

Submission to the Review of Secondary Education in the Northern Territory

June 2023

The Australian Education Research Organisation (AERO) would like to thank the Northern Territory Department of Education for the opportunity to provide a submission to the Review of Secondary Education in the Northern Territory (the Review). The following submission responds to Domain 5 – ‘systems of support’.

Research tells us that the use of evidence-based teaching practices in all classrooms, when paired with additional intensive support for students in need, is the most effective and efficient method to maximise student learning. While there a range of challenges in delivering secondary education in the Northern Territory, AERO’s research suggests that evidence-based practices improve education outcomes for most students regardless of context (AERO, unpublished). The Review should consider how system direction and resources can provide coherent guidance that encourages school leaders and teachers to consistently use these practices in secondary schools.

Effective teaching practices align with how students learn

There are a range of teaching practices, such as explicit instruction and mastery learning, that research has consistently found to be effective in improving student learning. These practices align with what cognitive science tells us about how students learn, namely that too much new information can overload working memory and that new information should be broken down and organised into manageable chunks with deliberate practice and scaffolding put in place to optimise learning.

Explicit instruction is highly effective, because it aligns with how the brain processes and retains new information which supports the creation of strong connections in memory for enhanced understanding and easier recall. It allows students to review and practice what they have learned under guidance until they are prepared to apply their learning independently. Similarly, mastery learning requires students to retrieve information from long-term memory through repeated and varied practice which helps to consolidate understanding. By putting these practices in place, teachers can maximise student learning.

An AERO review of meta-analytic studies on the effect of formative assessment, explicit instruction and mastery learning on student achievement found that formative assessment, mastery learning and explicit instruction are effective teaching practices across a variety of contexts and for different subgroups of students (AERO, unpublished).

AERO has produced a series of guides that outline the key practices which align with how students learn and which are effective across a broad range of contexts:

1. [Explicit instruction](#)
2. [Mastery learning](#)
3. [Spacing and retrieval](#)
4. [Formative assessment](#)
5. [Classroom management](#)

The Review should consider ways in which Northern Territory guidance, professional learning and resources for teachers align with and emphasise effective teaching practices which correspond with how students learn.

Example 1: Explicit teaching of writing

Students' ability to write – and write well – across school subjects is critical for their success in school. This is because writing is how students learn to synthesise knowledge, critically analyse information, and develop sophisticated logical relationships between ideas to express opinions.

Despite the importance of writing, a concerning number of students still write at levels lower than expected for their age. Over the period of 2011 to 2018, the share of students performing at or below national minimum standards on the NAPLAN writing test increased by six percentage points for Year 5 and by eight percentage points for Year 9 (AERO, 2022).

AERO conducted a [literature review](#) examining writing and writing instruction which found that explicit teaching of writing skills across all subject areas should be prioritised. It also recommended that teachers embed frequent formative assessment and provide explicit feedback to move students forward (AERO, 2022). Guidance to schools could emphasise that schools adopt a whole-school approach to teaching writing that includes the explicit teaching of writing throughout all learning areas at its core. This would give students more opportunities to practise and craft their language, and to write confidently and with purpose.

Some students require additional support to engage with age-appropriate curriculum

Research suggests that the learning needs of most students (around 80%) can be met through evidence-based teaching practices as outlined above. However, the remaining 20% are likely to require additional support (de Bruin et al. 2023; Burns and Symington 2002; Burns et al. 2005). Recent analysis by AERO found that 1 in 5 students nationally start secondary school 3 or more years behind their peers (AERO, 2023). Without support, these students will struggle to engage in their schooling and are at greater risk of not completing Year 12 and having their lifelong opportunities limited.

However, a new research review has found it is not too late to help these students catch up. AERO has worked with Monash University to conduct an evidence review

that identifies a multi-tiered system of supports (MTSS) framework as a promising model for supporting secondary school students who are struggling. The MTSS model emphasises:

- using proven teaching methods for all students
- regular testing of all students to identify gaps in learning
- delivering frequent small group or 1:1 interventions with a focus on these learning gaps
- continuous data-based tracking of student progress to ensure interventions deliver real gains.

This review found strong evidence that students who are struggling benefit from high-quality support provided it is delivered effectively.

The Review should consider ways in which secondary schools in the Northern Territory can be supported to introduce MTSS and ensure that all students have the necessary foundational skills to engage with age-appropriate curriculum.

Culturally responsive teaching practices are important to ensure all students engage in learning

As outlined above, evidence-based teaching practices have been found to be effective for a range of different student cohorts and in a range of different contexts. However, it is also important that there is cultural safety within the learning environment to provide a foundation upon which all learners can succeed. A lack of cultural safety may mean Aboriginal and Torres Strait Islander students and students from culturally and linguistically diverse backgrounds cannot access the same learning opportunities as other students (Rigney, 2017).

When students feel culturally safe, supported, and understand the intended goals of their learning, active engagement in learning opportunities is increased. Culturally responsive teaching practice is one way to establish safe learning environments. Culturally responsive teaching includes maintaining high expectations for all students, accompanied by commensurate support to provide a solid foundation for learning success (Ladson-Billings et al, 2013). Engagement with the [AITSL Intercultural Development toolkit](#) could provide a consistent framework for teachers and school leaders (AITSL, 2022) to develop cultural responsiveness.

The Review should consider how to build on existing system support to ensure schools are safe places for Aboriginal and Torres Strait Islander students to learn in and ensure that these students are given the same learning opportunities as their peers.

References

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