



Submission regarding the Productivity Commission's *Building a skilled and adaptable workforce* interim report

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September 2025

Summary

Our submission addresses Part 1 and Part 2 of the *Building a skilled and adaptable workforce* interim report.

Part 1:

While the Productivity Commission's interim report adequately addresses the challenges facing Australia's education system, its students and teachers, the policy responses recommended are underwhelming.

On both the policy recommendations to implement a national database of lesson resources and investment in Gen AI tools for the classroom, we find the evidence-base lacking in its support of these approaches. Instead, we recommend the Australian Government invest in tried and tested approaches to improving teaching, teacher and student outcomes, such as the University of Newcastle's Quality Teaching Rounds.

Part 2:

While recognition of prior learning and work-related training are important mechanisms for building the skill base of the Australian workforce, better supporting students to access and thrive in vocational and higher education is a key piece missing from this report. Our decade-long program of research into the educational and career aspirations of Australian students offers important lessons for teachers, parents, community members, education providers and governments on nurturing the next generation.

Summary of recommendations:

1. The Australian Government funds rigorous research into the impact of lesson resources on both teacher and student outcomes.
2. The Australian Government funds rigorous research to understand the use and impact of edtech and GenAI tools in education settings to help guide the further development and refinement of policy, guidelines and frameworks.
3. The Australian Government, in consultation with state and territory education systems, embeds the rigorously tested Quality Teaching Rounds approach to professional development as a National Reform Direction within the Better Fairer Schools Agreement.
4. The Australian Government widely promotes access to the free Aspirations professional development courses.
5. The Australian Government designs sustainable funding models for the vocational and higher education sectors.

In this submission, we provide an evidence-based critique of the content and recommendations contained in *Part 1: The best resources to improve school student outcomes*, with a brief response to the Productivity Commission's information request 1.1. We also propose an alternative policy approach to achieving improvements in education outcomes and productivity uplift across the Australian economy.

Regarding *Part 2: Building skills and qualifications for a more productive workforce*, we provide an overview of a decade-long program of research into educational and career aspirations of Australian students. This information addresses a gap in the interim report on how we better support students' journeys and pathways into tertiary education and the workforce through practical, cost-effective policy mechanisms.

About the Teachers and Teaching Research Centre

The University of Newcastle's Teachers and Teaching Research Centre (TTRC) has a mission to conduct and translate rigorous, relevant, and meaningful educational research to address the most pressing challenges in education. We are dedicated to generating knowledge that informs educational practice and policy, with the ultimate goal of improving student outcomes, transforming lives and communities, and sustaining fulfilling careers in education.

Since it was established in 2013, the TTRC has been awarded more than \$40m in research grants and contributed more than 135 highly-cited academic publications on key issues in education, published almost exclusively in top-tier journals. The TTRC consistently adopts a mixed-methodology approach to educational research in Australia, specialising in randomised controlled trials, longitudinal studies, and qualitative research underpinned by various theoretical perspectives. The TTRC is an Australian leader in the following research areas:

- Quality teaching
- Initial teacher education
- Teacher development
- School change
- Leadership
- Student aspirations
- Equity
- STEM education

PART 1: The best resources to improve school student outcomes

The Productivity Commission aptly defines some of the enduring challenges facing Australia's education system. Aboriginal and Torres Strait Islander students, those facing socio-economic disadvantage, and those living in rural and remote Australia are more likely to be behind their more advantaged peers in standardised test results. It is also true, as the Commission identifies, that the quality of teachers (and teaching) is the most important factor within schools that influences student outcomes¹. However, it is critical to note that out-of-school factors relating to economic advantage and family and community resources have a significant impact^{2,3}.

¹ Chetty, R., Friedman, J.N., Rockoff, J.N. (2014). Measuring the impacts of teachers II: Teacher value-added and student outcomes in adulthood. *The American Economic Review*, 104 (9). pp. 2633-2679, 10.1257/aer.104.9.2633

² Hattie, J. (2003). Teachers make a difference, what is the research evidence? *Australian Council for Educational Research*. http://research.acer.edu.au/research_conference_2003/4/

³ Gore, J. M., Jaremus, F., & Miller, A. (2021). Do disadvantaged schools have poorer teachers? Rethinking assumptions about the relationship between teaching quality and school-level advantage. *The Australian Educational Researcher*, 49(4). <https://doi.org/10.1007/s13384-021-00460-w>

Unfortunately, this interim report also embeds several misconceptions about the effectiveness of teachers and teaching and the performance of students in national and international testing regimes. Given these misconceptions shape the Commission's policy response (as well as broader efforts across the sector) we provide robust evidence that either refutes the ideas or provides necessary nuance.

The first misconception is that beginning teachers are less equipped to deliver quality teaching. Our research has demonstrated no statistically significant difference in the quality of teaching delivered by early career or more experienced teachers⁴. This finding replicates similar research undertaken by the University of Queensland using different analysis and a different model of teaching quality⁵. Instead, we find that, on average, teachers deliver similar quality of classroom teaching regardless of their years of experience.

We suggest two explanations for this finding with serious implications for Australian education policy: (1) while there is room for ongoing improvement, initial teacher education programs are doing a good job in preparing teachers for the workforce; and (2) experience alone doesn't improve the quality of teaching. While experience can manifest in greater effectiveness in other parts of teachers' work, this finding suggests the many hours teachers spend in professional development do little to lift the quality of teaching delivered. By contrast, our research also found that participation in Quality Teaching Rounds professional development produced significant improvements in the quality of teaching across all career stages.

A second misconception is the role of school location and level of community advantage in shaping teaching practice. On disadvantage: we found a statistically significant relationship between quality of teaching and school-level advantage using ICSEA as a measure. However, the relationship is primarily leveraged by the most disadvantaged schools. In schools with an ICSEA above 950 the relationship no longer exists; that is, there is no difference in the quality of teaching delivered between mid-ICSEA and high-ICSEA schools⁶. Given that teachers in all ICSEA bands produced higher quality teaching after participating in Quality Teaching Rounds, the result in low-ICSEA schools suggests that the issue is less about the quality of teaching or teachers and more to do with enduring and pervasive structural disadvantage.

On location: we found a small but significant difference between rural and urban schools in the average quality of teaching. However, in our sample no urban schools were at the lower end of the ICSEA range and no rural schools at the upper end. When we examined only those schools with overlapping ICSEA values, the relationship no longer exists, suggesting that community disadvantage is more important than school rurality in understanding quality teaching.

As the Commission's interim report highlights, students in these schools are often taught by teachers teaching out of their field of expertise, those earlier in their careers, and a more transient teacher workforce. For teaching out of field, the emphasis of professional development tends to be enhancing teachers' disciplinary knowledge. However, professional development on pedagogy through Quality Teaching Rounds builds teachers' confidence and efficacy to ensure the intellectual quality of lessons, even when teaching out-of-field. Indeed, our research on casual teachers, who share similar

⁴ Gore, J. M., Rosser, B., Jaremus, F., Miller, A., & Harris, J. (2023). Fresh evidence on the relationship between years of experience and teaching quality. *The Australian Educational Researcher*, 51(2). <https://doi.org/10.1007/s13384-023-00612-0>

⁵ Graham, L. J., White, S. L. J., Cologon, K., Pianta, R. C. (2020) Do teachers' years of experience make a difference in the quality of teaching? *Teaching and Teacher Education*. 96. <https://doi.org/10.1016/j.tate.2020.103190>

⁶ Gore, J. M., Jaremus, F., & Miller, A. (2021). Do disadvantaged schools have poorer teachers? Rethinking assumptions about the relationship between teaching quality and school-level advantage. *The Australian Educational Researcher*, 49(4). <https://doi.org/10.1007/s13384-021-00460-w>

challenges, found greater pedagogical confidence and efficacy to engage students and make learning meaningful, while helping to hone their understanding of key disciplinary concepts⁷.

The final misconception relates to student outcomes on national and international tests. The Commission rightly identifies the growth in NAPLAN results since 2008, however its framing of “stagnation” aligns more closely with the media’s unfounded crisis narrative^{8,9}. While longstanding equity gaps in student outcomes remain stubbornly and shamefully wide, Larsen makes the compelling argument that in most cases, in the aggregate, student achievement has improved in NAPLAN, PIRLS and TIMMS testing regimes over the past two decades¹⁰. As the Commission also identifies, this research finds results have fallen in PISA testing. Importantly, however, PISA differs from the other tests in its focus on “applied knowledge” rather than foundational skills.

While we accept that NAPLAN plays an important role in providing policymakers with data on which to base some education reforms, NAPLAN results do not neatly translate into students’ ability to apply curriculum knowledge to real world scenarios. Policy proposals and evaluations must consider both NAPLAN scores and wider measures such as equity and student wellbeing, attendance, engagement and enjoyment of schooling, as well as teacher wellbeing, morale, confidence and retention.

Our research on Quality Teaching Rounds has demonstrated improvements in student progressive achievement tests (PATs) in mathematics and readings^{11,12}, as well as in NAPLAN and HSC^{13,14} results, and with stronger results in disadvantaged schools. These outcomes occur simultaneously with improvements in engagement and attendance as well as teacher morale and efficacy¹⁵.

Supporting teachers with comprehensive, evidence-backed, lesson planning materials

Teacher workload is a serious concern. As the Commission’s interim report finds, workload, stress and burnout are key factors in teachers leaving the profession.

While a significant proportion of teachers’ non-teaching time is associated with lesson planning, teachers overwhelmingly consider this to be core business. Rather than reducing their agency in developing high quality programs and units of work—a key factor in job satisfaction—teachers are calling for a reduction in the administrative and reporting tasks that are associated with our highly

⁷ Briskham, J. (2025). *Transforming casual relief teacher practice and identity through participation in high-quality professional development*. University of Newcastle. <https://hdl.handle.net/1959.13/1518379>

⁸ Larsen, S. A. (2024). Are Australian students’ academic skills declining? Interrogating 25 years of national and international standardised assessment data. *Australian Journal of Social Issues*. <https://doi.org/10.1002/ajs4.341>

⁹ Mockler, N. (2022) *Constructing Teacher Identities: How the Print Media Define and Represent Teachers and their Work*. Bloomsbury, ISBN 9781350132344, 1350132349

¹⁰ Larsen, S. A. (2024). Are Australian students’ academic skills declining? Interrogating 25 years of national and international standardised assessment data. *Australian Journal of Social Issues*. <https://doi.org/10.1002/ajs4.341>

¹¹ Gore, J., Miller, A., Fray, L., Harris, J., & Prieto-Rodriguez, E. (2021). Improving student achievement through professional development: Results from a randomised controlled trial of Quality Teaching Rounds. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2021.103297>

¹² Povey, J., Porter, M., Kennedy, L., Potia, A., Bellotti, M., & Austerberry, S. (2023). Building capacity for quality teaching in Australian Schools: Queensland replication study – final report. Institute for Social Science Research, University of Queensland. <http://hdl.handle.net/1959.13/1471855>

¹³ Duffy, C. (2024). Teachers once feared working at Cessnock High, now it’s a model for best practice. *ABC News*. <https://www.abc.net.au/news/2024-04-14/formerly-violent-nsw-high-school-sets-model-for-teaching/103675354>

¹⁴ Carroll, L. (2025). Revealed: The state’s most improved schools in the HSC. *Sydney Morning Herald*. <https://www.smh.com.au/national/nsw/revealed-the-state-s-most-improved-schools-in-the-hsc-20250324-p5llwo.html>

¹⁵ Gore, J., Miller, D., Fray, L., Patfield, S. (2023). Final Report to the Paul Ramsay Foundation: Building Capacity for Quality Teaching in Australian Schools 2018-2023. University of Newcastle. <http://hdl.handle.net/1959.13/1493345>

scrutinised education system¹⁶. Curriculum and lesson planning should not be confused with administrative work. Investment in such materials does not provide a solution to the burdens felt by teachers. Nor does it, on its own, have potential to enrich schooling for the increasing number of students who are dealing with trauma or refusing school, for whom the nation carries responsibility¹⁷.

There is little evidence to suggest providing lesson plans to teachers will have any effect on student learning. Indeed, given the availability of these lesson resources in many jurisdictions, the fact that improvements haven't yet been realised highlights the need for additional policy levers. Overall, this interim report cites very little peer-reviewed research and instead relies on government and non-government reports and media reporting. While these sources have a role to play, we recommend the Commission consults more widely with the academic community and that the Government fund rigorous research into the impacts of lesson resources. **(Recommendation 1)**.

Given many state jurisdictions have already borne the cost of developing curriculum resources, a sensible approach would be to encourage making these publicly available. The Federal Department of Education or ACARA would be best placed to host a webpage that provides wayfinding to the various jurisdictions' available resources **(Information Request 1.1)**. While quality assurance is important, it is worth noting the risk that onerous review processes will be subjected to the same obstructive culture warring that accompanies reviews and rewrites of the Australian Curriculum. Commentary on these curriculum resources from the major education agencies as well as subject specific and professional associations should be encouraged, however states and territories have their own quality control measures in place as part of the development of these resources which should remain central.

In a report that is ostensibly providing the Australian Government with a roadmap to improving educational outcomes on a broad scale and ultimately lifting national productivity measures, the proposed approach seems narrow.

Our chief concern with this policy recommendation is the Commission's theory of change as to how these curriculum resources will improve educational outcomes for both teachers and students. The Commission states that "[t]eachers could use the list [of resources] to save time searching and instead improve their pedagogical knowledge, teaching practices and the quality of student engagement, and to foster culturally safe learning environments" (pp. 20-21). This statement belies a simplistic understanding of the complex teaching decisions needed to produce such outcomes and of the complex processes involved in improving teaching practice. We note here that "teaching practice" is more than the practices (or strategies) that teachers use.

It is a huge leap to suggest that teachers will have both the time and the support to improve their practice based on this proposed plan. Changing teaching practice is incredibly difficult, as some of the research cited above has demonstrated. Moreover, teachers consistently report that they want and need professional development that can support their growth, not just lesson materials¹⁸.

To have a genuine impact on student engagement and achievement, to improve equity outcomes, and to make teaching more attractive, teaching needs to be understood holistically, and policies need to be cognisant of the complexities of Australian classrooms. The curriculum is only one of three key

¹⁶ Wilson, R., Sears, J. A., Gavin, M., McGrath-Champ, S. (2022). 'This is like banging our heads against the wall': why a move to outsource lesson planning has NSW teachers hopping mad. *The Conversation*. <https://theconversation.com/this-is-like-banging-our-heads-against-the-wall-why-a-move-to-outsource-lesson-planning-has-nsw-teachers-hopping-mad-188081>

¹⁷ Clark, S. (2023). School refusal. *Parliamentary Library*. Parliament of Australia. https://parlinfo.aph.gov.au/parlInfo/download/library/prspub/9124340/upload_binary/9124340.pdf

¹⁸ Wilson, R., Sears, J. A., Gavin, M., McGrath-Champ, S. (2022). 'This is like banging our heads against the wall': why a move to outsource lesson planning has NSW teachers hopping mad. *The Conversation*. <https://theconversation.com/this-is-like-banging-our-heads-against-the-wall-why-a-move-to-outsource-lesson-planning-has-nsw-teachers-hopping-mad-188081>

message systems in education, alongside pedagogy (how the curriculum is enacted by teachers) and assessment (how knowledge is deemed to be understood). "Curriculum change, without simultaneous improvement in the learning environment and pupils' quality of life, is a mere academic exercise"¹⁹. Curriculum reform is insufficient to change what teachers do in classrooms.

The Quality Teaching Model, developed at the University of Newcastle, is a rigorously tested framework for improving teaching and learning that pays attention to critical elements of these three message systems. The Model's three key dimensions – Intellectual Quality, Quality Learning Environment, and Significance – guide educators on the essential components of teaching that make a difference to student learning. For example, the Model's attention to deep knowledge and understanding and to background knowledge addresses curriculum; its emphasis on high expectations, substantive communication and social support addresses pedagogy; and its focus on explicit quality criteria and student direction can guide assessment. As we explore below in more detail, embedding the Model in teachers' practice through Quality Teaching Rounds professional development is:

- evidence-backed (manifest in more than 25 peer-reviewed top-tier journal publications),
- scalable (already involving almost 7500 teachers from more than 1,500 schools), and
- cost-effective (a Deloitte Access Economics cost-benefit analysis found an uplift to gross state product of \$40 to \$150 for every dollar invested²⁰).

This approach can meet the goals of this review as well as the broader vision for Australia's education system as articulated in the Alice Springs (Mparntwe) Declaration.

A national approach to advanced edtech

The rapid development of technologies, including GenAI, presents an important challenge to Australia in general. These technologies and tools must be evaluated through regulatory, legislative, and ethical lenses to prevent such serious issues as plagiarism of Australians' intellectual property and the spread of misinformation. Particular attention is needed around consent and avoiding the malicious use of apps that manipulate images and videos of minors. Specifically, in school education, it's important that any technologies are implemented in ways that enhance teaching and learning and are grounded in respect for human rights²¹.

The interim report suggests that AI tools could assist teachers with administrative tasks and lesson planning. While our same caveats apply regarding teacher professionalism and autonomy in developing units of work, the opportunity to use AI in this way has major implications for any government investment in a national database of curriculum resources. On the one hand, the Commission proposes a national database of curriculum resources while, on the other, it proposes the adoption of AI tools of which one core feature is the ability to assist in the development of lesson plans. The duplication or redundancy of these ideas needs to be considered and addressed.

In saying that, research has found that AI tools do not improve workloads but often substitute one

¹⁹ Lason-Billings, G. (2021). *Culturally relevant pedagogy: Asking a different question*. Teachers College Press.

²⁰ Deloitte Access Economics. (2020). Quality Teaching Rounds – Cost benefit analysis. Report to the Teachers and Teaching Research Centre. <https://qtacademy.edu.au/wp-content/uploads/2020/10/Deloitte-Access-Economics-QTR-Cost-Benefit-Analysis-Final-report-9-Sept.pdf>

²¹ OHCHR. (2023). Artificial intelligence must be grounded in human rights, says High Commissioner. *The Office of the High Commissioner for Human Rights*. United Nations. <https://www.ohchr.org/en/statements-and-speeches/2023/07/artificial-intelligence-must-be-grounded-human-rights-says-high>

aspect of work for another²² and that research on any impact on learning needs careful scrutiny given myriad methodological and measurement validity issues and overhyped reporting of outcomes²³. While we support cautious adoption of Gen AI tools, their development and implementation should be carried out with robust evaluation. We highly recommend the government funds rigorous research—both experimental and qualitative—to understand the use and impact of edtech and GenAI tools in education settings to help guide the further development and refinement of policy, guidelines and frameworks (**Recommendation 2**).

Regarding both Draft Recommendations 1.1 and 1.2, we worry the Productivity Commission could fall in the trap of advocating for overly simplified solutions to some of education's most complex problems. As Mencken famously said, "There is always an easy solution to every human problem—neat, plausible and wrong"²⁴.

An alternative approach: one initiative with broad impact

The impact of lesson resources on student and teacher outcomes needs to be rigorously evaluated before adoption at scale. Gen AI tools and any frameworks or professional development for teachers to support their use need to be developed, piloted, and thoroughly evaluated. This process of testing and refinement should happen.

However, the timeliness of addressing Australia's education challenges must be considered. The Australian Government would be better placed investing in rigorously tested approaches that have been demonstrated to improve teaching, improve teacher well-being and lift student achievement in our schools, such as Quality Teaching Rounds.

As this interim report notes, the Productivity Commission undertook advanced modelling in 2023 that estimated a modest 0.12 to 0.18 standard deviation improvement in school outcomes could lead to substantial increases in long-term GDP. Rather than (or alongside) policies that propose speculative approaches to improving educational outcomes, the Government should invest in a wide-scale uptake of Quality Teaching Rounds professional development.

Quality Teaching Rounds has demonstrated annualised 25-30% improvement in student achievement in reading and mathematics through a series of gold-standard independently verified randomised controlled trials. This amounts to a modest 0.12 standard deviation, an improvement repeated in subsequent years for teachers who participate in the program. At the same time, Quality Teaching Rounds improves teachers' confidence, wellbeing and retention in the profession.

Why this works – an evidence-backed model for improving teaching

From just four days of professional development, Quality Teaching Rounds shifts teachers' understanding and delivery of good practice and lifts the quality of teaching to improve excellence and equity for Australian students, creating greater opportunities for making a positive contribution to the

²² Whittle, J. (2025). Does AI actually boost productivity? The evidence is murky. *The Conversation*. <https://theconversation.com/does-ai-actually-boost-productivity-the-evidence-is-murky-260690>

²³ Williamson, B. Code acts in education: enumerating AI effects in education. *National Education Policy Centre*. University of Colorado. <https://nepc.colorado.edu/blog/enumerating>

²⁴ Winchell, W. (1949). On Broadway. *The Laredo Times*. Texas.

country. Quantitative measures show improvements are sustained over more than six months²⁵ and, in qualitative data, teachers report they will never teach the same again²⁶.

A major systematic review found that effective teacher professional development is categorised by a balanced design that simultaneously builds knowledge, motivates teachers, develops teaching techniques and embeds the learning in practice²⁷. Quality Teaching Rounds has deliberate characteristics that attend to each of these domains.

Quality Teaching Rounds combines an evidence-based pedagogical framework – the Quality Teaching (QT) Model – with powerful professional development processes that guide teachers to embed the elements of the model in their practice.

The QT Model, with its three dimensions of Intellectual Quality, Quality Learning Environment and Significance, addresses the complexity of teaching while providing clear conceptual and practical guidance for teachers' pedagogical work. It does so without being overly prescriptive which enables local contextualisation.

Teachers can use strategies like explicit teaching, feedback, formative assessment both well and badly, affecting student learning and engagement. By focusing on the underlying quality of pedagogy rather than discrete teaching strategies, the Model and Rounds treat teaching holistically, respect teacher professionalism, and recognise the complexities of Australian classrooms, producing broad, fast, and significant positive effects. Quality Teaching Rounds provides teachers with a rigorously tested model and process for ensuring the quality of, and enhancing, explicit teaching and other evidence-based practices.

Quality Teaching Rounds brings together teachers with a range of experience levels, from any grade or subject area, to observe, analyse, discuss and enhance their pedagogy.

Quality Teaching Rounds has been trialled and successfully implemented in primary and secondary schools and in a range of specialist contexts, including: small, rural, and remote schools and large metropolitan schools; highly disadvantaged schools and wealthy independent schools; schools for specific purposes, hospital schools, environmental education and distance education centres. It has also demonstrated success supporting early career teachers, experienced teachers, casual relief teachers, pre-service teachers, and teachers in vocational and higher education settings²⁸.

²⁵ Gore, J., Lloyd, A., Smith, M., Bowe, J., Ellis, H., & Lubans, D. (2017). Effects of professional development on the quality of teaching: Results from a randomised controlled trial of Quality Teaching Rounds. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2017.08.007>

²⁶ Gore, J., & Rickards, B. (2020). Rejuvenating experienced teachers through Quality Teaching Rounds professional development. *Educational Change*. <https://doi.org/10.1007/s10833-020-09386-z>

²⁷ Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Van Herwegen, J., Anders, J. (2021). What are the Characteristics of Effective Teacher Professional Development? A Systematic Review & Meta-analysis. *Education Endowment Foundation*. <https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/teacher-professional-development-characteristics>

²⁸ Gore, J., Miller, A., Fray, L., & Patfield, S. (2023). *Building capacity for quality teaching in Australian schools 2018–2023: Final report to the Paul Ramsay Foundation*. Teachers and Teaching Research Centre, The University of Newcastle. <http://hdl.handle.net/1959.13/1493345>

Impact on student achievement

Quality Teaching Rounds was first evaluated under randomised controlled trial conditions in 2014/15 which established direct causation for its ability to improve teaching quality and teacher morale²⁹.

Based on these promising findings, in 2018, the Paul Ramsay Foundation provided \$17.2m to rigorously evaluate Quality Teaching Rounds' impact on student outcomes, scale the program nationally, and create a long-term sustainable business model to continue the roll-out after the funding period.

In 2020, the University of Newcastle launched the non-profit Quality Teaching Academy social enterprise to address scale and sustainability. Since 2018, almost 7,500 teachers from more than 1,500 schools Australia-wide have participated in a Quality Teaching Rounds workshop, positively benefiting at least 1.3 million students—a number that grows exponentially year on year.

Three of four PRF-funded randomised controlled trials demonstrated clear impact of Quality Teaching Rounds on student achievement in mathematics and/or reading³⁰ (Figure 1). Education research is notoriously messy due to the complex nature of classroom settings, making these results rare on a global scale. Rarer still, the trials demonstrated the efficacy of a pedagogy-focused intervention³¹ in improving student achievement rather than relying on PD focused specifically on mathematics or reading instruction.

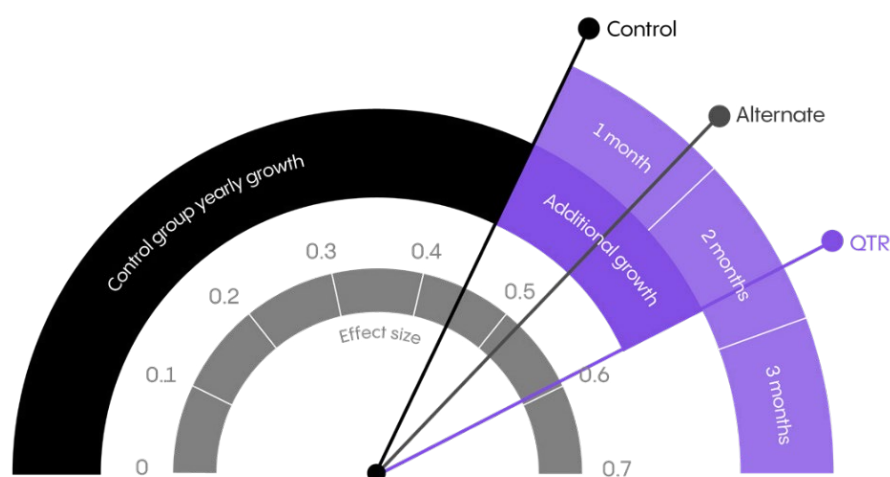


Figure 1: Impact of Quality Teaching Rounds on mathematics (2019 RCT)³².

²⁹ Gore, J., Lloyd, A., Smith, M., Bowe, J., Ellis, H., & Lubans, D. (2017). Effects of professional development on the quality of teaching: Results from a randomised controlled trial of Quality Teaching Rounds. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2017.08.007>

³⁰ Gore, J., Miller, A., Fray, L., & Patfield, S. (2023). *Building capacity for quality teaching in Australian schools 2018–2023: Final report to the Paul Ramsay Foundation*. Teachers and Teaching Research Centre, The University of Newcastle. <http://hdl.handle.net/1959.13/1493345>

³¹ Gore, J., & Rosser, B. (2020). Beyond content-focused professional development: Powerful professional learning across grades and subjects. *Professional Development in Education* <https://doi.org/10.1080/19415257.2020.1725904>

³² Gore, J., Miller, A., Fray, L., Harris, J., & Prieto-Rodríguez, E. (2021). Improving student achievement through professional development: Results from a randomised controlled trial of Quality Teaching Rounds. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2021.103297>

These studies involved more than 10,000 students, 1,400 teachers and 250 schools in three Australian states. Crucially, the results were stronger in disadvantaged settings, signalling the potential for this approach to narrow longstanding equity gaps.

Impact on teacher and job satisfaction

Quality Teaching Rounds also lifts productivity by improving teacher efficacy, morale and wellbeing, ultimately helping to retain talent in the teaching profession and supporting the pipeline of teachers from initial teacher education through to school leadership.

A national expansion of Quality Teaching Rounds is currently being funded by the Australian Government as part of the National Teacher Workforce Action Plan to improve the retention and job satisfaction of teachers³³.

Findings to date in this national, cross-sectoral *Strengthening Induction through Quality Teaching Rounds* project show that teacher participation has reduced burnout and improved wellbeing and professional community. It has increased teacher efficacy in general (effective practice), and in the specific domains of classroom management, instructional strategies and student engagement (Figure 2).

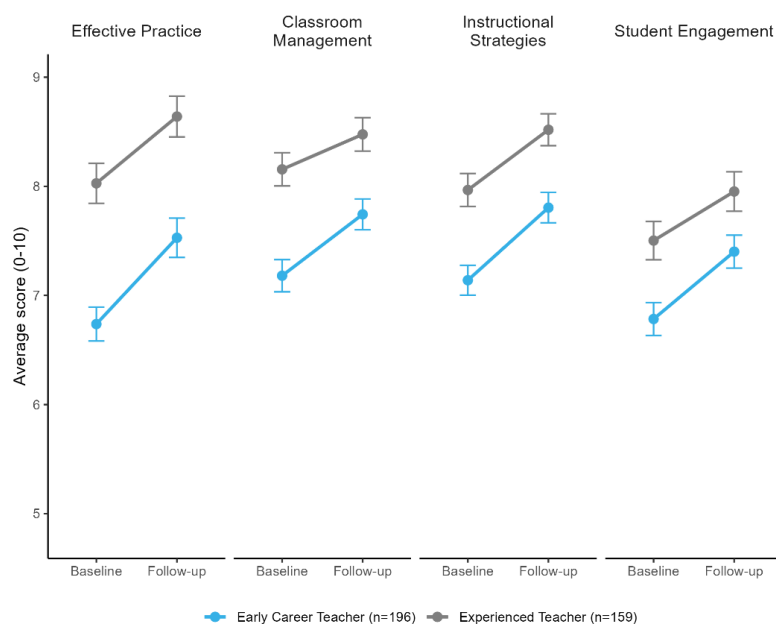


Figure 2: Impact of Quality Teaching Rounds on teacher efficacy by years of experience

Quality Teaching Rounds is also having a positive effect on teacher retention. When asked to indicate their intention to leave the profession within the next six months on a scale from 0 (not at all likely) to 10 (extremely likely), the average dropped following participation in Quality Teaching Rounds (Figure 3). Importantly, all these positive effects are reported by both early career and more experienced teachers involved in the *Strengthening Induction* project.

³³ Clare, J. (2023). Expansion of Quality Teaching Rounds program. *Ministers' Media Centre*. <https://ministers.education.gov.au/clare/expansion-quality-teaching-rounds-program>

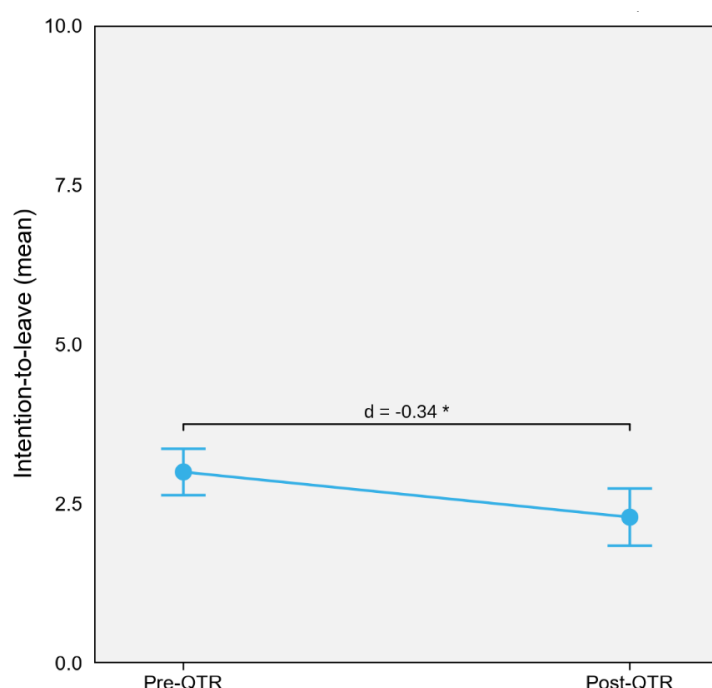


Figure 3: Average intention to leave ($n = 127$)

This current national expansion of Quality Teaching Rounds could be rapidly accelerated, producing widespread positive effects for teachers, students and equity, through additional funding and, most importantly, with jurisdictional buy-in³⁴. We recommend the Australian Government in consultation with state and territory education systems embeds Quality Teaching Rounds as a National Reform Direction within the Better Fairer Schools Agreement (i.e.: 84.c.ii. *A strong and sustainable workforce*³⁵) (**Recommendation 3**).

PART 2: Building skills and qualifications for a more productive workforce

Our research does not provide insight on recognition of prior learning or work-related training. However, our decade-long aspirations program of research provides detailed and important analysis of the factors influencing the way young people view and decide upon their educational and career pathways, which should be of relevance to this inquiry. Given the Universities Accord recommends that 80% of Australians have a tertiary qualification by 2050 to meet future workforce needs, addressing ways in which students consider or rule out education and career options needs to be central to the policy debate.

The *Aspirations Longitudinal Study* (2012-2018) was a groundbreaking research project that produced comprehensive insights into the factors that shape post-school aspirations of students from Years 3 to 12. The project spawned 10 additional research projects exploring the aspirations of Indigenous students and students from regional and remote Australia, implications for the VET and higher education sectors, and the impact of teachers, schools and communities in the formation of young people's aspirations.

³⁴ Gore, J. (2025). Submission to the Australian Government's Economic Reform Roundtable. University of Newcastle. https://www.newcastle.edu.au/_data/assets/pdf_file/0004/1078609/TTRC-submission-to-the-Economic-Reform-Roundtable.pdf

³⁵ Department of Education (2025). Heads of Agreement (Better Fairer Schools Agreement – Full and Fair Funding 2025-2034). Australian Government. <https://www.education.gov.au/download/18932/heads-agreement-better-and-fairer-schools-agreement-full-and-fair-funding-2025-2034/42007/document/pdf>

This work culminated in the development of two free online professional development courses, one for teachers and career advisers, and the other for families and community members, to support the nurturing of aspirations.

Two recent studies have extended the original *Aspirations Longitudinal Study*. In 2020-2021, *The Path Travelled* project surveyed and interviewed participants from the original study to find out if they had realised their childhood aspirations and explore barriers and challenges for young people accessing career and educational pathways. The 2024-25 *Aspirations: Ten Years On* study returned to schools from the original study to examine the changes in aspirations of young people today, finding that, compared to 10 years ago, students and young people are more anxious and uncertain about their futures due to local and global challenges and crises.

Aspirations Longitudinal Study

Regarding student aspirations for university and university-related careers, our first longitudinal study (2012-2015) surveyed 6,492 Australian school students about their educational and occupational aspirations, investigating how aspirations are formed, shaped, solidified or transformed throughout schooling^{36,37,38}. Overall, we found that university is the most desired educational pathway among young Australians, with 50.3% of students in our sample expressing interest in university as the highest level of education they plan to complete. By contrast, 13.9% indicated vocational education as their highest level of intended education, 12.6% indicated high school, and 23.1% indicated that they didn't know what level of education they planned to complete. Put another way, of the 77% who indicated a clear educational aspiration, 65% expressed interest in university.

In an open-ended survey question, students were asked to nominate occupations to which they aspired. Responses were coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The ten most frequently named Skill Level 1 occupations (i.e., those occupations requiring at least a bachelor's degree) were³⁹: arts professionals, school teachers, veterinarians, architects, science professionals, engineering professionals, medical professionals, social and welfare professionals, legal professionals and registered nurses/midwives.

Due to the longitudinal nature of our survey, we were able to investigate how interest in these occupational categories varied across the school years. In Australia, the assumption that aspirations take shape around the middle high school years results in the provision of most career education in Year 10. However, our data clearly show that in some occupational categories, interest appears to rise or fall towards the very end of high school. For example, students are less likely to aspire to be a doctor, vet or artist as they mature, but more likely to aspire to architecture, engineering, social work or law. Furthermore, significant interest in these careers is often expressed as early as Year 7, sometimes Year 5. In other careers, such as teaching and science, student interest is more consistent across year levels. Variation across year levels might relate to ongoing assessment by students of their abilities and achievement levels as they age or, indeed, to a more realistic understanding of what

³⁶ Gore, J., Patfield, S., Holmes, K., Smith, M., Lloyd, A., Gruppeta, M., Weaver, N., & Fray, L. (2017). When higher education is possible but not desirable: Widening participation and the aspirations of Australian Indigenous school students. *Australian Journal of Education*, 61(2), 164–183. <https://doi.org/10.1177/0004944117710841>

³⁷ Gore, J., Ellis, H., Fray, L., Smith, M., Lloyd, A., Berrigan, C., Lyell, A., Weaver, N., & Holmes, K. (2017). Choosing VET: Investigating the VET aspirations of school students. *National Centre for Vocational Education Research*. <https://www.ncver.edu.au/research-and-statistics/publications/all-publications/choosing-vet-investigating-the-vet-aspirations-of-school-students>

³⁸ Gore, J., Patfield, S., Fray, L., & Harris, J. (2022). *Community matters: The complex links between community and young people's aspirations for higher education*. Routledge.

³⁹ Gore, J., Holmes, K., Smith, M., Fray, L., McElduff, P., Weaver, N., & Wallington, C. (2017) Unpacking the career aspirations of Australian school students: towards an evidence base for university equity initiatives in schools. *Higher Education Research & Development*, 36(7), 1383-1400 <https://doi.org/10.1080/07294360.2017.1325847>

is involved in certain careers. Nonetheless, it appears that students are forming career interests at an early stage of their schooling.

These results reinforce the importance of robust career education in schools to meet Australia's skills needs now and into the future. Well-structured, timely, and evidence-based career education will also help to ensure students from underrepresented groups, such as first-in-family students, do not foreclose on the idea of higher education^{40,41}.

The Path Travelled

The Path Travelled study investigated how student aspirations translate into actual post-school educational and occupational pathways⁴². This study extended our initial work investigating school students' aspirations by following up with students one-to-five years post-school. Additional data were collected in 2021 via online surveys (n = 52) and interviews (n = 21) with original participants.

As an important foundation for policy, we found that most students' educational and occupational aspirations changed at least somewhat in the years following their schooling. The majority of our participants indicated that their career aspirations (64%) and their educational aspirations (60%) had changed either "to a great extent" or "somewhat" since leaving school. Less than a third of participants indicated that their education (29%) and career (21%) aspirations had not changed at all.

The most prevalent and disruptive obstacle for participants in meeting their aspirations was mental ill-health. A conglomeration of personal, relational, and economic challenges drove both acute and long-term episodes of mental ill-health. Such episodes were common among participants who felt compelled to abandon their desired educational and/or occupational pathways and forge a new path. The experiences of mental ill-health shared by many of these students are a reminder of the vulnerability of young people, even before the occurrence of the global COVID-19 pandemic.

University students from underrepresented equity target groups in particular faced an array of challenges arising from their lack of access to knowledge about specific careers, specific courses, or the university system in general. Some students commented that their access to information about education and career options during school was, by and large, positive. However, there was a general consensus among interview participants that the career education they received at school was insufficient to prepare them for the realities of life after school, including participation in higher education.

Concerted efforts will therefore need to be made by universities and governments to ensure those from underrepresented equity target groups are able to access the same kinds of information and advice as their more advantaged peers, key to which is professional development for teachers, school leaders, parents/carers and family members.

Aspirations Ten Years On

Returning to six high schools and one central school from the original longitudinal study, this new investigation found that overlapping and worsening crises in living costs, housing, climate change and

⁴⁰ Patfield, S., Gore, J., & Fray, L. (2021). Stratification and the illusion of equitable choice in accessing higher education. *International Studies in Sociology of Education*. <https://doi.org/10.1080/09620214.2021.1912633>

⁴¹ Patfield, S., Gore, J., & Weaver, N. (2022). On 'being first': The case for first-generation status in Australian higher education equity policy. *Australian Educational Researcher*, 29, 23–41. <https://doi.org/10.1007/s13384-020-00428-2>

⁴² Jaremus, F., Sincok, K., Patfield, S., Prieto, E., Fray, L., & Gore, J. (2022). Aspirations, equity and higher education course choice: The path travelled. *National Centre for Student Equity in Higher Education*. https://www.ncsehe.edu.au/wp-content/uploads/2022/04/Jaremus_UON_Final.pdf

global instability are making Australian high school students more anxious and uncertain about their futures compared to a decade ago.

Despite the concerning findings, the research also found that community perceptions of vocational education had improved in the past decade, and young people of all backgrounds had consistently high interest in attending university.

Addressing the Universities Accord goal to achieve 80 per cent of the population attaining a qualification in higher education or vocational training by 2050, this research provides key recommendations for schools, higher education providers and policymakers to ensure students are equipped to deal with rapidly evolving societal pressures.

These include:

- focusing on student wellbeing throughout their school and post-school lives by better integrating mental health programs into schooling and addressing mental health in tertiary education settings
- bolstering career education through partnerships with local employers and tertiary education and vocational education providers
- promoting and celebrating alternative pathways into university
- addressing community infrastructure needs and fixing funding models across school, vocational and higher education policy areas.

This decade of research demonstrates a key gap in the Productivity Commission's approach to building a skilled workforce through appropriate training and qualification pathways. It is clear that efforts need to be made to engage young people from an early age in thinking broadly about the future opportunities available to them.

We recommend the Australian Government widely promotes access to the free professional development courses commissioned and produced from this body of research (**Recommendation 4**), and designs more sustainable funding models for the vocational and higher education sectors that meet the needs of current and future students (**Recommendation 5**).