Creating Sensory-Friendly Classrooms: Supporting Neurodivergent Students in Rural Schools

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Context & Purpose

Classroom noise, harsh lighting, visual clutter and crowding can create barriers to comfort, attention and participation for autistic and neurodivergent students (Adams et al., 2025; Mallory & Keehn, 2021).

Rural schools may face additional challenges, including limited access to specialized services, funding and professional learning (Kuhl et al., 2015; McCabe & Ruppar, 2023).

Why it Matters

Environmental access is part of meaningful inclusion. Students may be present in a classroom while still facing sensory demands that limit their ability to participate (Price & Romualdez, 2025).

Research Question

How can practical, low-cost sensory-friendly classroom adaptations support engagement and well-being for autistic and neurodivergent students in rural schools?

Approach

Literature-based synthesis of classroom environmental barriers, inclusive practices, student perspectives and rural implementation considerations. No primary data were collected.

The review used a Thematic Analysis Grid to compare findings across studies and identify recurring themes, practical implications, and gaps in the evidence.

Sensory Barriers

Sensory experiences vary between students. The goal is not one “perfect” classroom, but flexible choices and fewer unnecessary demands.

NOISE
Conversations, transitions, echoes

LIGHT
Glare, flicker, harsh brightness

VISUAL
Busy displays and clutter

SEATING
Uncomfortable seating and limited choices

Design Implications

Offer options for light, sound, movement and access to calmer spaces while preserving student dignity and choice.

Student experiences should guide adjustments; a quieter or less visually busy room will not suit everyone (Dynia et al., 2023).

Research Synthesis

1 The environment affects participation

Research connects sensory conditions with discomfort, anxiety and difficulties concentrating. Environmental changes may reduce barriers, but students do not all experience the same triggers (Price & Romualdez, 2025; Adams et al., 2025).

For some students, overwhelming environments can make concentrating and remaining engaged more difficult. The aim is to remove avoidable barriers, not to eliminate every sensory stimulus.

2 Individual choice matters

Quiet spaces, flexible seating and opportunities to communicate preferences can help students manage sensory demands. Adaptations should be guided by students rather than assumed to work universally (Lebenhagen, 2024).

Student consultation can include conversations, written check-ins or visual choices. Access to a quiet space should be voluntary rather than assumed to meet every student’s needs.

3 Rural implementation needs collaboration

In settings with fewer specialist resources, educators can start with practical changes and share strategies across classrooms. Collaborative professional learning offers a possible route to sustained inclusion (Kuhl et al., 2015; Stayton et al., 2026).

Rural communities also bring strengths: relationships and shared knowledge can support manageable changes. Educators still need time, training and opportunities to reflect together.

From evidence to practice

NOTICE
Identify barriers

ASK
Listen to students

ADAPT
Make small changes

REVIEW
Check what helps

Evidence Gap

Few studies directly evaluate low-cost sensory adaptations and long-term outcomes in rural Canadian classrooms.

Classroom Adaptations

Match the adjustment to the barrier, then check whether it actually supports the student.

Begin with everyday changes; monitor the student’s experience before treating an adaptation as successful (Dynia et al., 2023).

Barrier	Practical option
Sound	Reduce competing noise; offer quiet work areas
Lighting	Use daylight or adjustable lighting when possible
Visual load	Organize displays; reduce unnecessary clutter
Crowding	Provide flexible seating and clear pathways
Regulation	Offer a voluntary calming or break space

Examples are possibilities for adaptation, not interventions proven effective for every student.

Try one change at a time, invite feedback, and revise the plan. Affordability alone does not establish effectiveness.

Recommendations

1. Start with the existing environment

Adjust noise, lighting, organization and access to quiet spaces before purchasing expensive equipment.

Examples: reduce competing sound, reorganize displays, and offer an optional quieter place to work (Mallory & Keehn, 2021).

2. Include student voice

Ask students what helps and allow meaningful choices without requiring disclosure of a diagnosis.

Use brief student check-ins or accessible choices, and revisit preferences as activities and environments change (Lebenhagen, 2024).

3. Support educator collaboration

Share observations, trial small changes and revisit strategies as students’ needs change.

Peer coaching and shared reflection offer promising ways to build rural educator capacity (Stayton et al., 2026).

Selected Literature

Adams et al. (2025); Dynia et al. (2023); Lebenhagen (2024); Mallory & Keehn (2021); Price & Romualdez (2025); Stayton et al. (2026). Full references appear in the capstone paper.