The economics of more capable young people: Improving young people's social and emotional skills for learning

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LearningCreates
AUSTRALIA

IMPACT ECONOMICS AND POLICY

Origins of this report

Impact Economics and Policy has been engaged by Learning Creates Australia to develop this paper.

About Impact Economics and Policy

Impact Economics and Policy (2022-2025) brought together a group of expert economists and policy specialists with experience working for government, non-for-profits and big four consulting. It partners with clients for impact through providing robust evidence, fresh analysis, and strategic communication to tackle Australia's biggest public policy challenges. Julie Sonnemann, Education Director, and Andrew Craston, Modelling Director, co-authored this paper.

About Learning Creates

Learning Creates Australia is an independent non-profit organisation. Through collaboration, evidence-driven innovation, and a shared vision of learning – it is dedicated to removing the structural barriers that compound education inequity. The organisation aims to create truly equitable and inclusive learning environments that enable young people, regardless of background, to thrive and achieve their full potential.

Acknowledgement of Country

We acknowledge the traditional custodians of the land throughout Australia who have been learning and educating on Country for over a thousand generations. We pay our respects to their Elders past, present and emerging for they hold the memories, traditions, cultures and hopes of Aboriginal and Torres Strait Islander Australia. We acknowledge that Aboriginal and Torres Strait Islander people continue to live in spiritual and sacred relationships with Australia.

Contents

Foreword: The New Economics of Learning

In an era defined by climate disruption, geopolitical instability, rising inequality, and technological transformation, adolescence has never been more pivotal. This period of rapid brain development and identity formation has long represented a powerful opportunity to shape pathways toward individual wellbeing and collective prosperity. When young people's learning is well supported during this period, it can significantly enhance their ability to thrive.

Yet our current education systems are increasingly struggling to meet this moment. More young people are disengaging from school, reporting declining mental health, and feeling disconnected from learning environments designed for a different era. The way we define and measure educational success is increasingly misaligned with the realities of both human development and economic necessity.

Today's employers are unequivocal about their needs. They seek graduates who can collaborate effectively, adapt to change, solve complex problems ethically, and continue learning throughout their careers. In a world where knowledge is increasingly accessible, the ability to connect, create, and navigate complexity has become the true competitive advantage.

This is the new economics of education - where we value not just what students know, but who they are becoming. In this new economy, social and emotional skills, complex capabilities, foundational knowledge, and technical skills aren't separate domains, but interconnected dimensions of complete learning. Together, they form the foundation upon which academic achievement is built. The skills that drive personal wellbeing are the same ones that power economic prosperity.

The skills that drive personal wellbeing are the same ones that power economic prosperity.

$22 Billion+

The $22 Billion+ Opportunity

This report offers compelling evidence that makes the economic case clear: by continuing to prioritise a narrow band of academic metrics, Australia is leaving substantial value on the table.

New economic modeling reveals that improving social and emotional skills across the school-age population could generate at least $22 billion in long-term value through enhanced earnings, productivity, mental health, and workforce participation.

This is intentionally conservative modeling. It captures just one dimension of broader capabilities and only includes benefits that can be robustly quantified today. The true value at stake extends far beyond these numbers to include lower welfare costs, reduced crime, social cohesion, civic engagement, and national resilience.

Moving Beyond False Choices

For too long, education debates have been shaped by limiting either/or framings that don't reflect the realities of how young people learn and grow.

In reality, effective education draws on multiple elements – direct teaching, adaptive methods, rich content, and real-world capabilities - combined thoughtfully and purposefully. Young people need strong foundations and the ability to apply them in dynamic, human-centred ways.

As the world changes, so must our definition of learning success. It's not about choosing sides. It's about building a system that equips every learner with the knowledge, skills, and confidence to navigate complexity - and connects them to meaningful, flexible futures.

Yet, despite decades of reform, education systems remain stuck. Too often, efforts focus on isolated interventions - adjusting curriculum here, tweaking assessment there - without shifting the deeper conditions that shape how, why, and for whom education works.

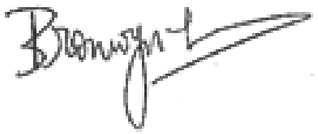
A Call for Systemic Transformation

To move beyond these reform cycles and false dichotomies to create the conditions for true transformation, a more integrated approach is needed. Transforming Australia's complex education landscape requires coordinated action across traditional boundaries. No single government body currently has the mandate, neutrality, proximity to young people's lived experiences, and ability to shift public sentiment on the barriers to meaningful change. Learning Creates Australia is well positioned to catalyse momentum towards this change.

This report is not an argument for replacing academic rigour with 'soft' skills. Rather, it presents a vision for rebalancing - for an education system that integrates cognitive, social, and emotional development together as essential dimensions of learning success.

The future economy demands team players, resilient problem-solvers, and ethical collaborators. Investing in these capabilities is no longer optional - it's a strategic imperative for national prosperity and generational wellbeing.

The path forward requires bold vision, sustained investment, and a willingness to reimagine how we define and measure learning success. The $22 billion+ opportunity is just the beginning of what's possible when we align our education systems with what young people, and our collective future, truly need.



Bronwyn Lee
CEO, Learning Creates Australia

Summary

What we want from school education is changing. Not only do we expect young people to perform well academically, but also to develop the social and emotional skills that enable them to learn and lead rich and fulfilling lives.

Research shows that learning involves a continuous interaction between cognitive, social, and emotional skills. Without this integration, successful learning is unlikely to be achieved.

Meanwhile, the modern economy is increasingly rewarding social and emotional skills, and jobs requiring collaboration and adaptability are on the rise. Schools play a vital role as the first place where children can first learn to negotiate complex social dynamics with peers and teachers and begin to address challenges such as managing stress and working toward set goals. These early experiences influence their engagement with learning as well as their behaviours later in life.

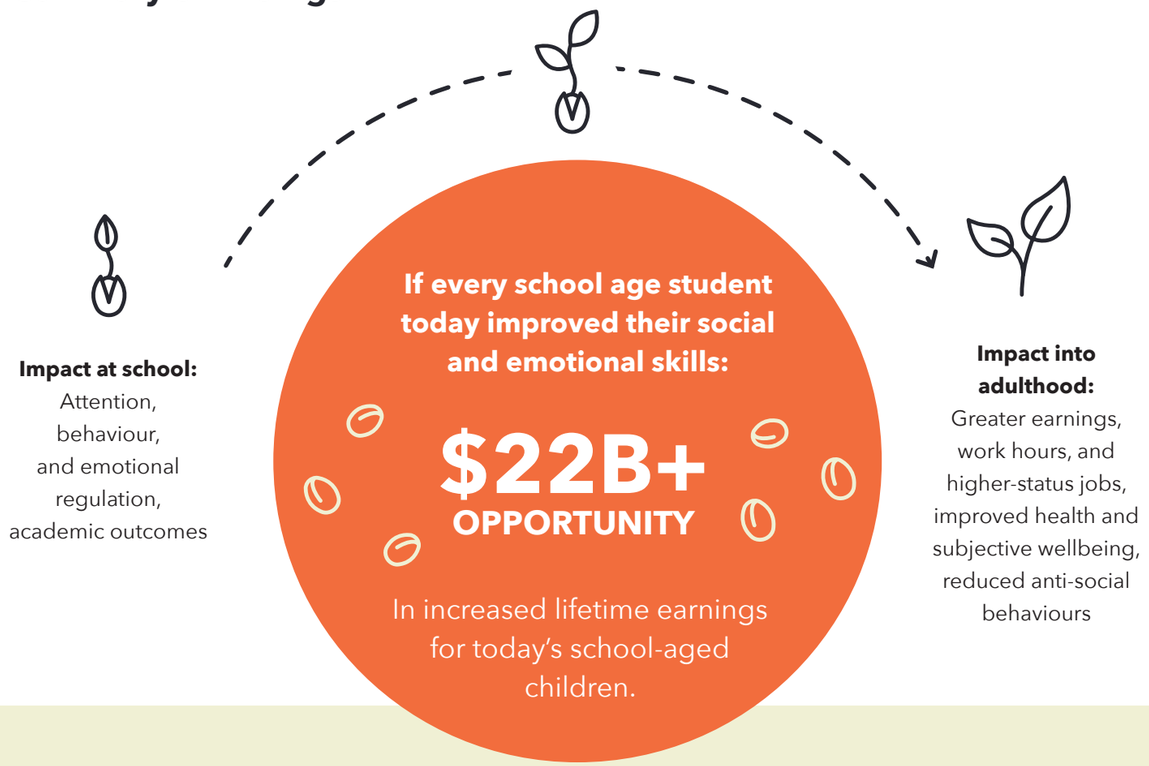
This report charts new territory in estimating the national productivity benefits from improving the social and emotional skills of all school age Australians today. If we can get this right, it would deliver around $22 billion for the national economy in future. The benefit accrues from improvements in adult life-time earnings and employment outcomes. This estimate is based on the 4.2 million school-aged children from the first year of school to Year 12 in Australia today, and assumes changes to their life-time earnings over a period of 35 years.

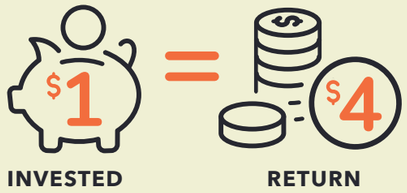
For every $1 dollar invested, there's a return of $4 dollars to the economy. The returns are big – and likely to be greatest for priority equity students who tend to benefit the most from such investments.

Building social and emotional skills in schools is not easy, and strong implementation is key. But it is crucial that we take this work more seriously and provide schools with the support they need to integrate social and emotional learning into everyday teaching and the wider school strategy.

Australia's new school funding agreement's focus on wellbeing provides an opportunity to re-think how we foster social and emotional skills and ensure all students—regardless of background—are empowered to thrive.

Summary of findings





High Returns, Greater Equity
For every $1 dollar invested, there's a return of $4 dollars to the economy.

The returns are big – and likely to be greatest for priority equity students who tend to benefit the most from such investments.

Impacts included in overall estimate:

$29B - Learning impact (indirect impacts) of improved social and emotional skills on improved academic learning for children – and ultimately to improved adult life-time earnings.

-$7.6B - Cost of delivering interventions

Other impacts NOT included:

Because we've taken a deliberately conservative approach to the modelling, several significant benefits are not reflected in the headline figures.

These include the direct impact of improved social and emotional skills on adult labour market outcomes, as well as additional potential gains to government through reduced spending on health, welfare, and juvenile justice, alongside increased tax revenue.

Also excluded are broader spillover effects—such as the positive influence of social and emotional capabilities on workplace culture, leadership, and decision-making—which are substantial, though harder to quantify.

1. Social and emotional skills are essential

Social and emotional skills are fundamental for success in learning and life.

These skills encompass both intrapersonal skills (executive functioning, self-management, responsible decision making, self-awareness) and interpersonal skills (social awareness and relationship skills) as shown below.[1]

Australian Education Ministers have publicly committed to developing the social and emotional wellbeing of children and young people in the Alice Springs (Mparntwe) Declaration (2019). There is broad agreement that Australian school education aims to support the wellbeing, mental health, and resilience of young people alongside the focus on literacy, numeracy and learning the curriculum.

What are social and emotional skills?

A US consensus statement by the Aspen Institute (2017) categorises social and emotional skills into three interconnected domains:

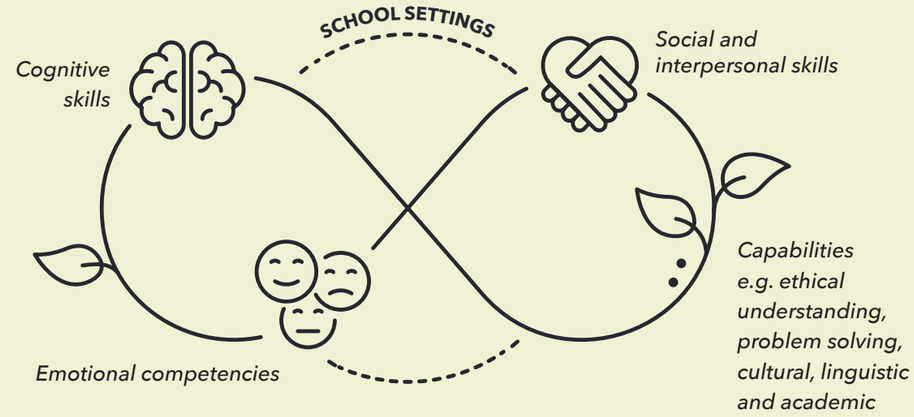
Cognitive skills
Including executive functions such as working memory, attention and planning, as well as attitudes to learning.

Emotional competencies
To cope with frustration, recognise and manage emotions, and understand others' perspectives.

Social and interpersonal skills
To navigate social situations, work effectively in a team, and demonstrate compassion toward others.

Whether these skills are called Social and Emotional Learning (SEL), soft skills, or life skills, they all point to the same essential competencies young people need to thrive. A related concept is student wellbeing, and the OECD (2024) identifies nine dimensions including agency, engagement with school, relationships, cultural well-being and openness to diversity.

The learning loop: A continuous interaction of mutually-reinforcing skills and capabilities - supported within school settings



Social and emotional skills are intertwined with learning

Literature shows that social, emotional and cognitive skills are not separate concepts, and that they interact and cross-fertilise each other in school settings.[2]

Learning is considered a continuous interaction between cognitive and other skills and competences, and developmental progression is unlikely to happen in the absence of this interaction.[3] For example, children who are not constantly distracted are more likely to concentrate on completing learning tasks in the school environment.

A US-based consensus statement by Jones and Kahn (2017) of the Aspen Institute involves a set of agreed statements by scientists that affirms the interconnectedness of social, emotional, and academic development as central to the learning process. This statement draws on brain science, medicine, economics, psychology, and education research.[4]

"Major domains of human development—social, emotional, cognitive, linguistic, academic—are deeply intertwined in the brain and in behavior, and all are central to learning." - Jones et al (2017), US-based consensus statement

Importantly, the consensus statement defines social and emotional skills broadly to cover cognitive skills such as executive functions in working memory, attention and planning, as well as attitudes to learning (as shown on the opposite page).

The Australian Education Research Organisation (AERO) emphasises how student's attention and focus are required for learning to be successful. It recommends teaching practices should help to foster the conditions for students' active and sustained engagement, and maximise student learning in ways that foster their self-efficacy and sense of belonging.[5]

Social and emotional learning practices show results

The past two decades have built a stronger empirical understanding of 'what works' in developing students social and emotional skills and motivation to learn.

Rigorous evidence summaries show that social and emotional learning (SEL) programs in schools can help children and young people improve their skills and behaviours, with flow on improvements in academic outcomes and later life.[6]

A major evidence review by Durlak and colleagues (2022) examined 12 meta-analyses of school based SEL programs which are universal – where all students and adults are engaged, for example with SEL practices integrated within subjects and whole school policies. The study examined outcomes across many countries for an estimated one million students, and consistently found these programs, on average, led to improvements to students' prosocial behaviours, reductions in problem behaviour, as well as increased academic performance.[7]

"There is now strong scientific evidence that certain carefully tested SEL programs improve children's well-being, behaviour, and academic outcomes." - Greenberg (2023), Learning Policy Institute US

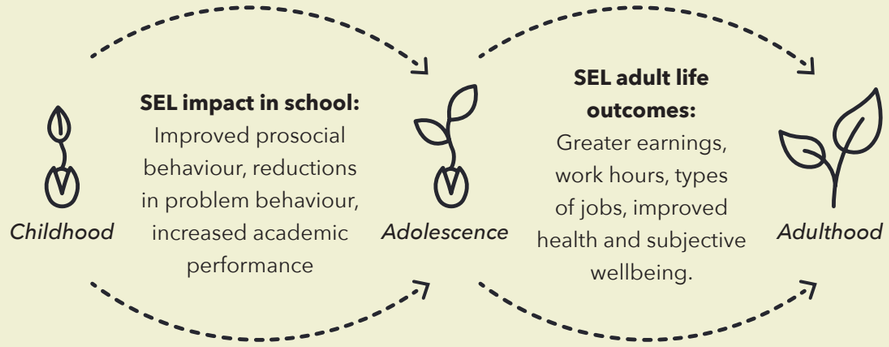
"The extensive positive research evidence on SEL programs should encourage relevant educational policies and practice. For example, schools of education [universities] should teach their students [trainee teachers] how SEL approaches have been used successfully at different curricula levels and train their student teachers in pedagogical strategies that promote SEL skills."
- Durlak et al (2022)

Similarly, a study by Cipriano and colleagues (2023) involves a systematic review and meta-analysis of over 420 studies on universal school-based SEL interventions for students from prep to Year 12 between 2008 and 2020. The sample is across 53 countries and involves almost 600,000 students. The results show that, compared to control conditions, students who participate in SEL interventions delivered to the whole class experienced significantly improved skills, attitudes, behaviors, school climate and safety, peer relationships, school functioning, and academic achievement.[8]

What is striking is that evidence summaries show positive impacts of SEL programs on both social and emotional skills and academic results.[9] However not all SEL interventions are equally effective, and effective implementation is important to achieve positive outcomes.[10]

SEL initiatives vary widely in design.
Effective SEL approaches tend to include explicit teaching of SEL skills, integration within subjects, the delivery of evidence-based externally developed SEL programs, as well as setting school-wide norms and routines. SEL initiatives can involve targeted programs for individual or small groups, whole-class strategies as well as whole school approaches.

Links with adult life outcomes: education, work, health, wellbeing and community participation



Links with adult life outcomes

Two decades of research show positive links between building social and emotional skills in childhood with adult outcomes around further study, work, health, wellbeing and civic engagement.

Longitudinal studies in the US, UK and Australia show a young person's social and emotional competence impacts a range of later life outcomes.[11] A 2024 study by Del Bono and colleagues examines the socio-emotional skills of individuals at age 10 and how they relate to their economic outcomes later in life using data from a 1970 British Cohort Study. It uses information provided by teachers, who assess aspects such as attention, behaviour, and emotional regulation. It finds that socio-emotional skills in children are strongly linked to earnings, work hours, and the types of jobs people take on. The authors find:

"Child socio-emotional skills are predictive of a number of adult economic outcomes, even conditional on a range of confounders and mediators" - Del Bono and colleagues (2024)

Similarly, an Australian longitudinal study by Abbot et al (2013) revealed that each unit of school engagement was independently associated with higher odds of achieving a post-compulsory school education as well as achieving higher status occupations 20 years on.

A landmark study by economist Raj Chetty (2011) found the quality of the classroom to which kindergarteners are randomly assigned affects teacher ratings of those students' social skills later on in their adolescent years in their schooling.[12] The impact of good classrooms can be seen in measures of student soft skills in middle school but not in academic test scores, and it is these soft skills that lead to higher wages in adulthood.

Empirical work by the OECD (2015) across countries shows that raising levels of social and emotional skills – such as perseverance, self-esteem and sociability – can in turn have a particularly strong effect on improving health-related outcomes and subjective well-being, as well as reducing anti-social behaviours long-term.[13]

The modern economy rewards social and emotional skills

Rapid advancements in technology means routine tasks are increasingly performed by automated and autonomous systems, and young people now need to be equipped to learn complex, non-routine skills and capabilities.

Rapid advancements in technology means routine tasks are increasingly performed by automated and autonomous systems, and young people now need to be equipped to learn complex, non-routine skills and capabilities.[14]

Harvard Economist, David Deming, finds the economic return of people's social skills has increased over time in the workplace. Social and emotional skills – such as communication, cooperation, collaboration, social intelligence and conflict resolution skills - are now a significantly more important predictor of full-time employment and wages for youth.

Deming finds that between 1980 and 2012, occupations requiring high levels of social interaction have grown nearly 12 percentage points as a share of all jobs in the U.S. economy and have experienced faster wage growth at the same time.[15] Social skills reduce coordination costs, allowing workers to specialise and work together more efficiently.

Economic research also shows that adults who are team players significantly advance the overall group performance by inspiring the efforts of other teammates, lifting overall workforce productivity.[16]

The Australian Government's 2023 White Paper on Jobs and Opportunities emphasises the importance of strong interpersonal and soft skills.[17] Deloitte Access Economics estimates that soft-skill intensive occupations are expected to grow at 2.5 times the rate of jobs in other occupations, and account for two-thirds of all jobs by 2030.[18]

"The labor market increasingly rewards social skills." – Deming (2017)

"Social skills – defined as a single latent factor that combines social intelligence scores with the team player effect – improve group performance about as much as IQ."
– Weidmann and Deming (2020)

2. Big potential benefits for equity and wellbeing

Australia can do more to improve social and emotional skills with big benefits for equity

How is the Australian education system tracking in developing young people's social and emotional skills for learning? The short answer is we do not really know.

Australia does not currently have consistent measures of students social and emotional skill development and wellbeing.[19] While we track children's development on the AEDC's 'school readiness' index in terms of social competences, emotional maturity, health and wellbeing, we do not follow through on these broader measures in schooling.[20]

However, there are some worrying signs. The OECD's Programme for International Student Assessment dataset shows Australian students at age 15 have a lower average score for 'sense of belonging' at school than the average of OECD countries.[21] Feeling a sense of belonging at school helps students to believe that their teachers and peers appreciate and support them, and that they do well at school. In turn this contributes to students displaying higher levels of motivation.[22]

Further, the most recent comprehensive study of the mental wellbeing of Australian children – undertaken in 2013-14 – reported that 10 per cent of those aged 4 to 12 scored in the 'of concern' range of the Strengths and Difficulties Questionnaire (SDQ) total difficulties score.

These results are consistent with 2020 survey data that showed that around 10 per cent of children aged 4 to 11 experienced a mild mental-health disorder in the preceding 12 months.[23] Poor mental health in childhood has been associated with a range of mental health conditions in adulthood, including anxiety, depression, poor emotional regulation and alcohol abuse.[24]

Big potential equity benefits

Priority equity children are likely to benefit the most from teaching social and emotional skills in school.

Research consistently shows priority equity students tend to have on average weaker social and emotional skills than their more affluent peers.[25] This is then compounded by the fact such students tend to attend schools with many similar students which can make the school environment difficult. OECD PISA data shows that priority equity students– including students from disadvantaged socioeconomic backgrounds, students in regional and remove areas and first nations students - are more likely than their peers to:[26]

- Report a lower sense of school belonging
- Perceive a lower level of cooperation among students in the school.
- Experience greater exposure to bullying
- Report a less favourable classroom disciplinary climate.
- Report lower levels of self-efficacy i.e. the extent to which individuals believe in their own ability to engage in certain activities and perform specific tasks.

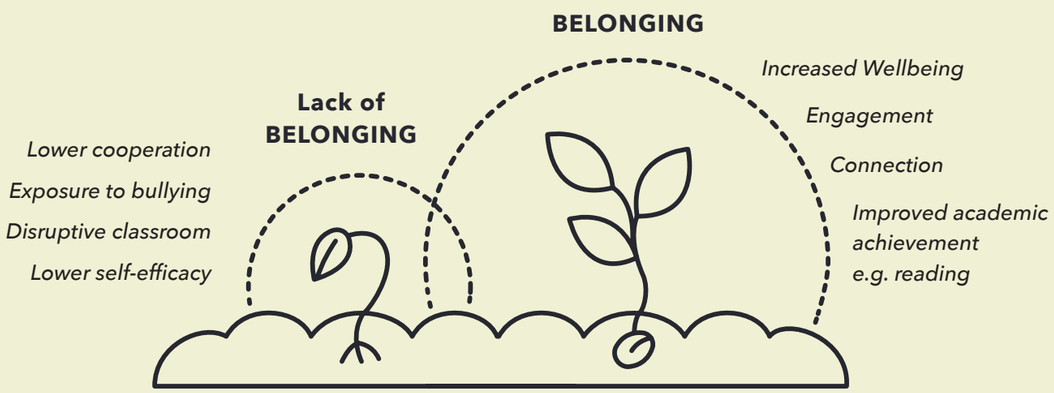
A higher percentage of students from disadvantaged socio-economic backgrounds than advantaged students agreed with the statements "I feel like an outsider (or left out of things)", "I feel awkward and out of place in my school". - ACER OECD PISA report (2022)

School belonging is especially important

SEL programs fostering a sense of belonging to school are shown to have some of the greatest impacts on child development.[27] Research by the Australian Council for Educational Research (ACER) found that, out a range of wellbeing interventions, the student belonging and engagement programs had the greatest impact on academic achievement.[28]

This finding is supported by Programme for International Student Assessment (PISA) analysis which shows that there is a clear link between sense of belonging and reading achievement in Organisation for Economic Co-operation and Development (OECD) countries.[29]

The Roots of Belonging: Social and Emotional Learning in Action
SEL is vital for building equitable, inclusive school environments – especially for priority equity students



A false dichotomy: Wouldn't a focus on academics do more for wellbeing?

There is no doubt that helping students to improve their academic progress, for example learning how to read, will go a long way to boosting student attitudes to learning and emotional wellbeing. However a sole focus on literacy and numeracy instruction alone is unlikely to deliver the same benefits as focusing on social and emotional skills in tandem.
There is good evidence that social and emotional learning interventions deliver a range of solid outcomes, with Greenberg's (2023) evidence summary of 12 independent meta-analyses internationally showing:

- SEL programs, usually taught by classroom teachers, promote the development of social and emotional competencies (effect sizes range from 0.23 to 0.58).
- Fostering these competencies facilitates positive, prosocial behaviors and positive relationships with others (effect sizes range from 0.13 to 0.33).
- SEL programs reduce disruptive behavior problems and emotional distress (effect sizes range from 0.13 to 0.33 and 0.10 to 0.31, respectively).
- Fostering these competencies increases students' engagement in learning and subsequently improves students' cognitive and academic performance (effect sizes range from 0.18 to 0.28)

Links between wellbeing and learning are reciprocal

A recent evidence summary by the Australian Education Research Organisation (2023) finds that the link between wellbeing and learning at school may be reciprocal, that is, higher wellbeing can boost achievement, and vice versa, higher achievement can improve wellbeing.

While wellbeing is a much broader concept (for example encompassing physical health and feeling safe) the research is still relevant here. AERO's summary shows that on the one hand, studies show that students with greater wellbeing are likely to have higher academic scores, even when accounting for previous test scores.[30] On the other hand, there is also good evidence showing that improving academic instruction on teaching and learning can have a positive effect on wellbeing too.[31] This finding suggests that a focus on social and emotional skills should complement, but not replace, a focus on teaching and learning. The two approaches should work together hand-in-hand in school settings.

What do effective SEL practices look like in schools?

A guidance report by the Education Endowment Foundation (EEF) draws on the best available evidence to show what schools can do to build social and emotional skills. It emphasises that teachers should teach SEL skills explicitly in class, for example building vocabulary for emotions, role playing relationship building, as well as setting goals and working toward them. For example, to help students identify barriers to goals, a teacher might provide a written vignette detailing a goal and a problem preventing the goal from being reached. Children then work together to identify the goal, identify the barrier and identify how the character is feeling.

Teachers should integrate and embed SEL in subjects, for example in stories within English (without replacing core content). In history lessons children can develop an understanding of others' perspectives based on real events. Teachers should also model SEL skills, as children learn by observing their teachers, for example the way teachers manage frustration or how teachers and adults in the school speak to each other. Opportunities for effective group work in class can help students practice their interactions.

Structured external programs can assist with a series of lessons which can be more effective than teachers developing their own from scratch. They are typically on topics such as labelling feelings, controlling impulses, and understanding the perspectives of others. And lastly SEL should be taught across the whole school in a way that is sequential, active, focussed and explicit, with a strong whole school ethos establishing school-wide norms and routines.

In addition to the EEF's guidance on SEL, research on how to help students sustain attention and engagement for successful learning is relevant here, as outlined in AERO's (2023) teaching and learning model (explained below).

It is important to emphasise that improving SEL is more than just a 'single program' response. The complex system of contexts, interactions, and relationships in schools help to social and emotional skills.[32] Addressing educator skills, the organisational culture and climate, the routines and structures as well as instruction are important. A focus on SEL in schools should ideally be a part of a broader effort to support wellbeing as well as student equity.

AERO's model emphasises attention and engagement

Overlapping research on how to help students sustain attention and engagement is outlined in AERO's (2023) teaching and learning model. To help students sustain attention and effectively process new content, teachers should consider several factors when teaching. These include establishing clear rules and routines which help students to meet expectations with less mental effort, and explicitly teaching self-regulated learning strategies to build student belief in their ability to learn, for example by encouraging students to set meaningful goals. Teachers should structure lessons to manage cognitive load, reinforce key ideas through regular review and practice, and foster a safe and supportive learning environment with respectful interactions and positive relationships. Culturally responsive teaching, especially for First Nations communities, helps to create safe learning environments, and engaging with families can help learning be recognised and supported at home.[33]

Research by McCrea (2022) on student motivation emphasises the importance of intrinsic drivers for learning such as securing prior success and using routines to reduce cognitive load, as well as increasing a sense of belonging in class, for example allocating individual responsibilities or status, and building buy-in through helping students understand good choices.[34]

3. The economic benefits are significant

Few studies have estimated the potential benefits of improving social and emotional skills in schools for Australia.[35] Without a clear picture of the benefits, our system leaders can inadvertently pay less attention to social and emotional learning in educational decision making.

There is a strong economic rationale for investing in social and emotional skills.

Such skills are important for supporting academic learning which has big impacts for employment, income and workforce productivity. And positive effects on pro-social behaviour can help to avoid later life costs associated with adult poverty, health and crime. These social problems, once entrenched, demand far more resources than early prevention would require.

This report charts new territory in estimating the national economic benefits. Findings show that for the current cohort of Australian school-age children, the aggregate impact is an increase in total life-time earnings of $22 billion in net present value terms.

If every Australian student today improved their social and emotional skills, this would deliver around $22 billion for the economy in future. In other words, for every $1 dollar invested, there's a return of $4 dollars to the economy.

This is a big return on investment – and the benefits greatest for students from priority equity cohorts who tend to benefit the most.

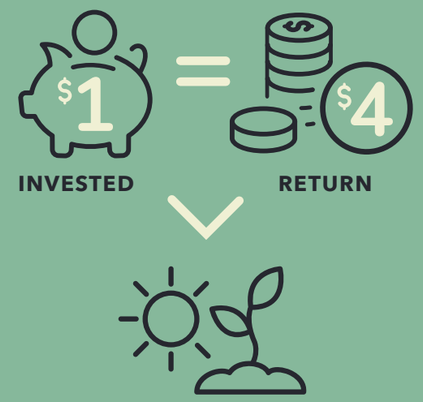
The $22B Opportunity

If every student improves their **social and emotional skills**

$22 billion in increased lifetime earnings for today's school-aged children

High Returns, Greater Equity

For every $1 invested, there's a $4 return to the economy.



IMPACT FOR YOUNG PEOPLE

The biggest benefits go to students from priority equity groups – who gain the most when we recognise and build their full range of skills.

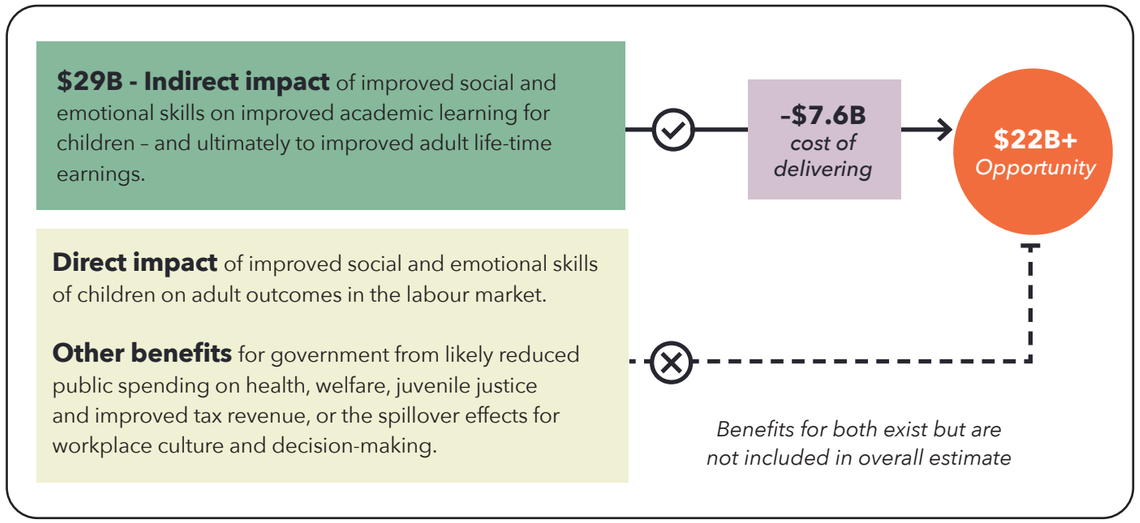
New modelling on the long-term benefits

The economic modelling draws largely from US and UK literature using the results of randomised controlled trials of effective SEL programs in schools and longitudinal studies. It assumes an average positive shift in the distribution of social and emotional skills of Australian students by 0.2 of a standard deviation, which is an achievable and realistic goal based on empirical research findings.[36] A full discussion of the methodology, including key assumptions and limitations, is included in the Technical Appendix.

In brief, the methodology examines two key elements related to adult life-time earnings and employment:

First - the direct impact of improved social and emotional skills of children on adult outcomes in the labour market. This captures the benefits in adult skills around self-awareness, self-management and interpersonal skills such as relationship skills. For example, in a recent UK longitudinal study, Del Bono et al (2024a) conclude that improvements to attention, emotions and peer relationships are associated with better labour market outcomes.

Second - the indirect impact of improved social and emotional skills on improved academic learning for children – and ultimately to improved adult lift-time earnings. Belfield et al (2016) estimates the impact of SEL interventions that are mediated through academic school achievement on lifetime earnings and employment.[37]



To take a conservative approach and avoid double counting, the methodology includes only the indirect effects in the overall economic estimate. The evidence base is more robust for the indirect impacts, giving a higher degree of confidence in the results. The cost of delivering interventions is also taken into account, including the cost of training teachers and developing resources for teachers and students. On a per student basis, the estimated cost is around $1,300.[38]

Overall, we find that if every student in school today improved their social and emotional skills, this could deliver – through the indirect effects on academic learning - in the order of $22 billion (present value terms) in the future.[39] The benefit accrues from improvements in adult life-time earnings and employment outcomes. This estimate is based on the 4.2 million school-aged children from the first year of school to Year 12 in Australia today, and assumes changes to their life-time earnings over a period of 35 years.

In terms of a return on investment, the gross benefit is $29 billion, while the cost is $7.6 billion. This means that for every $1 dollar invested, there are $4 dollars in economic benefits in return.

Other benefits not included in the overall estimate

Our overall estimate does not factor in positive long-term impacts for governments from likely reduced public spending on health, welfare, juvenile justice and improved tax revenue, or the spillover effects for workplace culture and decision-making. These benefits are important but are not included given they cannot be readily estimated with a high degree of confidence. Each is discussed briefly below.

Reduced public spending on health

Improved social and emotional skills can improve mental and physical wellbeing in childhood with effects into adulthood, helping to reduce public spending on health services. To provide an illustrative estimate of these benefits, we compare two scenarios: the current distribution of child wellbeing, and a counterfactual of an improved wellbeing distribution of 0.2 of a standard deviation. For the current population of school-aged children, this hypothetical shift would generate a total cost saving to the health system is $1 billion from reduced spending on mental health services as children move into adulthood. This estimate is based on the average rates of use of a range of different mental health services per person.[40]

Fiscal impacts from reduced welfare payments and higher tax revenue

Improvements in adult earnings and employment are likely to have flow on effects to lower welfare payments (including unemployment-related benefits), and higher taxation revenue (from higher earnings). The estimated effects are $0.9 billion for lower welfare and $5.4 billion in higher tax revenue.[41]

Reduced public spending on justice systems

Some SEL interventions can help to reduce severe problem behaviour in children with flow on effects into adulthood to help reduce delinquency and crime. This can help to reduce government spending in the juvenile justice system, although we estimate any cost-savings are likely to be relatively smaller than other areas examined in this paper.

Positive spillover effects

Positive spillover effects within Australian workplaces, from improved social and emotional skills within the cohort, can help to boost productivity among other workers. For the period during which the cohort is participating in the labour force, this impact is estimated to be up to around $1 billion.

Technical appendix: economic modelling

The methodology to estimate the economic benefits draws on largely US and UK literature on the positive impacts of improved social and emotional skills for children on labour market outcomes in adulthood.

In broad terms, the methodology comprises two key elements:

- **Direct effects** - the impact of improved social and emotional skills for Australian children on adult labour market outcomes – or the 'direct' effect.
- **Indirect effects** - where SEL interventions lead to observed improvements in academic learning for children – and ultimately to improved labour market outcomes in adulthood.

To avoid double counting, we include only the indirect effects as the basis for the overall economic estimate of long-term returns. We select the indirect effects, rather than the direct effects, given the evidence is more robust in this area. For completeness, the section below discusses both the direct and indirect effects to understand the possible maximum range of impacts. Overall we find that for the current cohort of Australian school-age children, the aggregate impact – comprising the indirect effects from improved learning outcomes – is an increase in total life-time earnings, in net present value terms, of $22 billion.

This estimate includes the costs of delivering interventions, including the cost of training teachers and developing resources for teachers and students. Estimated effects relate to the current population of Australian school-aged children, which stands at 4.3 million. Estimated effects are in present-value terms, using an assumed discount rate of 4 per cent.

A1: The impact of Social and Emotional Learning (SEL) interventions

The modelling draws on the literature of the impact of social and emotional learning (SEL) interventions in school settings. Although the channels to improve social and emotional skills of children may be broader than just SEL interventions, the literature on SELs provides a solid and salient avenue for a policy change to improve social and emotional skills.

Assumed impact on groups of children

Meta-analyses of academic studies of universal SEL interventions report that the estimated impact of SEL interventions on social and emotional skills (of the children in those studies) typically range from less than 0.1 of a standard deviation to around 0.7 of a standard deviation.[42] These estimated impacts can be interpreted as the average impacts on social and emotional skills for groups of children. In this regard, Durack et al (2022) provide a summary of the impacts of a range of universal SELs.

The impact of an SEL intervention on individual children within a group will vary. For any SEL intervention, the estimated effect reflects the average measured impact on social and emotional skills for a given group of children, where prior to the intervention, social and emotional skills of individual children within the group may differ widely. Broadly speaking, it would be expected that children with relatively low social and emotional skills prior to an intervention would experience a relatively large improvement in their social and emotional skills.

In the literature, the median estimated impact of SEL interventions on social and emotional skills is around 0.2 of a standard deviation. In their comprehensive review of meta-analyses, Durlak et al (2022) report that "for externalizing behaviours, a mean effect with a magnitude of 0.20 lies at the 50th percentile of the distribution of effects in terms of what has been reported in 11 meta-analyses of universal prevention programs for youth evaluating 385 studies."[43]

In the Australian context, an assumed impact of 0.2 (of a standard deviation) is potentially conservative, but with good reason. In the studies that estimate the impact on social and emotional skills, SEL interventions vary markedly in terms of both their goals and their application. Some interventions target a specific adverse behaviour of individual students, while other focus on group-level dynamics. Some interventions are delivered via discrete learning modules, while others focus on methods of teaching. Some interventions are applied at a specific grade, while others span a number of grades. Given this heterogeneity, the assumed effect – while potentially conservative – is prudent.

For this study, it is also assumed that the effects of separate SEL interventions, which target different behaviours, are not additive in terms of their impact on overall social and emotional skills. This approach is consistent with findings in the literature. In general, studies suggest that where an SEL invention results in improvements in multiple behaviours, the estimated effect on measures of overall SE skills is markedly less than the sum of the separate effects. This approach ensures no double-counting of effects.[44]

Assumed impact in Australian context

To determine an assumed impact for Australian children, consideration is also given to whether estimated impacts in the literature would be different in the Australian context.

In general, published studies on the impact of SEL interventions have been undertaken in the US or the UK. As noted above, the impact of an SEL intervention on individual children within a group would be expected to differ – reflecting, in part, differing degrees of social and emotional skills prior to the intervention. To the extent that social and emotional skills for Australian children are lower than those in the US and the UK, in general, the impacts of SEL interventions on social and emotional skills of Australian children could be expected to be greater compared with US and UK peers.

PISA data on student wellbeing suggests that, in broad terms, Australian students are on par UK students but underperform relative to US students.

The OECD PISA 2022 report lists 21 relevant indicators of student well-being including school climate, student well-being, student engagement, motivation, schoolwork anxiety, belonging at school, bullying and family support.[45]

- Australia underperformed compared to the US and/or the UK in 16 of 21 selected indicators. Australia underperformed compared to the US in 15 of the 21 indicators.
- Australia underperformed compared to the UK in 5 of the 21 indicators.

That said, the difference in well-being scores between Australian children and their US and UK peers is, on average, small and likely to be within the margin of error. Overall, this suggests that the assumed effect (of 0.2 of a standard deviation) could be conservative in the Australian context – though not to a significant degree.

Externalities

The literature suggests that SEL interventions are likely to generate positive externalities. In the context of an SEL intervention, positive externalities are benefits that accrue to children who are not the direct recipients of the intervention. These may include effects both at the classroom level (for example, improvements to teacher efficacy) and at the school level (for example, improvements to school climate).

Robust estimates for these effects are not available in the literature, so any potential positive impacts on social and emotional skills are not reflected in the assumed effects. In this regard, the assumed 0.2 of a standard deviation impact is likely to be conservative.

A2: Impact on labour market outcomes

Broadly speaking, the ultimate impacts of improved social and emotional skills on labour market outcomes in adulthood relate to both higher worker productivity and thus higher real earnings per worker, and higher rates of participation in the labour force. With respect to the latter, at any point in time, people who participate in the labour force comprise those who are working and those who are unemployed – that is, not working but looking for work.

Direct channel

There is evidence in the literature that improvements to social and emotional skills during childhood persist into adulthood, and manifest as long-term behavioural and attitudinal changes. As an adult, these can be thought of as comprising intrapersonal skills and attitudes (for example, self-awareness and self-management), and interpersonal skills and attitudes (for example, social awareness and relationship skills).

Robust estimates for the magnitude these 'direct' impacts on adult labour market outcomes are limited.

In a recent UK longitudinal study, Del Bono et al (2024a) conclude that improvements to attention, emotions and peer relationships are associated with better labour market outcomes. The authors also find that these factors are less important predictors of labour market outcomes than cognition and years of schooling.[46]

Broadly speaking, the author's reported results suggest that a one standard deviation improvement in behaviours is associated with an improvement in annual earnings of around 2 per cent. For an assumed impact of 0.2 of a standard deviation (and assuming linearity of effects), the implied effect on annual earnings is around 0.4 per cent.[47]

However, the authors note caution in applying the results. In particular, the study relies on assessments of childhood behaviours and skills in the early 1980s. In the current context, perceptions of, and attitudes in respect of behaviours/skills are likely to be different – which may limit the applicability of results. In addition, the results do not necessarily imply causality.[48]

Belfield et al (2015) estimates the economic benefits of SEL interventions that target specific behaviours including attention and social competence. The methodology involves estimating the 'shadow price' of improvements to behaviour – that is, the implied value that society places on such improvements. In this case, shadow prices are based on the cost of resources that are expended in the health care and educational systems to address the behaviours.[49]

For an average impact on social and emotional skills of 0.13 of a standard deviation, the estimated economic benefit – expressed in terms of the increase in lifetime earnings – ranges from 0.1 per cent to 0.5 per cent. This can be interpreted as incorporating the impacts on both earnings per worker and labour force participation.[50]

As noted above, in applying these findings to the current cohort of Australian school-age children, the assumed improvement in social and emotional skills is 0.2 of a standard deviation. Assuming linearity of effects this implies an estimated economic benefit – in terms of the increase in lifetime earnings – of 0.4 per cent. This is similar to the derived parameter from Del Bono et al (2024a) above.

Using this parameter, the increase in total life-time earnings for the current cohort of Australian school-age children is estimated to be $22 billion, in present value terms. The key parameters for the estimated impacts are population of school-aged children is 4.3 million; average wages in adulthood (which takes account of full and part-time work) are around $77,000 per annum; life-time earnings period is 35 years, and assumes historical rates for labour market participation; discount rate is 4 per cent.

As noted above, the estimated impact of improved social and emotional skills on earnings is an average effect for any group of children, and that for individual students, the impacts will vary – in particular according to individual needs for improvement in social and emotional skills.

Indirect channel

An additional, more indirect, impact relates to (potentially) unobserved improvements in social and emotional skills. In particular, where SEL interventions lead to observed improvements in academic learning for children – and ultimately to improved labour market outcomes in adulthood. In such cases, it is reasonable to assume that improvements in social and emotional skills – as a result of SEL interventions – would support improved academic learning to some degree.

There is certainly evidence that SEL interventions complement cognitive-based education to improve school achievement and attainment – that is later reflected in improved adult labour market outcomes. That said, using achievement and attainment gains as the sole mediator of earnings gains is likely to undervalue SELs – as suggested by the aforementioned direct effect of improved social and emotional skills on labour market outcomes. As is also the case for the direct effects, the empirical evidence does not yield a precise association.

With respect to the impact on earnings, there is a substantial, robust evidence base regarding the increasing economic value of educational attainment – where higher levels of attainment predict higher incomes. The causal link between academic achievement and better labour market outcomes is less clear cut. Some studies find a fade-out of cognitive gains over time, however this is not a universal result.[51]

In the literature, the median estimated impact of SEL interventions on cognitive-related outcomes is around 0.2 of a standard deviation. In their review of meta-analyses, Durlak et al (2022) report that for the meta-analyses that examined academic performance, the estimated mean effects range between 0.2 to 0.5 of a standard deviation. That said, other studies find a smaller impact – though also stress that fidelity of implementation is crucial. Kraft (2020) reports a median effect of 0.10. The author states that mean effects of 0.20 represent meaningful academic gains, but are not often achieved. For the purposes of this study, an impact of 0.2 (of a standard deviation) is assumed.

In terms of the measured impact on labour market outcomes, Belfield et al (2016) estimates the impact of SEL interventions that are mediated through achievement on lifetime earnings. The methodology involves estimating the 'shadow price' of improvements to achievement – that is, the implied value that the labour market places on such improvements. The authors utilise the outcomes of US studies that estimate the impact of higher academic achievement during school on future levels of adult wages. In this regard, the ultimate impacts on earnings relate to higher levels of academic achievement, rather than more years in school.

For three studies, the average estimated benefits (expressed in terms of the increase in lifetime earnings) range from 0.1 per cent to 2.6 per cent. Only for one study (Responsive Classroom) is the improvement in social and emotional skills expressed as shift in the standard deviation (0.26). Adjusted for an assumed standard deviation of 0.2 (and assuming linearity of effects), this suggests an economic benefit of 2.0 per cent. For the other two studies, the average derived economic benefits are in the order of 0.4 per cent. These (economic benefit) effects can be interpreted as incorporating the impacts on both earnings per worker and higher labour force participation.[52]

Turning to social and emotional skills, improvements – such as attention within class and self-management – could be expected to complement academic learning, and raise academic achievement and educational attainment (such as years of schooling). That is, whatever influences drive the returns to attainment, these are only partially mediated through improvements in student's cognitive functioning. Social and emotional development may also work to drive attainment and achievement.

That said, estimating this effect is made challenging by the fact that the relationship between social and emotional skills and achievement is potentially subject to reverse causality – high achievement may improve SE skills. As such, for the purposes of this report, a conservative parameter of 0.6 per cent is chosen for the economic benefits (from the range of 0.4 to 2.0 per cent).

Using this parameter, the increase in total life-time earnings for the current cohort of Australian school-age children is estimated to be $29 billion, in present value terms. The key parameters for the estimated impacts are: population of school-aged children is 4.3 million; average wages in adulthood (which takes account of full and part-time work) are around $77,000 per annum; life-time earnings period is 35 years and assumes historical rates for labour market participation; discount rate is 4 per cent.

As is the case for the direct channel above, the estimated impact of improved social and emotional skills on earnings is an average effect for any group of children, and that for individual students, the impacts will vary – in particular according to individual needs for improvement in social and emotional skills.

Direct and indirect channel - costs

The estimated economic impacts of improving social and emotional skills also need to take account of the costs compared with the status quo (which need to be offset against the estimated economic benefits).

In general, the direct costs of SEL interventions relate to program implementation, in particular; the cost of training teachers, evaluating teacher/program performance, and any specific materials and equipment. Indirect costs relate to the degree that interventions displace instructional time, and the impact of that on student outcomes. The key consideration here is whether an SEL intervention would supplant academic learning. Crucially, the extent of any opportunity cost depends on the nature of the intervention. An intervention that involves discrete learning modules – where the time taken to deliver the modules would necessarily mean less teaching time devoted to academic learning – would be expected to have a relatively high opportunity cost. In contrast, an intervention that involves changes to methods of teaching, without significantly reducing instructional time for academic learning, would be expected to have a relatively low opportunity cost.

For this analysis, both the direct and indirect costs are taken into account and utilise to specific intervention-related costs from Belfield et al (2016), where the cost figures are adjusted for inflation. The cost figures for specific interventions reported in Belfield vary according to the features of the interventions. An average of the reported intervention costs is utilised for this study. On a per student basis, the estimated cost, which includes both direct and indirect costs components, is around $1,300. This equates to a total cost of $7.6 billion overall.

After accounting for costs, the increase in total life-time earnings for the current cohort of Australian school-age children (in net present value terms) is $16 billion for the direct channel and $22 billion for the indirect channel.

Overall aggregate impact – includes only the indirect benefits

An aggregate effect, that comprises these direct and indirect effects, will include some degree of double counting. Given that it is not possible to derive a robust estimate for the degree of double counting, the overall effect is best reported as a minimum of the potential aggregate outcomes – that is, only the indirect effect. Thus, for the current cohort of Australian school-age children, the aggregate impact from the indirect effect is an increase in total life-time earnings, in net present value terms, of $22 billion.

This comprises the impacts on earnings per worker and higher labour force participation. A separate estimate for the impact on labour market participation only is required to determine the effect on government expenditures (see Section A5).

Other benefits not included in the overall estimate

A3: Broader productivity impacts

In the context of this study, improvements to labour productivity – in addition to those estimated in the preceding section – can be thought of as the positive externalities that are generated from improvements to individual social and emotional skills. Within the workplace, these can include improvements to workplace harmony and culture, and by extension, improvements to workplace decision-making.

Labour productivity – broadly defined – is the economic output generated per unit of labour input, typically measured as either output per worker or output per hour worked. The key factors that boost productivity include more capital per worker (or capital deepening), technological advancement, improved worker skills, better management practices and other improvements to organisational efficiency.

Empirically, there are no robust estimates for the contribution of all the various, relevant constituents to Australian labour productivity growth.

However, there is evidence in the literature that improvements to social and emotional skills during childhood persist into adulthood, and manifest as long-term behavioural and attitudinal changes – such as improved interpersonal skills and attitudes – that would be expected to have positive spillover effects in the workplace.

While there is little directly-relevant academic literature on the estimated impact of such spillovers, other studies provide a basis for determining an appropriate effect – in particular, studies that assess the peer effects of worker productivity. Herbst and Mas (2015) in their meta-analysis of 34 studies find that, on average, the impact of a 1.0 per cent change in co-worker productivity on a worker's own productivity is about 0.1 per cent – that is, there is a spillover factor of 0.1. Other studies, such as Cornelissen et al (2017), find smaller average spillover factors of no more than 0.05 when controlling for type of work task.

From the preceding section, the relevant channel from which to derive spillover effects is the direct impact of improved social and emotional skills on earnings – which is a proxy for the increase in individual worker productivity by virtue of improved social and emotional skills. From Section A2, for the current cohort of Australian school-age children the total direct effect is an increase in lifetime earnings of $22 billion, in present value terms.

For the period during which the current cohort of Australian school-age children moves through the labour force (over time), the total workforce is around four times the size of the cohort. This implies a maximum spillover effect of $3 billion during the period – by applying the assumed spillover rate of 0.05 to the $22 billion increase in total lifetime earnings, and assuming that spillovers affect all other workers in full. However, this is likely to be an over-estimate. Any effect is likely to be less than $1 billion.

A4: Impact on health-system costs

For a particular cohort of children, improvements to social and emotional skills during childhood would be reflected in improved mental wellbeing as children and into adulthood. Overall, this would reduce demand for health services and lead to lower costs to the health system. The methodology for estimating the impact of improved wellbeing on health-system costs is largely based on Australian data.

Broadly speaking, an individual's state of mental wellbeing will affect the degree to which the individual is able to realise their own abilities, can cope with the normal stresses of life, can work productively and make a contribution to their community (WHO 2022).

For children, mental wellbeing is affected by, and is a reflection of, their particular economic, social and environmental circumstances. Childhood wellbeing can vary in severity and duration. For adults, childhood mental wellbeing outcomes tend to be persistent into adulthood. Indeed, there is substantial empirical evidence that poor mental wellbeing in childhood is likely to be more persistent into adulthood than poor physical health (Delany and Smith 2012). Poor mental health in childhood has been associated with a range of mental health conditions in adulthood, including anxiety, depression, poor emotional regulation and alcohol abuse.

The most recent comprehensive study of the mental wellbeing of Australian children – undertaken in 2013-14 – reported that 10 per cent of those aged 4 to 12 scored in the 'of concern' range of the Strengths and Difficulties Questionnaire (SDQ) total difficulties score. A further 8 per cent scored in the 'borderline' range – that is, between 'of concern' and 'normal'.[53] These results are consistent with other survey data that showed that around 10 per cent of children aged 4 to 11 experienced a mild mental-health disorder in the preceding 12 months (AIHW 2024). For the purposes of the analysis in this report, it is assumed that these proportions have not changed over the past decade.

Into adulthood, the absence of robust estimates of the degree of persistence of mental health conditions (and in the absence of interventions), it is assumed that childhood wellbeing outcomes persist throughout adulthood.

To estimate the impact on health service use and costs, the model compares two scenarios: the current distribution of child wellbeing, and a counterfactual of an improved wellbeing distribution. These scenarios reflect differences in the use and cost of health services.

As stated above in Section A1, for this report, the chosen improvement in social and emotional skills for a cohort of children is 0.2 of a standard deviation. The impact of an SEL intervention on individual children within a group will vary. For any SEL intervention, the estimated effect reflects the average measured impact on social and emotional skills for a given group of children, where prior to the intervention, social and emotional skills of individual children within the group may differ widely. The improvement in the distribution of social and emotional skills is reflected in the use rates of mental health services, both in childhood and as adults. For consistency, it is assumed that this translates into a similar shift in the distribution of mild mental health symptoms among children.

The model incorporates average rates of use of a range of different mental health services per person, derived from data published by the Australian Institute of Health and Welfare (AIHW) and the Australian Bureau of Statistics (ABS), as well as data on the cost of providing the various health services (also derived from data published by the AIHW). For each type of service, rates of use are derived with respect to age and health status.[54]

For the current population of school-aged children (4.3 million), the total cost saving to the health system is $1 billion. For consistency with the above labour market analysis, the time period for the analysis is the assumed life-time earnings period of 35 years. Around 90 per cent of the relevant health services are government funded. As such, around $0.9 billion of the reduction in health system costs are reflected in lower government expenditures, while the remainder represents savings to out-of-pocket health spending.

A5: Fiscal impacts

Improved labour market outcomes – as described above – are reflected in lower welfare payments (largely related to unemployment), and higher taxation revenue on labour income.

As noted in Section A2, the estimated labour market effects comprise the impacts on earnings per worker and as well as higher labour force participation. A separate estimate for the impact on labour market participation only is required to determine the effect on government expenditures.

Del Bono et al (2024a) disaggregate the impacts of improved social and emotional skills on wages and participation. In broad terms, the relative impacts are around 97:3. From Section A2, given that the total increase in lifetime earnings from both the direct channel (before costs) totals $22 billion, the participation-related component is estimated to be around $0.6 billion. In respect of the number of people participating, this implies an increase in of around 90,000 (at a point in time).

The impact on government expenditure is derived by applying the number of affected people to assumed incidence and rates for welfare payments: JobSeeker, Parenting Payment, and Family Tax Benefits.[55] The overall, lifetime impact is a reduction in government spending of $0.9 billion, in net present value terms.

The impact on government taxation revenue is greater. In broad terms, the average tax rate on wage earnings is around 25 per cent.[56] With respect to the direct channel, this implies an increase in taxation receipts of around $5.5 billion, in present value terms. Hence, the overall fiscal impact is a $6.4 billion increase in receipts/ reduction in spending.

Our new findings are consistent with other studies

While there are few similar studies, a number of economic evaluations also show positive economic gains from school-based SEL programs. A seminal piece by Belfield and colleagues (2015) examined the projected economic return from six effective SEL programs. It found, on average across the six programs, a large return of around $11 for every dollar spent (see right).

In addition, a recent UK longitudinal study by Del Bono and Garcia (2024) gives concrete data on the impact on adult economic outcomes. The longitudinal 1970 British Cohort Study finds that improvements to attention, emotions and peer relationships are associated with better labour market outcomes – including via the ability to find good jobs and higher participation in the labour force. A one standard deviation improvement in behaviours is associated with an improvement in annual earnings of around 2 per cent.

Specific SEL programs show economic returns

Belfield and colleagues (2015) examined the economic returns of six rigorously evaluated SEL programs in the US, finding large benefit-cost ratios for each program. It found an average return of around $11 for every dollar put toward the interventions.

By way of example, one of the programs called the 'Responsive Classroom' program, focuses on instructional approaches to improve how teachers both teach and interact with primary students. It provides all teachers with strategies, structures, practices, and techniques to improve students' self-efficacy, social and emotional skills and to build a strong school community. The program benefits are estimated to future earnings using the demonstrated gains in academic achievement in a randomized control trial by Rimm-Kaufman and colleagues. On average, the program is estimated to generate a return of $10 for every dollar invested.

Another program called 'The Life Skills Project' is a more targeted, low-cost intervention delivered by teachers in middle school classroom settings to address risks for substance use in adolescence, including tobacco, alcohol, and illicit drugs. It teaches students self-management skills, equips youth to resist peer pressure and generally improves social and emotional skills to reduce anxiety. The program is estimated to deliver a return of $3.5 for every dollar invested.

Endnotes

1 CASEL Framework (n.d.)

2 Schoon et al (2015)

3 Schoon et al (2015)

4 Jones and Kahn (2017)

5 AERO (2023)

6 Studies include Durlak et al (2022), Greenberg (2023), Greenberg et al (2017), Durlak et al (2011), Cipriano et al (2023, 2024).

7 Durlak et al (2022)

8 Cipriano (2023, 2024). In addition, a rigorous systematic review by Berger and colleagues (2022) shows SEL can benefit mental health, with positive impacts at school and long-term wellbeing.

9 Rigorous evidence summaries include Cipriano et al (2023, 2024), Greenberg (2023), Dix et al (2020), Durlak et al (2011), Corcoran et al (2018), Grant et al (2017).

10 EEF Toolkit SEL.

11 Studies include Goodman et al (2015), Abbott et al (2013), Del Bono et al (2024), Heckman et al (2006), Heckman and Kautz (2012)

12 Chetty (2011)

13 OECD (2015)

14 Acemoglu & Restrepo (2018, 2019), Deming (2017)

15 Deming (2017)

16 Weidmann and Deming (2020), Falk and Ichino (2006), Mas and Moretti (2009)

17 Australian Government (2023)

18 Deloitte (2017)

19 For discussion of Australia's measurement approach see AERO (2023)

20 See AIHW (2022)

21 ACER (2018, 2022)

22 Allen et al (2018)

23 AIHW (2020)

24 Delany and Smith (2012)

25 Education Endowment Foundation Tooklit (n.d.)

26 ACER (2018, 2022)

27 Allen et al (2018)

28 Dix et al (2020)

29 OECD (2019)

30 Also see a longitudinal study by Kiuru et al., (2020), as well as a study by Adler (2016)

31 Gregory et al (2021), Kaya & Erdem, (2021)

32 Jones and Kahn (2017), Education Endowment Foundation Toolkit (2021).

33 AERO (2025)

34 Mccrea (2022), Mccrea (2020)

35 One international study is by Chatterjee and Duraiappah (2020).

36 In the literature, the median estimated impact of SEL interventions on cognitive-related outcomes is around 0.2 of a standard deviation. In their review of meta-analyses, Durlak et al (2022) report that for the meta-analyses that examined academic performance, the estimated mean effects range between 0.2 to 0.5 of a standard deviation., while the median effect is 0.2. In Belfield (2015), the measured impact on social and emotional skills of SELs ranges from 0.13 to 0.26. It is also assumed that the effects of separate SEL interventions, which target different behaviours, are not additive in terms of their impact.

37 Estimating this effect is made challenging by the fact that the relationship between social and emotional skills and achievement is potentially subject to reverse causality – high achievement may improve SE skills. As such, a conservative parameter of 0.6 per cent is chosen for the economic benefits (from the range of 0.4 to 2.0 per cent).

38 Costs that occur from the degree to which interventions displace instructional time are also taken into account here. Costs are based on the average of the six specific interventions in Belfield et al (2016) which are shown to be effective.

39 This estimate is in net present value terms. Key assumptions include a discount rate of 4 per cent and average wage in adulthood of $85,000AUD per annum.

40 A range of AIHW and ABS data is used. See Technical Appendix for further detail.

41 Welfare estimates use empirical findings on wages and workforce participation from Del Bono et al (2024), as well as current government expenditure on welfare payments from a range of DSS and ABS data. See Technical Appendix for further detail.

42 Durlak et al (2022)

43 Durlak et al (2022)

44 Durlak et al (2022)

45 OECD (2023).

46 Del Bono et al (2024a)

47 Impact Economics calculations.

48 Del Bono et al (2024a)

49 Belfield et al (2015).

50 Belfield et al (2015).

51 Belfield et al (2015).

52 Belfield et al (2015).

53 The SDQ incorporates positive and negative attributes for 5 scales covering; emotional symptoms, conduct problems, peer problems, hyperactivity and pro-social (AIHW 2020).

54 A range of AIHW and ABS data is used. This includes: AIHW, Medicare-subsidised Services, by SA3 (2018-19); ABS, Patient Experiences, 2022-23; AIHW, Health Expenditure, 2021-22; AIHW, Recurrent Expenditure on Specialised Mental Health Services, 2021-22.

55 A range of DSS and ABS data is used. This includes: DSS, Income Support Recipients; DSS, JobSeeker Payment and Youth Allowance - monthly profile - January 2025; DSS, Annual Report, 2022-23. AIHW, Medicare-subsidised Services, by SA3 (2018-19); ABS, Patient Experiences, 2022-23; AIHW, Health Expenditure, 2021-22; AIHW, Recurrent Expenditure on Specialised Mental Health Services, 2021-22.

56 OECD (2024a)

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