



THRIVE

About Thrive: Finishing School Well

Thrive is a living learning hub that helps education systems understand what enables young people to finish school well, and how to act on that insight.

It brings together advanced causal data analysis with lived experience from schools and communities to move beyond reporting outcomes, toward learning what drives them.

Thrive offers a new way to turn complex data and models into earlier, clearer signals for decision-making and meaningful change across the education system. It positions NSW at the forefront of international practice in evidence-informed education policy.

Thrive's achievements

A new evidence paradigm for complex system challenges

Thrive has defined and operationalised a research approach that integrates quantitative modelling, lived experience, expert judgement, and contextual knowledge as complementary sources of insight. Evidence is built iteratively with schools, communities, and young people—linking system-level analysis with place-based learning and adaptive action, rather than being extracted and interpreted at a distance.

A multi-institutional learning hub bridging research and government

Thrive has established a living learning hub bringing together universities and government across data science, social science, education, and public policy. Research projects are shaped by real education priorities, with research students supporting the translation of new methods and digital capability into practical decision-making.

Advanced analytical capability that embraces system complexity

Thrive has developed advanced digital and causal AI methods that move beyond traditional statistical analysis, enabling inference at scale while accounting for complexity and variation across student groups and contexts. This capability reveals patterns, such as how belonging, wellbeing, and achievement interact differently for different cohorts—that are often obscured by conventional approaches, supporting more targeted and effective system responses.

Multidisciplinary Research in Action

What helps students overcome barriers and finish school well?

Recent data show a sustained decline in apparent retention rates in government schools, while other schooling sectors have remained relatively stable. While this pattern is visible in headline retention figures, it offers limited insight into which students are disengaging, why they struggle to remain through the later years of school, or what can be done to change their trajectories.

Policy responses have traditionally focused on visible outcomes such as attendance or academic performance. Thrive's causal analysis of longitudinal data from the Longitudinal Study of Australian Children (LSAC) enables a different approach—making explicit the underlying drivers of school completion and highlighting students' sense of belonging as a central and earlier influence on pathways through school.

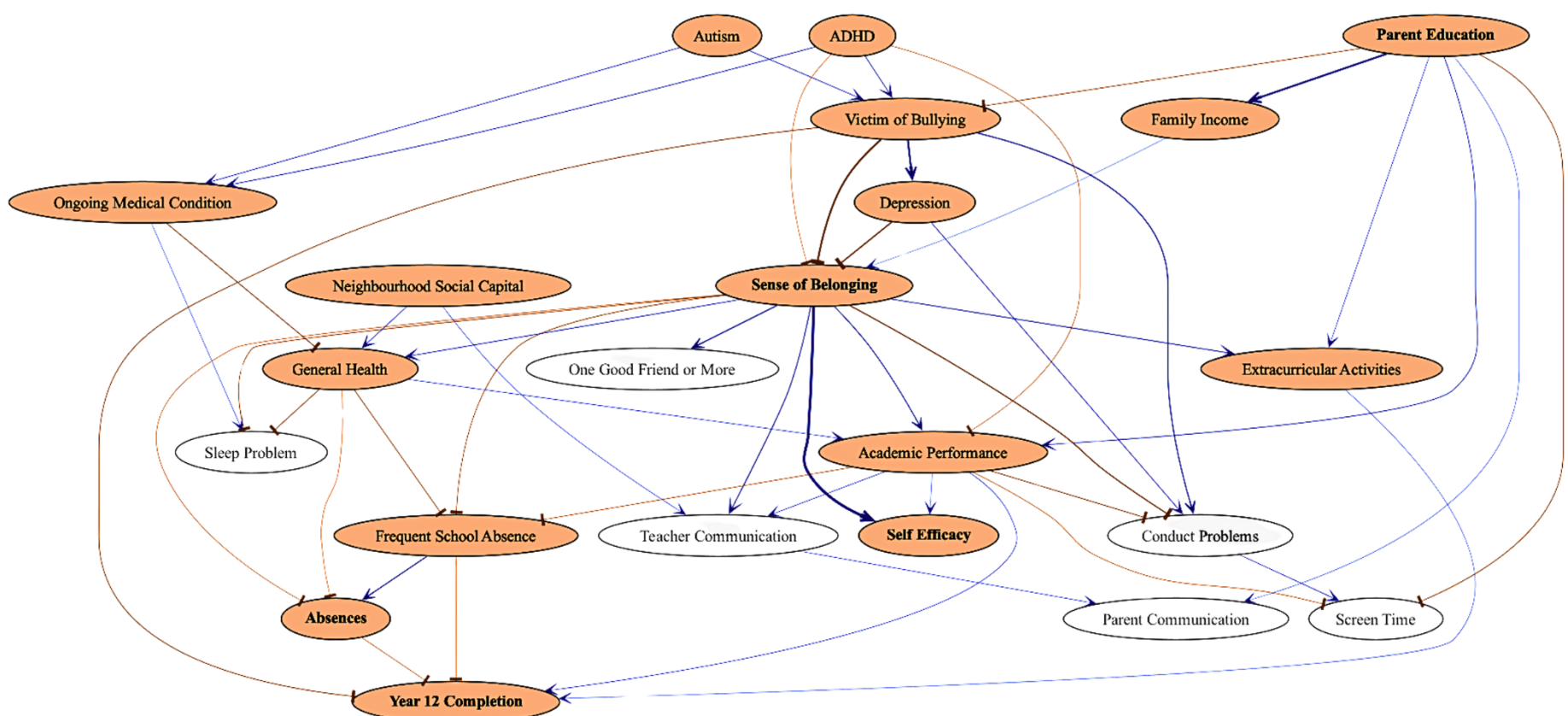
What the causal evidence shows

The causal map below illustrates how key factors interact to shape students' educational outcomes in early adolescence. The analysis shows that a student's sense of belonging plays a central role and acts as an early signal of the health of learning environments and student wellbeing.

Higher belonging is associated with stronger learning engagement, improved wellbeing, fewer behavioural challenges, and more consistent participation over time. The strength and direction of these relationships vary across student groups and contexts, highlighting why one-size-fits-all responses are unlikely to be effective, and why early signals matter.

Why this matters

These insights show that addressing complex educational challenges requires more than isolated initiatives. They point to the need for a learning-oriented system that integrates data, lived experience, and professional judgement to identify emerging issues early, adapt responses over time, and improve students' chances of finishing school well.



Causal map of factors influencing Year 12 completion

This causal map is derived from Thrive's analysis of a subset of students from Cohort K in the Longitudinal Study of Australian Children (LSAC) who were followed until age 19, allowing Year 12 completion to be observed. Arrows indicate inferred causal direction; blue and orange links represent positive and negative relationships, with line thickness reflecting the relative strength of each relationship. Nodes shown in orange represent factors that precede and shape Year 12 completion.

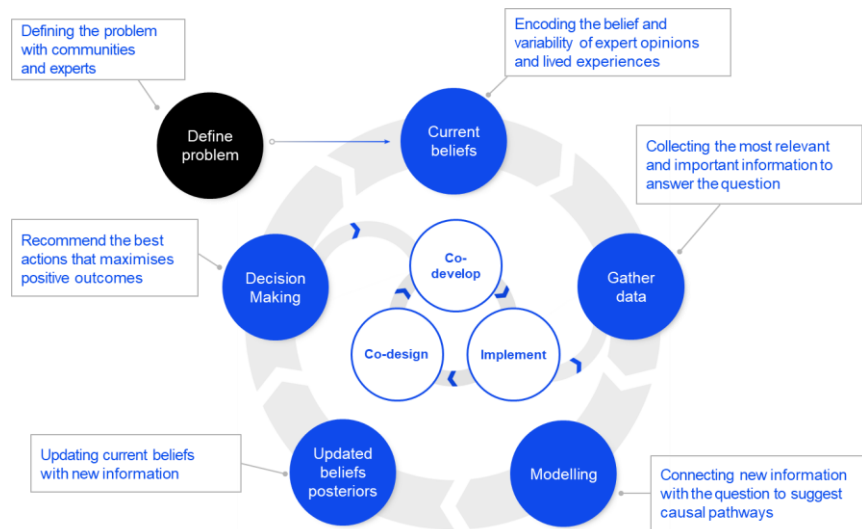
The map illustrates the complexity of influences on school completion, highlighting a set of interconnected, and potentially intervenable, drivers rather than a single explanatory factor. By making these relationships explicit, this approach supports government to reason more rigorously about where and how initiatives are likely to have effect, instead of relying on assumptions about causal drivers. This application of causal modelling to education policy is at the forefront of international practice and positions Australia as a leader in using advanced analytical methods to inform more effective social policy.



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How Thrive works

Thrive operates through an iterative learning cycle that connects system-level evidence with place-based learning in schools. The cycle ensures that insight is not produced for reporting alone, but is continuously tested, refined, and translated into action as learning unfolds. It relies on our newly developed paradigm for complex system change, integrating advanced quantitative modelling with lived experience and professional judgement rather than treating them as separate forms of insight. Evidence is built iteratively with schools and communities, enabling causal understanding that is both analytically rigorous and grounded in real-world experience.



The Thrive Cycle links evidence, inquiry, and action—moving from understanding what matters, to identifying what works, to adapting practice over time

What Has Thrive Demonstrated

Thrive's work starts from the central proposition that lasting impact in complex education systems comes not from scaling individual initiatives, but from embedding learning-oriented capabilities that enable evidence-informed adaptation over time.

Causal Pathways from System Evidence to School Action

Thrive demonstrates how modern data science can move beyond descriptive analysis to generate causal insight at scale without flattening complexity. By linking advanced system-level modelling with school-based inquiry, it creates a learning architecture that turns evidence into adaptive action across diverse contexts.

Integration of evidence and lived experience

Thrive represents a new evidence paradigm for complex system change, integrating advanced quantitative modelling with lived experience and professional judgement rather than treating them as separate forms of insight. Evidence is built iteratively with schools and communities, enabling causal understanding that is both analytically rigorous and grounded in real-world experience.

Adaptive learning as a new research paradigm

Thrive embeds evidence directly into implementation, positioning schools as partners in knowledge creation rather than sites of delivery. Evidence is generated and used iteratively to guide decision-making, adaptation, and refinement in real time, grounded in local context. This approach redefines rigour as the disciplined integration of inquiry, evidence, and adaptation over time, offering a scalable model for learning-led change in complex education systems.

Partnership with schools

Thrive's engagement with schools has demonstrated a strong appetite for ownership of data, inquiry, and adaptive learning at the local level. In many cases, this work reflects schools' efforts to innovate within existing system settings, often with limited visibility or connection across the system. The experience points to an opportunity for more decentralised, supported models that retain clear system guidance while enabling schools to learn, adapt, and share practice more effectively.

Leadership Team



Professor Sally Cripps is the **UTS Institutional lead** and a Co-Director of the Human Technology Institute at UTS and a Professor of Mathematics and Statistics. She was awarded an Australian Research Council Future Fellow 2014-2018 and has held several leadership positions in machine learning and AI research. She was co-founder and co-director of the University of Sydney's Centre for Translation Data Science (CTDS) and the founder and Director of the Australian Research Council's Industrial Transformation Training Centre Data Analytics for Resources and Environments (DARE). Most recently, Sally was Research Director of Analytics and Decision Science and Science Director of the Next Gen AI Training Programme in CSIRO's Data61. Sally's research focuses on developing new mathematical statistics and machine learning methods to address national and global challenges, including mental health, education, natural resources, and social disadvantage.

Professor Rebekah Grace is the **WSU Institutional Lead** and Director of the Centre for Transforming Early Education and Child Health at Western Sydney University. Her research is focused on the service and support needs of children who experience adversity and their families. Rebekah employs a cross-disciplinary, mixed-methods approach to research and has extensive experience collaborating with government and non-government service organisations. Rebekah's expertise is in applied research to transform research into meaningful policy and practice. She also has particular expertise in conducting rigorous effectiveness trials within human services settings.



Dr Gilad Francis is the **Program Director** of Thrive at the Human Technology Institute. Previously, he was the Group Leader of Data-Driven Operations, Enterprises and Services at CSIRO's Data61. In his current role, he works in close partnership with institutional leads to develop and operationalise a new research paradigm for tackling complex sociotechnical systems, leading cross-institutional research programs that translate rigorous evidence into actionable insights - particularly to understand and address the factors and experiences contributing to school non-completion.



2026 Highlights

Identifying What Works: Co-creating Communities of Belonging Initiative

Thrive has partnered with schools to co-develop program logic, generate evidence, and adapt initiatives in response to local context.



Thrive's co-design workshop with librarians from Keira, Parramatta and Grafton High Schools

Vincentia High School:

Working with the school to evaluate its existing integrated wellbeing approach through co-analysis of attendance and wellbeing program register data, and to establish a continuous learning approach to understand how drivers of belonging vary across student groups and cohorts over time.

Keira, Parramatta and Grafton High Schools:

Mapping existing school initiatives, with a focus on libraries as safe and social spaces, and co-developing tailored initiatives for each school. This includes the rollout of a school-led survey to support ongoing evaluation of initiative effectiveness.