

# QUIET CLASSES: LOW-SENSORY TEACHING ENVIRONMENTS

Maia Bradley<sup>a</sup>, Danielle J Burgess<sup>b</sup>, Laura Carniel<sup>a</sup>, Sara Davies<sup>a</sup>, Matthew Davis<sup>a</sup>, Angus Linklater-Steele<sup>a</sup>, Melanie Robertson-Dean<sup>a</sup>

Presenting Authors: Melanie Robertson-Dean ([m.robertsondean@uq.edu.au](mailto:m.robertsondean@uq.edu.au)) and Danielle Burgess ([d.burgess@uq.edu.au](mailto:d.burgess@uq.edu.au))

<sup>a</sup> School of Mathematics and Physics, University of Queensland, St Lucia QLD 4072, Australia

<sup>b</sup> School of Biomedical Sciences, University of Queensland, St Lucia QLD 4072, Australia

**KEYWORDS:** low sensory, classroom environment, neurodivergence

**SUBTHEME:** Equity, Diversity and Inclusion

## BACKGROUND AND AIMS

Student cohorts in tertiary education are becoming increasingly diverse (Teo, Hsein, Buckley & Nolan, 2023), yet it remains unclear whether classrooms are adapting accordingly. For many, particularly those with sensory sensitivities, the classroom environment can be distracting, overwhelming, and a barrier to engaging in learning activities (Cline, Connolly & Nolan, 2016). Limited research exists on how sensory sensitivities impact students' engagement in active learning and the opportunity to process complex material. This study aims to evaluate the effectiveness of a sensory-friendly classroom environment on students' learning and engagement.

## INTERVENTION

Courses across science disciplines were designated as Quiet Classes (QCs), with classroom environments adapted to better support students with sensory sensitivities. Modifications included smaller class sizes for increased personal space, reduced lighting and noise, and discouragement of strong odours. Sensory tools such as silent fidget toys were encouraged. Students self-selected into QCs via the standard timetabling process, with no requirement to provide evidence of need. To support delivery, tutors completed a two-hour training session led by experts in sensory inclusion, focused on pedagogies that promote sensory-friendly engagement and communication.

## DESIGN AND METHODS

An anonymous survey was distributed to all students enrolled in courses offering QCs in Semester 2, 2024, and Semester 1, 2025. The survey explored students' experiences in QCs, those who wished to but could not, and those in traditional classes. In total, 353 students participated. Closed-ended questions were analysed using R Studio, and qualitative data was gathered using inductive thematic analysis in NVivo.

## RESULTS AND CONCLUSION

Results suggest that many students desire sensory-friendly classroom environments and perceive the environment in QCs to aid their learning. Several significant findings emerged. Students in QCs reported improved participation in activities ( $p < 0.01$ ), better organisation ( $p < 0.05$ ), enhanced focus and attention ( $p < 0.05$ ), and overall improved learning ( $p < 0.01$ ). Interestingly, students who were not in a QCs but wished to be reported that the traditional class environment was significantly detrimental to their learning compared to those in QCs ( $p < 0.01$ ).

QCs offer a practical, inclusive approach to supporting students with sensory sensitivities. Providing flexible, sensory-considerate and inclusive learning environments allows students to self-select the setting that best supports their success in higher education.

## REFERENCES

- Cline, M., Connolly, L., & Nolan, C. (2016) Comparing and exploring the sensory processing patterns of higher education students with attention deficit hyperactivity disorder and autism spectrum disorder. *American Journal of Occupational Therapy* 70, 2–10.
- Teo, I., Hsien, M., Buckley, S., & Roberts, A. (2023). International comparison of tertiary education systems. Australian Government Department of Education.

Proceedings of the Australian Conference on Science and Mathematics Education, The University of Melbourne, 30 September - 2 October 2025, page 16, ISSN Number 2653-0481.