Pecora, L. A., Ridgway, K., Hooley, M., Thomson, M., Dymond, S., Donaldson, E., Mesibov, G. B., & Stokes, M. A. (2023). An evaluation of education-based interventions for students with autism spectrum disorders without intellectual disability: A systematic review. *Review Journal of Autism and Developmental Disorders*, 10(2), 220–238. <https://doi.org/10.1007/s40489-021-00289-0>
- Mahoney, M. W. M. (2023). Peer-mediated instruction and intervention to support the academic achievement of secondary students with autism spectrum disorder: A systematic review of the literature. *The Journal of Special Education Apprenticeship*, 12(1). <https://doi.org/10.58729/2167-3454.1159>
- Mahoney, M. W. M., & Davis, C. A. (2024). Supporting the academic engagement of secondary students with autism through the use of a visual activity schedule and peer-mediated instruction and interventions. *Education and Training in Autism and Developmental Disabilities*, 59(2), 132–147. <https://doi.org/10.1177/215416472405900203>
- Mallory, C., & Keehn, B. (2021). Implications of sensory processing and attentional differences associated with autism in academic settings: An integrative review. *Frontiers in Psychiatry*, 12, Article 695825. <https://doi.org/10.3389/fpsy.2021.695825>
- Monk, R., Whitehouse, A. J. O., & Waddington, H. (2022). The use of language in autism research. *Trends in neurosciences*, 45(11), 791–793. <https://doi.org/10.1016/j.tins.2022.08.009>
- Moore, D. A., Russell, A. E., Matthews, J., Ford, T. J., Rogers, M., Ukoumunne, O. C., Kneale, D., Thompson-Coon, J., Sutcliffe, K., Nunns, M., Shaw, L., & Gwernan-Jones, R. (2018). School-based interventions for attention-deficit/hyperactivity disorder: A systematic review with multiple synthesis methods. *Review of Education*, 6(3), 209–63. <https://doi.org/10.1002/rev3.3149>
- Mutluer, T., Aslan Genç, H., Özcan Morey, A., Yapici Eser, H., Ertinmaz, B., Can, M., & Munir, K. (2022). Population-based psychiatric comorbidity in children and adolescents with autism spectrum disorder: A meta-analysis. *Frontiers in Psychiatry*, 13, Article 856208. <https://doi.org/10.3389/fpsy.2022.856208>
- Nally, A., Holloway, J., Lydon, H., & Healy, O. (2021). The Edmark® Reading Program: A comparison of computerized and table top presentation in reading outcomes in students with autism spectrum disorder. *Journal of Developmental and Physical Disabilities*, 33, 259–278 (2021). <https://doi.org/10.1007/s10882-020-09747-9>
- Nordahl, C. W. (2023). Why do we need sex-balanced studies of autism?. *Autism research: official journal of the International Society for Autism Research*, 16(9), 1662–1669. <https://doi.org/10.1002/aur.2971>
- Odom, S. L., Brantlinger, E., Gersten, R., Horner, R. H., Thompson, B., & Harris, K. R. (2005). Research in special education: Scientific methods and evidence-based practices. *Exceptional Children*, 71(2), 137–148.
- Ozdowska, A., Wyeth, P., Carrington, S., & Ashburner, J. (2021). Using assistive technology with SRSD to support students on the autism spectrum with persuasive writing. *British Journal of Educational Technology*, 52(2), 934–959. <https://doi.org/10.1111/bjet.13063>
- Pennington, R. C., Foreman, L. H., & Gurney, B. N. (2018). An evaluation of procedures for teaching students with moderate to severe disabilities to write sentences. *Remedial and Special Education*, 39(1), 27–38. <https://doi.org/10.1177/0741932517708428>
- Platania, N. M., Starreveld, D. E. J., Wynchank, D., Beekman, A. T. F., & Kooij, S. (2025). Bias by gender: exploring gender-based differences in the endorsement of ADHD symptoms and impairment among adult patients. *Frontiers in Global Women's Health*, 6, Article 1549028. <https://doi.org/10.3389/fgwh.2025.1549028>
- Ranjan, M. (2023). *Understanding autism prevalence* (TTPI - Working Paper 17/2023). <http://dx.doi.org/10.2139/ssrn.4638072>
- Reed, P. (2023). Individuals with autism spectrum disorder are differentially sensitive to interference from previous verbal feedback. *Autism*, 27(7), 2011–2020. <https://doi.org/10.1177/13623613221150377>

- Richardson, M., Moore, D. A., Gwernan-Jones, R., Thompson-Coon, J., Ukoumunne, O., Rogers, M., Whear, R., Newlove-Delgado, T. V., Logan, S., Morris, C., Taylor, E., Cooper, P., Stein, K., Garside, R., & Ford, T. J. (2015). Non-pharmacological interventions for attention-deficit/hyperactivity disorder (ADHD) delivered in school settings: systematic reviews of quantitative and qualitative research. *Health technology assessment, 19*(45), 1–470. <https://doi.org/10.3310/hta19450>
- Rodgers, D. B., & Loveall, S. J. (2023). Writing interventions for students with intellectual and developmental disabilities: A meta-analysis. *Remedial and Special Education, 44*(3), 239–252. <https://doi.org/10.1177/07419325221108896>
- Rong, Y., Yang, C. J., Jin, Y., & Wang, Y. (2021). Prevalence of attention-deficit/hyperactivity disorder in individuals with autism spectrum disorder: A meta-analysis. *Research in Autism Spectrum Disorders, 83*, Article 101759. <https://doi.org/10.1016/j.rasd.2021.101759>
- Rosenbloom, R., Wills, H. P., Mason, R., Huffman, J. M., & Mason, B. A. (2019). The Effects of a Technology-Based Self-monitoring Intervention on On-Task, Disruptive, and Task-Completion Behaviors for Adolescents with Autism. *Journal of autism and developmental disorders, 49*(12), 5047–5062. <https://doi.org/10.1007/s10803-019-04209-4>
- Rosenshine, B. (2008). *Five meanings of direct instruction*. Center on Innovation & Improvement.
- Royer, D. J., Lane, K. L., Dunlap, K. D., & Ennis, R. P. (2019). A systematic review of teacher-delivered behavior-specific praise on K–12 student performance. *Remedial and Special Education, 40*(2), 112–128. <https://doi.org/10.1177/0741932517751054>
- Rusli, N. A., & Kheng, M. (2025). Teachers' perceptions and challenges in implementing digital learning for autism spectrum disorder (ASD) students in inclusive classrooms. *Journal of ICT in Education, 12*(1), 50–64. <https://doi.org/10.37134/jictie.vol12.1.4.2025>
- Sartini, E. C., Knight, V., Spriggs, A. D., & Allday, R. A. (2020). Effects of systematic instruction and self-directed video prompting on text comprehension of elementary students with autism spectrum disorder. *Research in Autism Spectrum Disorders, 72*, Article 101529. <https://doi.org/10.1016/j.rasd.2020.101529>
- Sawyer, M. G., Reece, C. E., Sawyer, A. C. P., Johnson, S. E., & Lawrence, D. (2018). Has the prevalence of child and adolescent mental disorders in Australia changed between 1998 and 2013 to 2014? *Journal of the American Academy of Child and Adolescent Psychiatry, 57*(5), 343–350.e5. <https://doi.org/10.1016/j.jaac.2018.02.012>
- Schatz, R. B., Peterson, R. K., & Bellini, S. (2016). The use of video self-modeling to increase on-task behavior in children with high-functioning autism. *Journal of Applied School Psychology, 32*(3), 234–253. <https://doi.org/10.1080/15377903.2016.1183542>
- Schlosser, R. W., Shane, H. C., Allen, A. A., Benz, A., Cullen, J., O'Neill, L., Chiesa, L., Miori-Dinneen, L., Koul, R., & Pasupathy, R. (2020). Coaching a school team to implement the visual immersion system™ in a classroom for children with autism spectrum disorder: A mixed-methods proof-of-concept study. *Advances in Neurodevelopmental Disorders, 4*, 447–470. <https://doi.org/10.1007/s41252-020-00176-5>
- Spooner, F., Root, J. R., Saunders, A. F., & Browder, D. M. (2019). An updated evidence-based practice review on teaching mathematics to students with moderate and severe developmental disabilities. *Remedial and Special Education, 40*(3), 150–165. <https://doi.org/10.1177/0741932517751055>
- Stenner, P., Pearson, A., Kapp, S., Watson, C., Pressler, R., Williams, G., Bertilsdotter-Rosqvist, H., Hultman, L., Semmens-Wheeler, R., & Botha, M. (2025). Using Q methodology, a group of neurodivergent neurodiversity researchers ask: What is the neurodiversity movement and what should it do? *Neurodiversity, 3*. <https://doi.org/10.1177/27546330251329625>
- Stokes, M. A., Thomson, M., Macmillan, C. M., Pecora, L., Dymond, S. R., & Donaldson, E. (2017). Principals' and teachers' reports of successful teaching strategies with children with high-functioning autism spectrum disorder. *Canadian Journal of School Psychology, 32*(3–4), 192–208. <https://doi.org/10.1177/0829573516672969>
- Swanson, H. L. (2000). What instruction works for students with learning disabilities? Summarizing the results from a meta-analysis of intervention studies. In R. M. Gersten, E. P. Schiller, & S. Vaughn (Eds.), *Contemporary special education research: Syntheses of the knowledge base on critical instructional issues*. Routledge.

- Tatel II, H. G. (2025). Assessing the effectiveness of visual supports in fostering communication and classroom engagement among elementary students with autism spectrum disorder. *Psychology & Education: A Multidisciplinary Journal*, 46(8), 1057–1083. <https://doi.org/10.70838/pemj.460806>
- Tay, H. Y., Kee, K. N. N., & Hui, S. K. F. (2019). Effective questioning and feedback for learners with autism in an inclusive classroom. *Cogent Education*, 6(1), Article 1634920. <https://doi.org/10.1080/2331186X.2019.1634920>
- Thom-Jones, S., Gordon, C. S., & Mizzi, S. (2025). 'I shouldn't have to educate their school about what autism is': Community attitudes and parent reports of autistic primary and secondary school experiences in Australia. *Autism*, 29(10), 2451–2462. <https://doi.org/10.1177/13623613251338908>
- Topping, K., & Ehly, S. (1998). Introduction to peer-assisted learning. In *Peer-assisted learning* (pp. 1–24). Routledge.
- Tullis, C. A., Cannella-Malone, H. I., & Payne, D. O. (2015). Literature review of interventions for between-task transitioning for individuals with intellectual and developmental disabilities including autism spectrum disorders. *Review Journal of Autism and Developmental Disorders*, 2(1), 91–102. <https://doi.org/10.1007/s40489-014-0039-0>
- Vidovic, J. L., Cornell, M. C., Frampton, S. E., & Shillingsburg, M. A. (2021). Adventures in direct instruction implementation: The devil is in the details. *Behavior Analysis in Practice*, 14(3), 839–855. <https://doi.org/10.1007/s40617-021-00616-1>
- Wagland, Z., Sterman, J., Scott-Cole, L., Spassiani, N., & Njelesani, J. (2025). Promoting neurodiversity-affirming care for autistic children: A scoping review. *Neurodiversity*, 3. <https://doi.org/10.1177/27546330251357479>
- Watkins, L., Ledbetter-Cho, K., O'Reilly, M., Barnard-Brak, L., & Garcia-Grau, P. (2019). Interventions for students with autism in inclusive settings: A best-evidence synthesis and meta-analysis. *Psychological Bulletin*, 145(5), 490–507. <https://doi.org/10.1037/bul0000190>
- Whalon, K., Henning, B., Jackson, E., & Intepe-Tingir, S. (2019). Effects of an adapted story grammar intervention on the listening comprehension of children with autism. *Research in Developmental Disabilities*, 95, Article 103507. <https://doi.org/10.1016/j.ridd.2019.103507>
- Wilson, W. J., Harper-Hill, K., Armstrong, R., Downing, C., Perrykkad, K., Rafter, M., & Ashburner, J. (2021). A preliminary investigation of sound-field amplification as an inclusive classroom adjustment for children with and without autism spectrum disorder. *Journal of Communication Disorders*, 93, Article 106142. <https://doi.org/10.1016/j.jcomdis.2021.106142>
- Yakubova, G., Hughes, E. M., & Chen, B. B. (2020). Teaching students with ASD to solve fraction computations using a video modeling instructional package. *Research in Developmental Disabilities*, 101, Article 103637. <https://doi.org/10.1016/j.ridd.2020.103637>

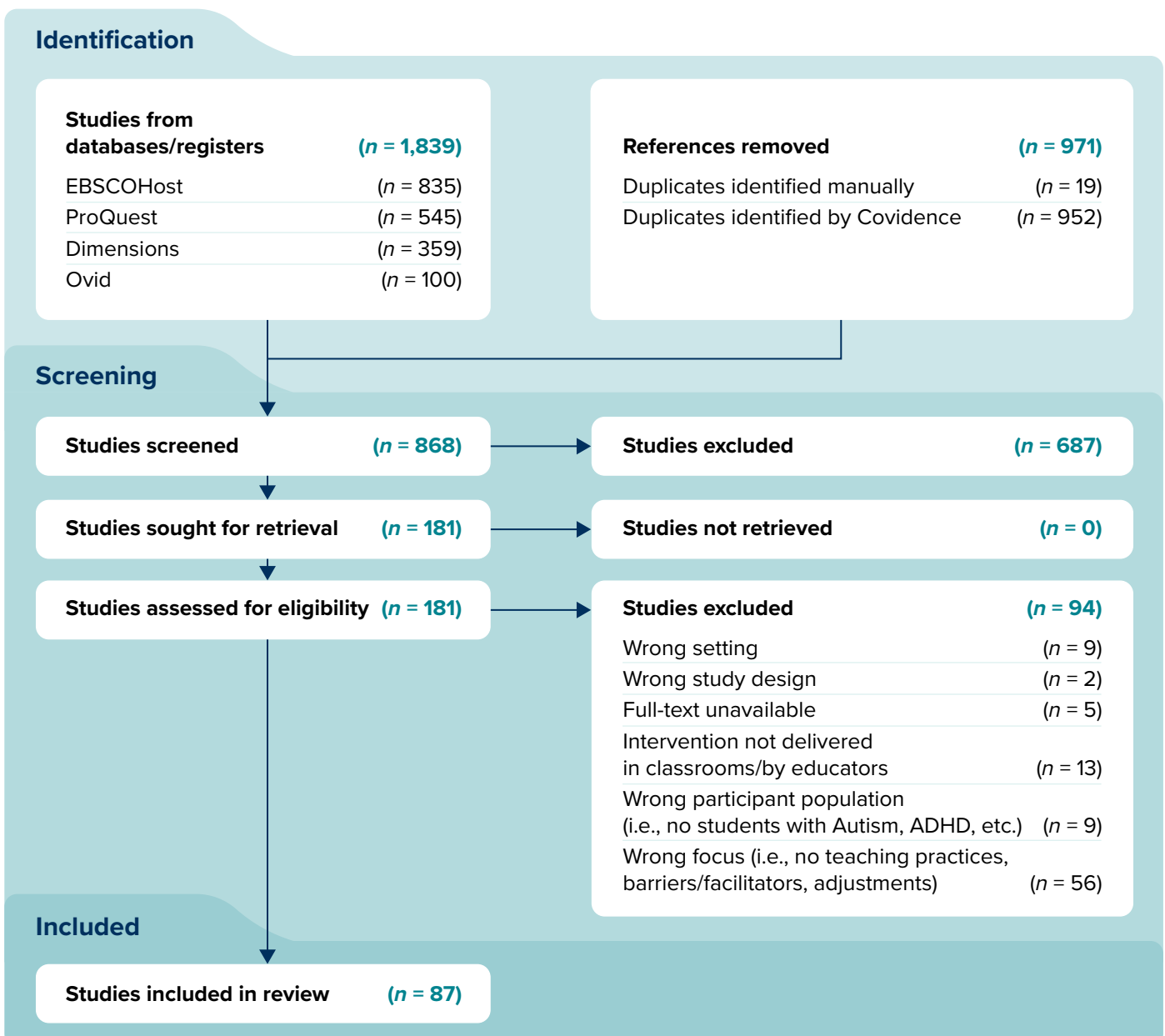
Appendix A: Methodology

Purpose and approach

This appendix outlines the methodology we used to identify and assess evidence on specific practices. Our goal was to answer the question: ‘What teaching practices support learning outcomes for Autistic students and students with ADHD in classroom settings?’

A large number of practices were initially identified through an umbrella review (see Figure A1 for the PRISMA flow chart). These practices were categorised based on broad categories found consistently in the literature for evidence-based teaching practices and current guidance on supporting Autistic children and children with ADHD ([Australian Evidence-Based Clinical Practice Guideline for ADHD \[AADPA\]](#) and [Interventions for Children on the Autism Spectrum \[AutismCRC\]](#)).

Figure A1: Umbrella review PRISMA flow chart



From this large list of practices, the research team short-listed those that were universal teaching practices and able to be implemented within a classroom setting by a teacher, without additional specialised training or need for 1:1 implementation. The focus was also narrowed to learning and learning adjacent outcomes (e.g., engagement, on-task behaviour). The team then undertook targeted searches of these short-listed practices in relation to learning outcomes for Autistic students and students with ADHD to find recent evidence, including primary studies, and synthesised the findings of these as part of the discussion paper.

The review focused on school settings internationally (mainstream and specialist) for primary and secondary students and included English-language, peer-reviewed studies published between March 2014 and October 2025. Searches were designed to capture multidisciplinary perspectives, including education, psychology, speech pathology and occupational therapy.

Databases searched

Searches were conducted in ERIC, Education Source (via EBSCO), JSTOR, Australian Education Index, A+, APA PsycInfo, Scopus, and CINAHL.

Search terms

Search terms combined population, practice, context and outcome keywords (Table A1).

Table A1: Summary of search terms

Population	Practice	Context	Outcome
autis* OR ASD OR autism spectrum disorder OR ASC OR ADHD OR attention deficit hyperactivity disorder	instruction AND (explicit OR direct OR systematic OR embedded)	school OR classroom	outcome OR achievement* OR attain* OR engage* OR participate*

Separate searches were conducted for each of the following practices using the same population context and outcome keywords:

- peer AND (assisted OR mediated OR tutoring)
- reinforcement OR feedback
- routines OR rules
- model* OR prompt*
- scaffolding in the classroom OR scaffold OR teacher scaffolding
- visual supports OR visual aids
- classroom environment OR classroom adjustments)
- technolog* OR computer OR “computer assisted learning” OR VR OR AR OR digital.

Inclusion criteria

- Involved school-aged Autistic and ADHD participants (primary or secondary)
- Used selected evidence-based teaching practices
- Conducted during school hours in a classroom context
- Reported learning related outcomes
- Empirical research published between 2014 and 2025.

Exclusion criteria

- Preschool or tertiary-aged students
- Practices used outside classroom instructional time (e.g., recess, home)
- Reported outcomes not related to learning or learning adjacent behaviours (e.g., on task behaviour, engagement)
- Theoretical papers, opinion pieces or grey literature (e.g., reports, theses).

Screening and selection

The decision was made to include both review papers and primary studies due to the emerging nature of the field. This was done to ensure all recent literature was captured. After title and abstract screening by 3 researchers, 66 studies were excluded for reasons including wrong population, practice, outcome or setting. Fifty-three studies met the inclusion criteria and were analysed. Data was extracted by one reviewer and checked by a second reviewer. These checks included ensuring studies were not double counted in evidence summaries.

Table A2 outlines the number of returned articles and those included within the review for each teaching practice.

Table A2: Summary of search results

Practice	Returned	Included
Explicit instruction	113	12
Peer-mediated	121	4
Feedback	280	9
Rules and routines	353	5
Modelling or prompting	355	4
Scaffolding	16	1
Visual supports	43	3
Environment	63	2
Technology	345	13

Further details of each included article, organised by teaching practice and confidence level, can be found in [Appendix C](#).




Evidence assessment

Each study was assessed against [AERO's Standards of Evidence](#) (Table A3), which consider 2 dimensions:

- **Rigour** – The methodological quality of the study, including design type (e.g., RCT, quasi-experimental, single-subject design), sample size, replication and internal validity.
- **Relevance** – The applicability of findings to real-world education contexts, including alignment with Australian schooling, feasibility for classroom implementation and clarity of outcomes.

Papers were rated low, medium, high or very high confidence based on these criteria. Only papers rated medium or above were included in this review. Low confidence papers were excluded as these present a hypothesis for why the approach should have positive effects on outcomes but do not provide data (whether qualitative or quantitative) to substantiate their claims that the approach is effective.

Table A3: Standards of Evidence

Symbol	Confidence level	Evidence required to assign level
	Medium	High-quality studies or reviews with a robust and transparent methodology that include studies that allow correlational claims to be made
	High	High-quality studies or reviews with a robust and transparent methodology that include studies that allow causal claims to be made
	Very High	High-quality studies or reviews with a robust and transparent methodology that include studies that allow causal claims to be made, at least some of which were undertaken in Australia

Appendix B: First Nations search methodology

Purpose and approach

This appendix outlines the methodology used to identify and assess evidence for First Nations Autistic students and/or students with ADHD. The goal was to identify any First Nations literature focusing on educational outcomes for Autistic students and/or students with ADHD.

A literature search was conducted to synthesise recent research examining learning outcomes for First Nations Autistic students and students with ADHD. Given the lack of findings, the search was broadened to include any literature around autism or ADHD in schools from a First Nations context worldwide. This included English-language, peer-reviewed studies, book chapters and reports published between 2015 and October 2025.

Databases searched

- EBSCO: Education Source, ERIC
- Proquest: Australian Education Index, Education Collection (excluding ERIC), Supplemental Education Index
- Informit: All databases
- Gale: Educator's Reference Complete
- Scopus
- Google Scholar
- Learning Ground (ACER)
- Australian Indigenous Health Bibliography
- LitSearch (Lowitja Institute).

Search terms

Search terms combined population, context and outcome keywords (Table B1).

Table B1: Summary of First Nations search terms

Context	Population	Outcomes
“First Nations” OR Indigenous OR Aboriginal OR “Torres Strait Islander*” OR Maori OR Māori OR Inuit OR Inuk OR Iñupiak OR Iñupiat OR Metis OR Métis OR “Native American” OR “American Indian” OR Sami OR Saami OR Sámi	autis* OR ASD OR “attention deficit-hyperactivity disorder” OR “attention deficit hyperactivity disorder” OR ADHD OR “attention deficit disorder”	school* OR educat* OR teach* OR academic OR student* OR pupil* OR learner*

Inclusion criteria

- Studies in the First Nations context addressing autism or ADHD
- Empirical research published between 2015 and October 2025
- Reports
- Book chapters.

Appendix C: Included papers

AERO uses the following symbols to indicate confidence in the evidence base:

● = Medium confidence ● = High confidence ● = Very high confidence

Confidence ratings are based on study design, methodological rigour and relevance to classroom contexts.

Teach explicitly

Country	Aims	Study design	Sample	Context	Outcomes
<p>● Rodgers, D. B., & Loveall, S. J. (2023). Writing interventions for students with intellectual and developmental disabilities: A meta-analysis. <i>Remedial and Special Education, 44</i>(3) 239–252. https://doi.org/10.1177/07419325221108896</p>					
Not reported	To identify and evaluate the effectiveness of the writing interventions that have been used with students with intellectual and developmental disabilities (IDD).	Meta-analysis	<p>52 studies</p> <p>40 single-case design (SCD) (mainly multiple baseline or multiple probe most common)</p> <p>12 group design (mostly pre/posttest design with intervention and control)</p> <p>424 participants (31% Autistic)</p> <p>Primary to post-secondary ages</p>	<p>Autism</p> <p>Both mainstream and specialist settings</p> <p>Majority specialist settings</p>	<p>Direct instruction interventions led to significant improvements in writing outcomes.</p> <p>Students with IDD benefit from targeted writing instruction in ways comparable with students with less significant needs.</p>

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Apanasionok, M. M., Hastings, R. P., Grindle, C. F., Watkins, R. C., & Paris, A. (2019). Teaching science skills and knowledge to students with developmental disabilities: A systematic review. <i>Journal of Research in Science Teaching</i>, 56(7), 847–880. https://doi.org/10.1002/tea.21531</p>					
United States and United Kingdom	To identify current practice on teaching science to students with intellectual disability (ID) and/or autism spectrum disorder.	Systematic review	30 studies 28 SCD 2 group design 118 participants (intellectual disability and/or ASD) Primary to post-secondary ages	Autism Both mainstream and specialist settings Majority specialist settings	Systematic instruction appears to be an effective teaching practice for science education for students with developmental disabilities. 97% students made progress in their target skills as a result of systematic instruction.
<p>① Barnett, J. H., Frankel, A. J., & Fisher, K. W. (2018). Systematic review of evidence-based interventions in science for students with autism spectrum disorders. <i>Education & Training in Autism & Developmental Disabilities</i>, 53(2), 128–145. https://doi.org/10.1177/215416471805300203</p>					
Not reported	To contribute to the current knowledge base on effective interventions in science for students with ASD.	Systematic review	10 studies Mainly SSD 54 participants (70% ASD) Primary to post-secondary ages	Autism Both mainstream and specialist settings Majority specialist settings	Direct instruction <i>together with supplementary materials</i> (e.g., e-texts, graphic organisers), as well as inquiry-based practices that provide hands-on exploration, benefit students with ASDs science learning.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Finnegan, E., & Mazin, A. L. (2016). Strategies for increasing reading comprehension skills in students with autism spectrum disorder: A review of the literature. <i>Education & Treatment of Children</i>, 39(2), 187–220. https://doi.org/10.1353/etc.2016.0007</p>					
Not reported	To identify studies with interventions focusing on reading comprehension, in students with ASD, to identify which interventions are effective, and to contrast the key components of these studies.	Systematic review	15 studies Various designs (QED, SSD, group design) 198 participants (44% ASD) Primary to secondary ages	Autism Both mainstream and specialist settings Majority specialist settings	Direct instruction showed positive effects on reading comprehension skills.
<p>① Frampton, S. E., Munk, G. T., Shillingsburg, L. A., & Shillingsburg, M. A. (2021). A systematic review and quality appraisal of applications of direct instruction with children with Autism Spectrum Disorder. <i>Perspectives on Behavior Science</i>, 44(2), 245–266. https://doi.org/10.1007/s40614-021-00292-0</p>					
Not reported	To: <ul style="list-style-type: none"> • characterise the scope and quality of research addressing direct instruction with learners with ASD • identify areas in need of additional research that may move direct instruction closer to adoption in practice • provide preliminary recommendations for incorporating direct instruction into clinical practice with children with ASD. 	Systematic review	16 studies Various designs (multiple probe, group design, case study) 92 participants with ASD Primary to secondary ages	Autism Variety of settings, including mainstream and specialist settings	SSD studies demonstrated that direct instruction had a strong positive impact. Group design studies showed a more moderate impact.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Garcia, R. G. V., Mosen, J., & Therese A. P. Bustos, M. (2025). How the science of learning can strengthen inclusive literacy instruction in the Philippines. <i>International Journal of Developmental Disabilities</i>, 71(6), 896–918. https://doi.org/10.1080/20473869.2025.2544158</p>					
Mainly United States	To determine evidence-informed practices that strengthen the teaching and learning of reading and writing for all learners, including those with specific learning difficulties.	Systematic review	18 studies Various designs (QED, systematic reviews, SCD, discussion papers) Number of participants not documented Primary ages	Autism and ADHD Variety of settings, including mainstream and specialist settings	Explicit instruction in teaching reading and writing skills benefits neurodivergent learners.
<p>① Spooner, F., Root, J. R., Saunders, A. F., & Browder, D. M. (2019). An updated evidence-based practice review on teaching mathematics to students with moderate and severe developmental disabilities. <i>Remedial and Special Education</i>, 40(3), 150–165. https://doi.org/10.1177/0741932517751055</p>					
Not reported	To examine the body of research on teaching mathematics to students with moderate and severe developmental disability.	Systematic review	36 studies (SCD and group design) 147 participants (32% ASD) Preschool to post-secondary ages	Autism Both mainstream and specialist setting Majority (83%) specialist settings	Study supported systematic instruction as evidence-based practice in teaching mathematics to students with developmental disability.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Apanasionok, M. M., Alallawi, B., Grindle, C. F., Hastings, R. P., Watkins, R. C., Nicholls, G., & Staunton, D. (2021). Teaching early numeracy to students with autism using a school staff delivery model. <i>British Journal of Special Education</i>, 48(1) 90–111. https://doi.org/10.1111/1467-8578.12346</p>					
United Kingdom	To explore the feasibility of implementing Teaching Early Numeracy to Children with Developmental Disabilities (TEN-DD – a systematic instruction programme) in a special school.	Primary research (pre and posttest design)	17 participants with ASD Primary and secondary ages	Autism Specialist setting	Explicit mathematics instruction using the TEN-DD demonstrated a positive impact on student achievement. Students scored significantly higher on standardised mathematics tests posttest compared to baseline.
<p>① Bishop, A. E., Sawyer, M., Alber-Morgan, S. R., & Boggs, M. (2015). Effects of a graphic organizer training package on the persuasive writing of middle school students with autism. <i>Education and Training in Autism and Developmental Disabilities</i>, 50(3), 290–302.</p>					
United States	To examine the effects of teaching persuasive writing to through graphic organiser training.	Primary research (multiple baseline across participants)	3 participants with ASD Upper primary/ lower secondary ages	Autism Specialist setting	Explicit instruction and graphic organiser package improved students' persuasive writing.
<p>① Cadette, J. N., Wilson, C. L., Brady, M. P., Dukes, C., & Bennett, K. D. (2016). The effectiveness of direct instruction in teaching students with autism spectrum disorder to answer “wh-” questions. <i>Journal of Autism and Developmental Disorders</i>, 46(9), 2968–2978. https://doi.org/10.1007/s10803-016-2825-2</p>					
United States	To examine the effects of direct instruction in a group format on the acquisition and maintenance of answering ‘wh-’ questions for high school students with ASD.	Primary research (SSD multiple probe across behaviours)	3 participants with ASD Secondary ages	Autism Specialist setting	Direct instruction is effective in teaching ‘who’ and ‘what’ questions to mastery. It is less effective in teaching ‘where’ questions.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① García-Moya, M., & Blanco, R. (2024). Arithmetic problem-solving routine for students with Autism. <i>Education & Training in Autism & Developmental Disabilities</i>, 59(4), 416–428. https://doi.org/10.1177/215416472405900405</p>					
United States	To verify the effectiveness of a problem-solving routine based on the Pólya's model and the use of cognitive strategies combined with systematic and explicit instruction with continuous feedback, to improve additive problem-solving skills of students with autism.	Primary research (QED)	28 participants with ASD Primary and secondary ages	Autism Specialist setting	Explicit instruction combined with Pólya's model is an effective approach for improving students' mathematics skills.
<p>① Sartini, E. C., Knight, V., Spriggs, A. D., & Allday, R. A. (2020). Effects of systematic instruction and self-directed video prompting on text comprehension of elementary students with autism spectrum disorder. <i>Research in Autism Spectrum Disorders</i>, 72. https://doi.org/10.1016/j.rasd.2020.101529</p>					
United States	To investigate the effects of systematic instruction combined with a self-directed video prompt to teach text comprehension skills to students with ASD.	Primary research (single case multiple probe across participants)	4 participants with ASD Primary ages	Autism Specialist setting Generalisation conducted in mainstream classroom	A package of practices (systematic instruction, video prompting and graphic organiser) is effective in promoting skill acquisition and independence. Participants showed improvements compared to baseline.

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Vidovic, J. L., Cornell, M. C., Frampton, S. E., & Shillingsburg, M. A. (2021). Adventures in direct instruction implementation: The devil is in the details. <i>Behavior Analysis in Practice</i>, 14(3) 839–855. https://doi.org/10.1007/s40617-021-00616-1</p>					
United States	<p>To provide insight into the steps taken to initiate and sustain comprehensive site-wide direct instruction implementation.</p> <p>To add to the evidence-base regarding the effectiveness of direct instruction by providing ‘real-world’ outcome data.</p>	Primary research (longitudinal pre-post study)	<p>67 participants with ASD</p> <p>Primary and secondary ages</p>	Autism Specialist setting	<p>Direct instruction positively impacts reading achievement.</p> <p>Students demonstrated significantly improved reading scores.</p> <p>Younger students experienced larger improvements than older students.</p>
<p>📌 Whalon, K., Henning, B., Jackson, E., & Intepe-Tingir, S. (2019). Effects of an adapted story grammar intervention on the listening comprehension of children with autism. <i>Research in Developmental Disabilities</i>, 95. https://doi.org/10.1016/j.ridd.2019.103507</p>					
United States	To determine the impact of a story grammar (SG) intervention and evidence-based practices on the listening comprehension of young children with ASD.	Primary research (withdrawal design)	<p>4 participants with ASD</p> <p>Primary ages</p>	Autism Specialist setting	<p>SG and explicit instruction improve comprehension skills.</p> <p>All students showed increased correct responses to fact and inference questions.</p> <p>Visual supports are necessary for student engagement and learning.</p>

Model, scaffold and prompt

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Rodgers, D. B., & Loveall, S. J. (2023). Writing interventions for students with intellectual and developmental disabilities: A meta-analysis. <i>Remedial and Special Education</i>, 44(3) 239–252. https://doi.org/10.1177/07419325221108896</p>					
Countries not reported	To identify and evaluate the effectiveness of the writing interventions that have been used with students with IDD.	Meta-analysis	<p>52 studies (9 studies examining modelling or prompting)</p> <p>40 SCD (mainly multiple baseline or multiple probe most common)</p> <p>12 group design (mostly pre/posttest design with intervention and control)</p> <p>424 participants (31% ASD)</p> <p>Primary to post-secondary ages</p>	<p>Autism</p> <p>Both mainstream and specialist settings</p> <p>Majority specialist settings</p>	Modelling is an effective practice to improve writing skills.
<p>📌 Harrison, J. R., Evans, S. W., Zatz, J., Mehta, P., Patel, A., Syed, M., & Custer, B. A. (2022). Comparison of four classroom-based strategies for middle school students with ADHD: A pilot randomized controlled trial. <i>Journal of Attention Disorders</i>, 26(11), 1507–1519. https://doi.org/10.1177/10870547221081108</p>					
United States	To compare the effectiveness of 4 strategies (self-management, breaks, prompting, sensory proprioception) on engagement, disruptive behaviour, and time to initiate tasks.	Primary research (RCT)	<p>15 participants with ADHD</p> <p>Late primary, early secondary ages</p>	<p>ADHD</p> <p>Mainstream setting</p>	Prompting is an effective practice for improving engagement and on-task behaviour.

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Kahveci, G., & Altun, H. (2019). The effectiveness of a comprehensive intervention on word problem solving for elementary school students with ADHD: POVM+ schema-based instruction. <i>Journal for the Education of Gifted Young Scientists</i>, 7(4), 1055–1073. https://doi.org/10.17478/jegys.609603</p>					
Turkey	To extend the use of VBI by using point-of-view video modelling (POVM), schema based-word problem solving method, and peer tutoring to teach addition-subtraction word problem solving to students with ADHD.	Primary research (SCD multiple probe across participants)	3 participants with ADHD Primary ages	ADHD Specialist setting	VBI using POVM with peer tutoring is effective in teaching students to solve 3 types of word problems (change, group, and compare).
<p>📌 Pennington, R. C, Foreman, L. H. & Gurney, B. N. (2018). An evaluation of procedures for teaching students with moderate to severe disabilities (MSD) to write sentences. <i>Remedial and Special Education</i>, 39(1), 27–38. https://doi.org/10.1177/0741932517708428</p>					
United States	To evaluate the efficacy of instruction on the sentence writing skills of students with moderate to severe disabilities.	Primary research (SSD multiple probe across sentence types)	3 participants (2 with ASD) Secondary ages	Autism Specialist setting	Response prompting and predictable writing routines improve students sentence writing skills. Students produced more accurate sentences during intervention and maintained performance above baseline during follow-up.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Schatz, R. B., Peterson, R. K., & Bellini, S. (2016). The use of video self-modelling (VSM) to increase on-task behaviour in children with high-functioning autism. <i>Journal of Applied School Psychology</i>, 32(3), 234–253. https://doi.org/10.1080/15377903.2016.1183542</p>					
United States	To expand the research on video self-modelling (VSM) by studying the effect of a VSM intervention on task engagement during mathematics class for elementary school-aged children with higher functioning ASD.	Primary research (SSD multiple baseline across participant)	3 participants with ASD Primary ages	Autism Mainstream setting	VSM may be effective for increasing and sustaining on-task behaviour for some students, though individual responsiveness may vary.
<p>① Yakubova, G., Hughes, E. M., & Chen, B. B. (2020). Teaching students with ASD to solve fraction computations using a video modelling instructional package. <i>Research in Developmental Disabilities</i>, 99, Article 103637. https://doi.org/10.1016/j.ridd.2020.103637</p>					
United States	To examine the effects of providing instruction via video modelling (VM), concrete manipulatives, a self-monitoring checklist and practice for comprehension check on the accuracy of fraction problem solving of 3 middle school students with ASD.	Primary research (Single-case multiple probe across students)	3 participants with ASD Secondary ages	Autism Specialist setting	VM, together with concrete manipulatives, and a self-monitoring checklist is effective at improving the accuracy of solving simple proper fraction problems.

Use peer-assisted learning

Country	Aims	Study design	Sample	Context	Outcomes
<p>🕒 Bene, K., Banda, D. R., & Brown, D. (2014). A meta-analysis of peer-mediated instructional arrangements and autism. <i>Review Journal of Autism and Developmental Disorders</i>, 1(2), Article 135. https://doi.org/10.1007/s40489-014-0014-9</p>					
Not reported	To review the literature that examined peer-mediated instructional arrangements (e.g., cooperative learning, peer tutoring, peer-mediated learning, group learning and same age peer instruction) with children with ASD in academic settings.	Meta-analysis	14 studies (single subject reversal design, multiple baseline design, withdrawal design) 32 participants Primary and secondary ages	Autism Both mainstream and specialist settings	Peer-mediated instruction is a promising method for enhancing academic (and social) skills in children with ASD.
<p>🕒 Chang, Y. C., & Locke, J. (2016). A systematic review of peer-mediated interventions (PMI) for children with autism spectrum disorder. <i>Research in Autism Spectrum Disorders</i>, 27. https://doi.org/10.1016/j.rasd.2016.03.010</p>					
Not reported	To expand the literature on PMIs by focusing on studies that used experimental group designs for all school-age children (preschool to high school) with ASD.	Systematic review	5 studies (4 RCT and one pre-post test) 260 participants Preschool to primary ages	Autism Mainstream setting	PMI is an effective practice for students with ASD.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Haas, A., Vannest, K., Thompson, J. L., Fuller, M. C., & Wattanawongwan, S. (2020). Peer-mediated instruction and academic outcomes for students with autism spectrum disorders: A comparison of quality indicators. <i>Mentoring & Tutoring: Partnership in Learning</i>, 28(5), 625–642. https://doi.org/10.1080/13611267.2020.1859330</p>					
Not reported	To update and expand literature and evaluate quality.	Systematic review	18 studies (SCD and RCT) 131 participants Primary and secondary ages	Autism Both mainstream and specialist settings Majority in mainstream setting	PMI can be considered an evidence-based practice to increase academic skills for students with ASD.
<p>① Mahoney, M. W. (2023). Peer-mediated instruction and intervention to support the academic achievement of secondary students with autism spectrum disorder: A systematic review of the literature. <i>The Journal of Special Education Apprenticeship</i>, 12(1). https://doi.org/10.58729/2167-3454.1159</p>					
Not reported	To review PMI as an effective teaching strategy in supporting the academic achievement of students diagnosed with ASD and additional learning needs.	Systematic review	11 studies (SCD multiple baseline across participants and withdrawal) 21 participants with ASD Primary and secondary ages	Autism Both mainstream and specialist settings Majority mainstream setting	PMI structures are effective in supporting the academic engagement of students with ASD across various academic content areas (e.g., mathematics, language arts). Both peer tutoring and cooperative learning models have been found to effectively promote academic achievement and social interactions for students with ASD.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Carter, E. W., Gustafson, J. R., Sreckovic, M. A., Steinbrenner, J. R. D. P., Pierce, N. P., Bord, A., Stabel, A., Rogers, S., Czerw, A., & Mullins, T. (2017). Efficacy of peer support interventions in general education classrooms for high school students with autism spectrum disorder. <i>Remedial and Special Education</i>, 38(4) 207–221. https://doi.org/10.1177/0741932516672067</p>					
United States	To evaluate the efficacy of peer support arrangements on the social interactions and academic participation of high school students with ASD.	Primary research (SSD)	4 participants with ASD, 1 participant also had ADHD Secondary ages	Autism and ADHD Mainstream setting	PMI demonstrated mixed effects. Two students showed improvement, one maintained and one decreased.
<p>① Mahoney, M. W. M., & Davis, C. A. (2024). Supporting the academic engagement of secondary students with autism through the use of a visual activity schedule and peer-mediated instruction and interventions. <i>Education and Training in Autism and Developmental Disabilities</i>, 59(2), 132–147. https://doi.org/10.1177/215416472405900203</p>					
United States	To identify the effects of using PMI and visual schedules to support the academic success of students with ASD in a general education setting.	Primary research (SSD) multiple baseline across	3 participants (2 with ASD) Secondary ages	Autism Mainstream setting	PMIs are a promising strategy to support the academic engagement and social interactions of students with ASD in secondary mainstream classrooms.

Provide feedback

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Gal, C., & Ryder, C. H. (2025). A comparative analysis of verbal versus combined verbal–tangible reinforcement for students with behavioural difficulties. <i>International Social Science Journal</i>, 75(257), 709–720. https://doi-org.edresearch.idm.oclc.org/10.1111/issj.12581</p>					
Israel	To examine whether combined verbal–tangible (VT) reinforcement demonstrates superior effectiveness compared to verbal reinforcement alone in improving behavioural outcomes.	Primary research (comparative within-subjects experimental design)	12 participants (67% ADHD) Primary ages	ADHD Specialist setting	VT reinforcement was an effective practice for supporting transitions and reducing disruptive behaviour in students with ADHD. It did not significantly effect material management or hand raising.
<p>📌 Kranak, M. P., Alber-Morgan, S. R., & Sawyer, M. R. (2017). A parametric analysis of specific praise rates on the on-task behaviour of elementary students with autism. <i>Education and Training in Autism and Developmental Disabilities</i>, 52, 453–464. https://www.jstor.org/stable/26420417</p>					
United States	To: <ul style="list-style-type: none"> • examine the differentiated effects of varying rates of teacher praise on the on-task behaviour of elementary-aged students with autism • explore teachers' perceptions regarding the effectiveness and feasibility of implementing these praise rates in teaching practice. 	Primary research (SCD alternating treatments)	5 participants with ASD Primary ages	Autism Specialist setting	Four or more specific praise statements per minute may be an effective rate for increasing on-task behaviour.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Maras, K., Gamble, T., & Brosnan, M. (2019). Supporting metacognitive monitoring in mathematics learning for young people with autism spectrum disorder: A classroom-based study. <i>Autism: The International Journal of Research & Practice</i>, 23(1), 60–70. https://doi.org/10.1177/1362361317722028</p>					
United Kingdom	<p>To examine the:</p> <ul style="list-style-type: none"> nature of the metacognitive difficulties in ASD with respect to monitoring the accuracy of answers, intentions and regulating learning strategy accordingly use of feedback as metacognitive monitoring support in mathematics learners with ASD. 	Primary research (2 x 2 between participants design)	40 participants with ASD Secondary ages	Autism Specialist setting	Using feedback can improve mathematical learning for students with ASD.
<p>① Reed, P. (2023). Individuals with autism spectrum disorder are differentially sensitive to interference from previous verbal feedback. <i>Autism: The International Journal of Research & Practice</i>, 27(7), 2011–2020. https://doi.org/10.1177/13623613221150377</p>					
United Kingdom	To explore whether verbal or non-verbal feedback leads to faster acquisition of the initial set, and then whether set-shifting (the ability to switch between tasks, rules, etc.) would be faster, slower or unaffected, by the type of feedback given.	Primary research	56 participants with ASD Primary ages	Autism Mainstream setting	<p>Feedback type had little effect on initial set acquisition.</p> <p>Non-verbal feedback better supported set shifting, suggesting this type of feedback may be more effective during transitions in classroom settings.</p>
<p>① Tay, H. Y., Kee, K. N. N., & Hui, S. K. F. (2019). Effective questioning and feedback for learners with autism in an inclusive classroom. <i>Cogent Education</i>, 6(1), 1–12. https://doi.org/10.1080/2331186X.2019.1634920</p>					
Singapore	To examine how questioning and feedback works with students with ASD.	Primary research	6 participants with ASD Primary and lower secondary ages	Autism Mainstream setting	To be effective, questioning and feedback for students with ASD should be precise, scaffolded, and supported by visual aids.

Establish routines and rules

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Tullis, C. A., Cannella-Malone, H. I., & Payne, D. O. (2015). Literature review of interventions for between-task transitioning for individuals with intellectual and developmental disabilities including autism spectrum disorders. <i>Review Journal of Autism and Developmental Disorders</i>, 2(1), 91–102. https://doi.org/10.1007/s40489-014-0039-0</p>					
Not reported	To identify prevalent interventions for addressing challenging behaviour during activity transitions, evaluate their effectiveness in reducing such behaviour and in teaching independent transitioning, examine the extent to which intervention effects are maintained or generalised, and describe the contexts and implementers involved in these interventions.	Systematic review	32 studies (SCD multiple probe, multiple baseline, reversal) 91 participants (48% ASD) Preschool to post-secondary ages	Autism School setting (63% of studies) Mainstream or specialist setting not reported	A variety of practices are effective for increasing independent transitioning and for decreasing challenging behavior related to between-task transitions. Antecedent-based interventions, were most commonly used.
<p>📌 Iadarola, S., Shih, W., Dean, M., Blanch, E., Harwood, R., Hetherington, S., Mandell, D., Kasari, C., & Smith, T. (2018). Implementing a manualized, classroom transition intervention for students with ASD in under-resourced schools. <i>Behavior Modification</i>, 42(1), 126–147. https://doi.org/10.1177/0145445517711437</p>					
United States	To develop a multi-component ABA (applied behaviour analytic)-based intervention for supporting transitions (STAT), assess its fidelity when delivered by non-specialists in applied settings and evaluate implementation and intervention effectiveness.	Primary research (cluster randomised group comparison with matched pairs)	150 participants with ASD Primary ages	Autism Specialist setting	Results provide preliminary support for a transition program (STAT), suggesting it is both feasible and perceived as sustainable in real-world settings. No differences were found in academic engagement. However, the approach showed advantages in reducing challenging behaviour.

Use of visual supports

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Watkins, L., Ledbetter-Cho, K., O'Reilly, M., Barnard-Brak, L., & Garcia-Grau, P. (2019). Interventions for students with autism in inclusive settings: A best-evidence synthesis and meta-analysis. <i>Psychological Bulletin</i>, 145(5), 490–507. https://doi.org/10.1037/bul0000190</p>					
International	To identify intervention studies for students with ASD in inclusive classroom settings that meet minimum standards for methodological rigor.	Best evidence synthesis and meta-analysis	28 articles, 10 of which included some form of visual support strategy	Autism Classroom	<p>Visual supports and self-monitoring interventions resulted in significantly higher effects than peer networks.</p> <p>Visual supports, self-monitoring and PMI, which are recognised as evidence-based practices by National Professional Development Center on Autism Spectrum Disorders (NPDC), resulted in large effects and should also be considered recommended interventions for this student population.</p>
<p>📌 Tattel, H. G. (2025). Assessing the effectiveness of visual supports in fostering communication and classroom engagement among elementary students with autism spectrum disorder. <i>Psychology & Education: A Multidisciplinary Journal</i>, 46(8), 1057–1083. https://doi.org/10.70838/pemj.460806</p>					
United States	To evaluate the efficacy of visual supports in enhancing communication and classroom engagement among learners with ASD.	Primary research Mixed methods design	62 respondents: 26 elementary school students with ASD (6 to 10 years) 15 special education teachers 21 parents/guardians	Autism Classroom	Educators assessed the utilisation of visual supports as very effective with visual aids, visual schedules and timetable cards, and reminder/task cards being identified as key strategies.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Macdonald, L., Trembath, D., Ashburner, J., Costley, D., & Keen, D. (2018). The use of visual schedules and work systems to increase the on-task behaviour of students on the autism spectrum in mainstream classrooms. <i>Journal of Research in Special Educational Needs</i>, 18(4), 254–266. https://doi.org/10.1111/1471-3802.12409</p>					
Australia	To evaluate the use of visual schedules and work systems in supporting 4 students on the autism spectrum to stay on-task and work independently in a mainstream setting.	Primary research Multiple baseline, single case design	3 students with ASD in their fifth year of formal schooling	Autism Mainstream primary school	Visual schedules and work systems increased students' on-task behaviours.

Use of technology

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Lee, G. T., Hu, X., Yu, Z., Hu, X., & Luke, N. (2025). Feasibility and effectiveness of a computer-assisted instructional system implemented by teachers for students on the autism spectrum with intellectual disabilities in China. <i>Journal of Special Education Technology</i>, 40(1), 39–49. https://doi.org/10.1177/01626434241257222</p>					
China	<p>To what extent:</p> <ul style="list-style-type: none"> Do the teachers implement computer assisted interventions with fidelity? Is the intervention implemented via CAI acceptable and feasible in the Chinese special education school context? Does multiple exemplar instruction implemented via CAI establish or improve student performance of bidirectional naming? 	Primary research Single-case experimental design	3 students with ASD, 7 years of age 3 special education teachers	Autism Specialist setting	All 3 students demonstrated improvements at post-instruction bidirectional naming assessments.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Correia, A.-P., & Halabi, A. L. (2021). Tablet devices in the classroom: Their instructional role with children on the autism spectrum. <i>Journal of Educational Technology Systems</i>, 50(2), 273–293. https://doi.org/10.1177/00472395211047930</p>					
United States	To better understand the use of technology (in particular, tablet devices) to teach mathematics to a group of learners diagnosed with autism in the context of a specific classroom.	Primary research Qualitative case study	5 students with ASD (all male) aged 7 to 12 years	Autism Mainstream school	Technology in general and tablet devices, in particular, are used in the classroom as reward mechanisms and entertaining strategies to seize and retain the learners' attention to achieve instructional goals.
<p>① Pellecchia, M., Marcus, S. C., Spaulding, C., Seidman, M., Xie, M., Rump, K., Reisinger, E. M., & Mandell, D. S. (2020). Randomized trial of a computer-assisted intervention for children with autism in schools. <i>Journal of the American Academy of Child & Adolescent Psychiatry</i>, 59(3), 373–380. https://doi.org/10.1016/j.jaac.2019.03.029</p>					
United States	To evaluate the effectiveness of one CAI (TeachTown Basics), designed to improve children's language, cognitive and academic skills, in a large urban school district.	Primary research Randomised trial	59 teachers 154 students Kindergarten through to second grade	Autism Autism support classrooms	There were no statistically significant differences in outcomes for children who received TeachTown: Basics or treatment as usual. Increased time spent using TeachTown: Basics was associated with worse receptive language outcomes for children in the experimental group after one academic year.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Ozdowska, A., Wyeth, P., Carrington, S., & Ashburner, J. (2021). Using assistive technology with SRSD to support students on the autism spectrum with persuasive writing. <i>British Journal of Educational Technology</i>, 52(2), 934–959. https://doi.org/10.1111/bjet.13063</p>					
Australia	<p>What is the quality and length of written compositions of students on the autism spectrum when producing persuasive written text via (a) handwriting, (b) assistive technology and (c) self-regulated strategy development (SRSD) with their choice of writing strategy?</p> <p>How does using the writing-support app impact on students on the autism spectrum's feelings about persuasive writing tasks?</p>	<p>Primary research</p> <p>Single-subject research design</p>	8 students with ASD, Years 4 to 6	<p>Autism</p> <p>Mainstream school</p>	<p>The app developed as part of this research combined SRSD with assistive technology. This combination was found to be an effective way of significantly improving the quality and/or length of writing for 4 of the 8 students.</p>
<p>① Hughes, E. M., & Yakubova, G. (2019). Addressing the mathematics gap for students with ASD: An evidence-based systematic review of video-based mathematics interventions. <i>Review Journal of Autism and Developmental Disorders</i>, 6(2) 147–158. https://doi.org/10.1007/s40489-019-00160-3</p>					
International	To evaluate the evidence of effectiveness for VBI to teach mathematics to students with a primary diagnosis of ASD, with and without co-occurring intellectual disability.	Systematic review	11 studies	<p>Autism with and without intellectual disability</p> <p>Classroom</p>	Results indicate that VBI meets minimum to be an established evidence-based practice to teach mathematics to students with ASD.

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Rusli, N. A., & Kheng, M. (2025). Teachers' perceptions and challenges in implementing digital learning for autism spectrum disorder (ASD) students in inclusive classrooms. <i>Journal of ICT in Education</i>, 12(1), 50–64. https://doi.org/10.37134/jictie.vol12.1.4.2025</p>					
Hungary	<p>What are:</p> <ul style="list-style-type: none"> teachers' perceptions of using digital learning to teach ASD students in inclusive classrooms? the challenges experienced by teachers while implementing digital learning in inclusive classrooms with ASD students in the class? 	<p>Primary research</p> <p>Qualitative</p>	12 teachers	<p>Autism</p> <p>Mainstream school</p>	<p>Teachers experience numerous difficulties when integrating digital learning for ASD students in inclusive classrooms, which are attention difficulties, technological barriers, sensory sensitivities of ASD students, difficulties in transitioning between activities or devices and sensory sensitivities.</p> <p>Despite these challenges, the teachers view digital resources as helpful in preparing lesson plans, providing personalised instruction, assisting in data tracking or progress monitoring, increasing student engagement, and also providing flexibility and adaptability.</p>

Country	Aims	Study design	Sample	Context	Outcomes
<p>① Larwin, K. H., & Aspiranti, K. B. (2019). Measuring the academic outcomes of iPads for students with autism: A meta-analysis. <i>Review Journal of Autism and Developmental Disorders</i>, 6, 233–241. https://doi.org/10.1007/s40489-019-00165-y</p>					
International	To assess the overall effectiveness of the recent literature (those studies published from 2010 to the present) that contained small samples of students who have been provided interventions using iPads.	Meta-analysis	7 studies	Autism Primary and secondary school	Results indicated a heterogeneity across the studies, which indicates that the impact of the iPad interventions was not statistically consistent across the included investigations. When examining effect sizes for individual students, 14 of the 18 students (78%) showed significant and strong effect sizes, indicating that for the majority of participants, the intervention produced the desired outcomes.

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Bossavit, B., & Parsons, S. (2018). Outcomes for design and learning when teenagers with autism codesign a serious game: A pilot study. <i>Journal of Computer Assisted Learning</i>, 34(3), 293–305. https://doi.org/10.1111/jcal.12242</p>					
Spain	To explore and analyse an academic-based educational game that was co-designed with and for young people with ASD.	Primary research Pilot study	6 students with high functioning ASD	Autism Specialist setting	Students enjoyed the game, found it easy to use, felt competent in playing and demonstrated positive learning effects for geography specific knowledge.
<p>📌 Collette, D., Brix, A., Brennan, P., DeRoma, N., & Muir, B. C. (2018). Proloquo2Go enhances classroom performance in children with autism spectrum disorder. <i>Occupational Therapy Journal of Research</i>, 39(3), 143–150. https://doi.org/10.1177/1539449218799451</p>					
United States	To determine whether an iPad with Proloquo2Go would increase independent activity/task performance and reduce required support for children with ASD during classroom activities compared with no and other forms of technology (i.e., picture exchange communication system [PECS], SMARTBoard).	Primary research Comparison study	4 students with autism and limited speech, aged 6 to 9	Specialist setting	Using Proloquo2Go to respond to academic opportunities, children required less support than when using no technology, and equal support to when using a PECS or SMARTBoard.

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Nally, A., Holloway, J., Lydon, H., & Healy, O. (2021). The Edmark® Reading Program: A comparison of computerized and table top presentation in reading outcomes in students with autism spectrum disorder. <i>Journal of Developmental and Physical Disabilities</i>, 33, 259–278. https://doi.org/10.1007/s10882-020-09747-9</p>					
<p>Ireland</p>	<p>What are the effects of Edmark® Reading Program computer-assisted instruction (ERP-CAI) relative to Edmark® Reading Program- table top instruction (ERP-TTI) on reading accuracy, reading rate, reading comprehension, vocabulary, non-words and target ERP words for students with ASD, across a range of inclusive and self-contained educational settings?</p> <p>Across and within groups, what progress did students make between pre and post tests on reading accuracy, reading rate, reading comprehension, vocabulary, nonwords and target ERP words?</p> <p>How did teachers and participants perceive the effectiveness, acceptability and feasibility of ERP-CAI and ERP-TTI?</p>	<p>Primary research</p> <p>Between groups design</p>	<p>31 students with ASD</p>	<p>Autism</p> <p>Multiple school settings (e.g., specialist, mainstream and ASD units within mainstream)</p>	<p>There were statistically significant differences found in favour of tabletop instruction on reading accuracy, reading rate and phonemic awareness, specifically first sound fluency.</p> <p>Despite these outcomes, upon completion of the study, many teachers in the TTI condition requested to switch to CAI, possibly highlighting the perceived response effort required in the administration of ERP-TTI.</p>

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Maras, K., Gamble, T., & Brosnan, M. (2019). Supporting metacognitive monitoring in mathematics learning for young people with autism spectrum disorder: A classroom-based study. <i>Autism: The International Journal of Research & Practice</i>, 23(1), 60–70. https://doi.org/10.1177/1362361317722028</p>					
England	To test new computer-based metacognitive support (the 'Maths Challenge') for mathematics learners with ASD within the context of their classroom.	Primary research Between groups design	40 students with ASD 95 typically developing students	Autism Mainstream secondary school	Support from the Feedback condition significantly improved task performance for both group.

Making environmental adaptations

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Dargue, N., Adams, D., & Simpson, K. (2021). Can characteristics of the physical environment impact engagement in learning activities in children with autism? A systematic review. <i>Review Journal of Autism and Developmental Disorders</i>, 9(2), 143–159. https://doi.org/10.1007/s40489-021-00248-9</p>					
International	To investigate aspects of the physical environment and how such variations may impact an individual's ability to participate, engage or complete a set task.	Systematic review	10 studies	Autism 8 classroom, 1 boarding school (classified as 'home' setting, 1 lab	Limited generalisability of results due to studies examining different environmental modifications.

Country	Aims	Study design	Sample	Context	Outcomes
<p>📌 Kulawiak, P. R., & Schussler, D. (2021). Academic benefits of wearing noise-cancelling headphones during class for typically developing students and students with special needs: A scoping review. <i>Cogent Education</i>, 8(1). https://doi.org/10.1080/2331186X.2021.1957530</p>					
International	To identify and review empirical studies on the academic benefits of wearing noise cancelling headphones during class for students with special needs.	Scoping review	13 studies (including 4 studies with Autistic students)	Autism Classroom	Evidence that headphones resulted in more on-task behaviour in one study. The current body of evidence does not meet the standards for evidence-based practices in both mainstream and specialist settings.
<p>📌 Wilson, W. J., Harper-Hill, K., Armstrong, R., Downing, C., Perrykkad, K., Rafter, M., & Ashburner, J. (2021). A preliminary investigation of sound-field amplification as an inclusive classroom adjustment for children with and without autism spectrum disorder. <i>Journal of Communication Disorders</i>, 93, Article 106142. https://doi.org/10.1016/j.jcomdis.2021.106142</p>					
Australia	To determine if sound-field amplification (SFA) could be used as an inclusive classroom adjustment to support primary school students with and without ASD.	Primary research RCT	13 Year 3 students with ASD 17 typically developing students	Autism 10 mainstream primary schools (public, catholic and independent)	SFA benefited Autistic students more than typically developing students. Autistic students showed greater improvements than typically developing students in one area of phonological processing following SFA versus no SFA.



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