

## Study highlights pathways to school success

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A first ever study by Menzies School of Health Research (Menzies) and Charles Darwin University (CDU) into a child's journey from preschool attendance (age 4 years) to early academic achievement (age 8 years) has been published in the prominent multidisciplinary journal *PLOS ONE*.

The study offers valuable insights into how foundational skills for life and learning contribute to successful school participation and subsequent academic achievement; and provokes a reset on prioritising social, emotional, and cognitive skills necessary for learning in the complex and dynamic environment of the Northern Territory (NT).

Foundational skills called self-regulation and executive function (SR-EF) refer to a child's ability to manage their emotions and respond appropriately; as well as being able to juggle multiple tasks of a more complex nature, often referred to as having our own 'air traffic control tower'.

The SR-EF skill set has not been a policy or program priority in the race to improve literacy and numeracy scores, but with the implementation of the [Closing the Gap 2020 recommendations](#), there is an urgent need to better understand the contributing factors of, and pathways to positive educational outcomes for both Aboriginal and non-Aboriginal children living in urban and remote settings.

By linking Australian Early Development Census (AEDC) to attendance data and Year 3 National Assessment Program for Literacy and Numeracy (NAPLAN), the study confirms the expected importance of SR-EF for all children but suggests that different pathways for Aboriginal and non-Aboriginal children occur.

In addition to SR-EF and early literacy/numeracy skills, preschool attendance and early years attendance were also found to be critical contributing factors to early achievement for Aboriginal children.

CDU project leader Dr Georgie Nutton said the study shows the importance of developing culturally responsive programs and policies that support SR-EF skills for diverse Australian education contexts.

"There is a pressing need to better understand how current policies and programs enhance children and their families' sense of safety and support in order to nurture these skills when participating in quality early learning, preschool and school learning," Dr Nutton said.

The ability to self-regulate and access executive functions are increasingly relevant for everyone with additional mental health stressors of a global pandemic and the level of uncertainty experienced in daily life.

The recent development of the [NT Social Outcomes Framework](#) and [NT Education Engagement Strategy \(2022-2031\)](#) as well as the [implementation of the NT Royal Commission recommendations \(i.e. Safe, Thriving and Connected\)](#) all point to the

importance of more inclusive, and socially and emotionally regulated environments for healthy growth.

Menzies lead author Dr Vincent He said an important recommendation from the study is the need to develop measures of SR-EF at middle childhood and adolescence.

“This study demonstrates the utility of linked administrative data to better understand the major drivers of positive school outcomes to inform a more differentiated response to early childhood and educational service delivery.”

“The complementary data on successful, quality programs and teaching will be a future focus of our program of research on SR-EF,” Dr He said.

The article published in *PLOS ONE* can be read [here](#).

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**Menzies School of Health Research**

Menzies is one of Australia’s leading medical research institutes dedicated to improving the health and wellbeing of Aboriginal and Torres Strait Islanders, and a leader in global and tropical research into life-threatening illnesses, Menzies continues to translate research into effective partnerships and programs in communities across Australia and the Asia-Pacific region.