



Improving Children's Literacy and Numeracy in Benalla

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A Tomorrow Today Foundation position paper informed by six years of program implementation and a review of the literature.¹

A poor foundation in literacy prior to school entry not only reduces the likelihood of later success in literacy, but also increases the risk of children 'dropping out' of formal education. Poor reading and writing skills are associated with lower self esteem, poorer educational and social outcomes, and higher rates of unemployment, welfare dependence and teenage pregnancy. Reading difficulties disproportionately affect children from disadvantaged homes, and those children who experience difficulties in learning to read are unlikely to catch up. Poor reading levels can also impact negatively on individuals' health. All of these factors contribute to a perpetuation of the poverty cycle.

- Policy Brief No.13 2008 Royal Children's Hospital

During the first 24 months of life, children's acquisition of language is highly associated with their mothers' speech. By 2 years of age, children whose mothers speak to them the most have vocabularies that are 8 times greater than those whose mothers speak to them the least. When given the right types and amounts of language and cognitive experiences, particularly within a warm and responsive social context, children from all walks of life gain in their intellectual and social-emotional competence. Learning occurs in the family and community well before children start school.

By Grade 3, there are wide differences in children's levels of achievement in reading and mathematics. Some children are already well behind year-level expectations, and many of these children remain behind throughout their schooling. They are locked into trajectories of 'underperformance' that often lead to disengagement, poor attendance and early exit from school. There is little evidence that, as a nation, we are doing a better job of reducing the numbers of students on long-term trajectories of low achievement or of reducing the resulting 'tail' of student underperformance.

Since 2000, the Programme for International Student Assessment (PISA) has assessed reading, mathematics and science among 15-year-olds in all OECD countries every three years. Although Australia performs relatively well in PISA, there is a steady decline in the average performance and no reduction in the relationship between student performance and socioeconomic background. The gap in performance between schools with a low and high socioeconomic status has increased.

At Grades 3, 5, 7 and 9, the National Assessment Program (NAPLAN) shows that Benalla government school students perform below or substantially below the national average in reading, persuasive writing, spelling, grammar and punctuation, and numeracy. This is not a geographic

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anomaly; other similarly socio-economically disadvantaged communities have the same poor levels of literacy and numeracy.

Whilst there are a number of explanations found as part of this review for what is meant by the terms “literacy” and “numeracy”, the following is used for this discussion —

Literacy includes the capacity to read, understand and critically appreciate various forms of communication including spoken language, printed text, broadcast media, and digital media. The term is used to include speaking and listening as well as communicating using not only traditional writing and print but also digital media.

Numeracy encompasses the ability to use mathematical understanding and skills to solve problems and meet the demands of day-to-day living in complex social settings. To have this ability, a young person needs to be able to think and communicate quantitatively, to make sense of data, to have spatial awareness, to understand patterns and sequences, and to recognise situations where mathematical reasoning can be applied to solve problems.

Becoming Literate and Numerate

Children from socio-economically disadvantaged families (low SES) are more likely to experience difficulties in literacy and numeracy achievement than other children. The reasons are multiple and related. Poverty, poor housing and health, difficulty in achieving the right kinds of support at the right time, low educational attainment of the parent/s, and attitudes to learning are all involved. All of the sub-headings shown below have been found in the literature to impact positively or negatively on children becoming literate and numerate and various negative combinations of these factors are more prevalent in low SES families.

1. Parental / in-home attitudes to literacy and numeracy

Student attitudes to reading (confidence, motivation and enjoyment) are strongly related to engagement in reading lessons, yet only one third of Australian Year 4 students are engaged in their reading lessons. Lower performance in maths is strongly connected to how confident the student is in their ability to solve maths problems, and how anxious they are when faced with maths homework or maths problems. Attitudes to reading and solving maths problems are built in the home learning environment.

In Australia, children whose parents did not complete Year 12 are 3.72 times more likely to have not developed core reading skills by Year 7 than learners with at least one parent with a university degree (49.5 per cent vs 13.3 per cent). Benalla is in the lowest performing group of local government areas in terms of % of population aged 25 - 34 years with a completed degree (17.9% compared to Victoria average of 39.3%, Metro Melbourne 43.3% and Country Victoria 22.8%).

The support of parents who are engaged in their child’s learning has a big impact on a child’s educational achievement, especially in literacy and numeracy. Young people achieve better when their parents take an active interest in their education, supporting and encouraging them. Prof.

Hattie, who has helped assess our pilot Reading Buddies activity, goes as far as stating that student expectations of their capacity underpins their school learning.

2. Feelings of safety and security

Feeling unsafe and insecure impacts on learning. In-school testing in Australia shows that among Year 4 students, those who disagreed a lot that they felt safe scored lower on average in reading, mathematics and science than all other students. Year 8 students who disagreed a lot with the statement about feeling safe at school also recorded the lowest scores in mathematics and science, on average. This is not directly attributed to bullying, but rather to issues such as low socio-economic status and learning difficulties. Children with both established and emerging health issues are also more likely have lower than average scores.

3. Wellbeing

Wellbeing, or lack of wellbeing, is consistently found to impact on educational outcomes. There are different developmental ages and stages where a lack of wellbeing impacts in different negative ways on learning. For example in the first two years of a child's life, babies with a strong attachment to their mother are open to learning and development at a vastly more significant rate than a baby who has suffered from non-attachment. This may link with the Piagetian stage of learning which states that 0 - 2 year olds learn by the basic senses including seeing, hearing and touching and construct an understanding of the world by coordinating those experiences with physical and motor actions. A lack of complete, safe, attachment would undermine the ability to learn during this stage.

During the ages of 9 - 14 years, major changes to the brain increase the likelihood of risk taking and impulsive behaviours, which also heightens emotional volatility. The process of 'synaptic pruning' enables the brain to operate more efficiently and occurs during this stage. This is where well worn patterns of feeling, thinking and behaving are strengthened and weaker links are severed. The imperative is to ensure that positive rather than negative pathways are strengthened during this time. Young adolescents in particular benefit from lots of positive experiences.

Sense of belonging, sense of purpose, self efficacy, determination or grit are all correlated with achievement. Low SES communities can excel at reinforcing sense of belonging and valuing local knowledge. As has been shown in research on knowledge and innovation, it is important that communities value and welcome 'external' knowledge into the mix.

Although there are challenges at all years of schooling, participation is most at threat in Years 6 - 9. Student disengagement at these years could be attributed to the nature of the curriculum, missed opportunities in earlier years, inappropriate learning and teaching processes, and perhaps the students' stages of physical development.

4. Socio-economic status (SES) of the child's community

Growing up in a low SES community reduces "developmental opportunity". The extent to which this matters over the longer term is highlighted by Boyle et al's (2007) analysis of the long term follow up of a general population sample of over 20,000 Canadian children aged 4-16 years originally surveyed in 1983 and followed to 2001. This showed that a sizeable proportion of the variation in educational attainment in early adulthood could be explained by early childhood neighbourhood factors. The local community/neighbourhood context of child-rearing plays a much greater role in predicting children's developmental outcomes than has generally been recognised.

A recent Australian study (Redmond, Skatebol et al 2016) suggests that impoverished families rely on social and familial networks to get through until the next payday. Networks protect young people from severe deprivation.

A region's service system is also influential. Unfortunately there are common examples of service system negative impacts and very few examples where systems are working to mitigate the effects of disadvantage on children and families. Tomorrow Today has been working cross-sectorally in

Benalla since 2009 and there is goodwill across agencies for a common, child-centred approach; but there is more to be done. A recent analysis of Australian and international literature reviews summarises the problems in service systems as

- A fragmented and poorly coordinated system in which specific service sectors largely focus on particular issues or groups of vulnerable people without a whole of system view.
- A program focus instead of a client focus, where the onus is on people to make sense of services, navigate from door to door and 'fit' a program to qualify for support.
- Services which fail to consider the family circumstances of clients, in particular the existence and experience of children.
- A traditional welfare approach that focuses on crisis support and stabilisation, and that may encourage dependency.
- A focus on solving problems after they occur rather than anticipating and intervening to prevent them arising.

All the sub-headings outlined above, as well as systems issues, affect many Benalla families in different combinations and in mild or severe forms. Drugs and alcohol and the nomadic lives of many families (transience) also impact on the hundreds of children at school and the hundreds of children and parents who Tomorrow Today works with weekly.

The family, the neighbourhood, the school and the district's service-system can all provide protective factors for children from socio-economically disadvantaged areas so that learning to become literate and numerate is supported at multiple levels and in multiple ways. To date there is very little data or information available to guide place-based interventions such as the Education Benalla Program. We do know from the Jesuit's long term study into disadvantage in Australia (Prof. Tony Vinson) that the one indicator that links to every other indicator of socio-economic disadvantage is *educational attainment* - that is, level of education attained by a child impacts every other indicator of disadvantage. We know that education is the key.

Public Policy

A child's academic progress is assessed in school and reported at different scales, including at the school level. "School performance" is a measure of combined student performance, a useful measure for checks and balances within and across schools. Unfortunately the school performance measure is also used in policy discussions about how to improve children's educational outcomes. Education research about improving learning outcomes thus focuses on schools and teaching. Schools with a high proportion of children from socio-economically disadvantaged families are described as "disadvantaged schools" rather than schools operating in disadvantaged communities - a simple thing perhaps, but it shifts the issue to being a school problem in need of a school solution. In Australia the performance gap has grown between students from disadvantaged and advantaged families and communities; but children's academic progress is described as a disparity in performance between Australia's most and least advantaged schools. The very basis of discussion about possible solutions is misconstrued. Educational policy, and an individual child's educational progress, is seen completely as a school issue.

Schools are compared to identify which schools fall below acceptable performance - a useful assessment to identify where organisational or teacher level performance needs attention. To assist comparison, 'like' schools are compared - meaning that schools in disadvantaged communities are compared with similarly disadvantaged schools, and schools where student's parents are socio-economically advantaged are compared with similarly advantaged schools. The unintended consequence is that poor student educational performance is not obvious in disadvantaged areas because it is known that schools in disadvantaged areas have lower educational results than schools in moderate or advantaged communities. "Social factors" are seen as resulting in lower educational performance, and the discussion about solutions is confined to schools. In Australia there is a significant and increasing gap between educational outcomes of students from low and high socio-economic schools. It seems evidence-based that more public policy attention be given to the family and community learning environments.

Schools have a crucial role in teaching and developing children, as well as in identifying children at risk, identifying learning difficulties, and intervening intensively to address individual learning needs. Great teachers make a difference to a child's whole life. However schools are just one learning environment. Public policy has a responsibility to recognise that each child's home and community are not just "social factors" that impact on the child's academic performance at school. They are also part of the public policy solution and should be recognised as learning environments.

Tomorrow Today Foundation recognises that children's education occurs in the family and in the community as well as in school, and our whole-of-community approach to improving student outcomes works across the three learning environments.

In contrast to the educational research sector, child development research has demonstrated for a number of years that learning happens in the family and the community as well as in school. The recent major project on Australian Child Wellbeing (Redmond, Skattembol et al 2016) draws the link between child wellbeing and lifelong learning and opportunity. The four main findings from this research are -

- (1) The middle years are important. There is a lot going on in young people's lives at this time, and policy needs to pay attention to more than their academic achievement.
- (2) Marginalisation is associated with low wellbeing. For example, it is evident from this study that young people who are marginalised report worse health and do not engage in school to the same extent as young people who are not marginalised.
- (3) Young people are experts in their lives. They were the key informants in this study, and should be the key informants on policies affecting them
- (4) Policy action to improve the wellbeing of young people in their middle years must be accompanied by rigorous monitoring and evaluation of progress. This is already occurring in terms of academic achievement, however, monitoring other forms of achievement needs strengthening, especially with respect to young people in their middle years.

At Tomorrow Today Foundation, we believe that by working across all three learning environments - the family, the school and the community - Benalla will see, over time, a change in measures of student performance that sit outside the experience of other disadvantaged communities. The gap in educational outcomes between Benalla's children and children from more advantaged communities will narrow and eventually close. By 2030 Tomorrow Today will see its Education Benalla Program's desired outcome achieved - that education and training completion rates of Benalla's 17 - 24 year olds will equal or exceed the state average.

Whilst there have been some welcomed funding partnerships with the Victorian State Government in the delivery of occasional projects and activities, there is yet to be significant public policy attention given to what is occurring in Benalla. Tomorrow Today Foundation would welcome State and Federal interest and investment.

Three Educational Environments

Education in the home and neighbourhood environments happens. Improving literacy and numeracy requires that families and communities be recognised and validated as educational environments as important as - but different to - schools. Recognising families and communities as educational environments makes them part of the solution.

All families and communities have strengths and weaknesses. For instance, in Benalla's case, it is possible to use cross-sector collaboration across the service system and strong social capital to mitigate at least some of the effects of disadvantage that impact on a child's educational trajectory.

Improving literacy and numeracy as components of the Education Benalla Program

Of the various actions and approaches highlighted by the review, the following list emerged as potentially providing the most benefit to improving Benalla students' literacy and numeracy. These should be considered for further development and implementation with school and community partners, as part of the Education Benalla Program.

Early Years (0 - 8 years of age)

- * Highlight the importance of the Australian Early Development Census data in schools and health agencies. (It was noted that this could also be expanded to a community-wide awareness campaign). Work with organisational partners across Benalla to develop coordinated institutional responses to the AEDC that will, measure by measure, improve the trajectory of Benalla's children.
- * Information for parents, disseminated in affirming and appropriate ways that helps them to develop positive learning expectations in their children. Grow and develop the Program's existing social media program of messages to parents. Consider introducing a term by term approach to messages and links to tie in with the term program. Staff to consider the "help my kid learn" approach.
- * Whilst the Program already significantly resources parental interaction with other parents in early child development and parenting programs, staff noted their commitment to helping parents practice verbal stimulation in the first and second years of a child's life. Group parental training and social networking have great potential to assist parents, especially in offering sensitive and relevant interventions such as the need for attachment in 0 - 2 year olds

Middle Years (9 - 14 years)

- * The benefits gained from participation in early learning programs have been found to fade by the later primary years, pointing to a need for sustained interventions to capitalise on early progress. While many Australian education systems are achieving strong results in the early years of schooling, the substantial decline in the proportion of learners meeting milestones at Year 5 suggests that Tomorrow Today should develop a dedicated approach to the Middle Years. The objectives of introducing a middle years focus could be to move literacy from 'learning to read' to 'reading to learn'; and to build self-assessed levels of confidence (crucial in maths).
- * Tomorrow Today could encourage a collaborative approach across families - community - schools to reinforce and re-engage students from Years 6 - 9 in literacy and numeracy. A program partnership with a University could help inform the approach.
- * Develop a more robust system of consulting with and responding to children's views on what and how activities designed to improve their educational outcomes should be shaped and run.
- * Peer led, peer support programs. A well coordinated and supported Year 8/9 buddy program with Year 6/7s would be effective in promoting positive outcomes for children particularly in easing the transition to secondary school, building friendship groups and reducing bullying behaviours. Also helps boost the self-assessed value of the older buddies as they assist the younger students' transition into secondary school.
- * Connect adults or achieve greater parental involvement in the lives of young adolescents e.g. appropriate supervision after school; conversation-rich home and community environments. A project run in Melbourne will be investigated where adults are welcomed into school to speak with groups of students on a wide range of topics, producing a conversation rich environment.
- * Develop and implement activities that enthuse adolescents to socially and verbally interact in safe, non-judgmental community environments.

- * Ensure projects such as Hands on Learning continue to place emphasis on practical literacy and numeracy - group discussions for managing projects, use of measurement, teaching manipulation of numbers to achieve the task, etc.
- * Investigate current emerging techniques for rapidly being of use to adolescents seeking information/assistance e.g. how to create a spreadsheet. Teenager counselling techniques are adopting 'coaching' styles to explain concepts (rather than deep therapy) and such approaches warrant consideration in home and community learning environments.

Young People (15 - 24 years)

- * Evaluate and develop the Connect9 mentor training and support program to build awareness about practical literacy and numeracy confidence building.
- * Training for community volunteers (such as Connect9 volunteers) to include how to provide feedback on progress with any social or practical task (an adaptation of what is referred to in teacher research as 'formative evaluation')
- * Develop a more robust system of consulting with and responding to young people's views on what and how activities designed to improve their educational outcomes should be shaped and run.

Future Direction

But what we learn from the patterns of recovery and students coming back on track is that it is possible for young people missing out to gain ground. Being behind at any point need not be a life sentence, even for the disadvantaged, though even here the chances of recovery and of gaining ground are still in favour of students from more advantaged backgrounds. The most advantaged learners are not only less likely to fall below expected standards in the first place, but more likely to catch up again if they do.

Lamb, S et al Mitchell Institute 2015

Disadvantaged families and disadvantaged communities may not be able to replicate or even extend school based approaches at home, but that does not mean they are not able to positively influence educational achievement in literacy and numeracy.

Being literate and numerate is central to life chances and quality of life. Families, schools and communities are children's three learning environments that, together with the child's natural abilities, determine their level of educational attainment.

This review strongly reinforces Tomorrow Today's community development model of action, where we work across three learning environments of families, the community and schools. Our focus of effort to date has been on the early years (birth to Year 2) and Year 9; with a range of other activities relating to family support and student transitions. Additionally, considerable effort is invested in achieving strong collaboration across the public/private/community sectors so that myriad public and private efforts are aligned to improve student outcomes in Benalla. These approaches are reinforced. There is now stronger evidence that the family is core to babies, children, adolescents and young people; and that the child's family and community impacts positively or negatively on learning outcomes. There is also better definition of models of action (such as "Collective Impact") that bring together organisations and groups to focus on a common 'wicked problem'.

Whilst our model of action is confirmed, the middle years (ages 9 - 14) are highlighted as requiring attention to ensure young people establish their literacy and numeracy. NAPLAN results for Benalla are alarmingly poor at Year 3 and worse at Years 5, 7 and 9. Literacy and numeracy levels need

to improve to achieve the Education Benalla Program's goal of significantly increasing the number of children who not only complete Year 12, but who successfully transition and complete their apprenticeship, diploma or degree. Developing new approaches to improve literacy and numeracy during the middle years will not only include listening and responding to schools as collaborating partners. Our approach will also recognise that working with children, families and the broader community to build student confidence and a sense of one's own ability, a sense of belonging, positive social interactions and meaningful relationships lie at the heart of a desire to learn and persist. Recent publications such as the Final report of the Australian Child Wellbeing Project remind us that ongoing consultation with young people on what they are comfortable with and what activities should look like is very important and should be built in to all that we do.

Whilst educational academic discourse tends to focus on schools as the only learning environment, it may be that some of the work can be adapted for use in Benalla. For example, could Tomorrow Today adapt Hattie's Ranking of Influences on Student Achievement for relevance to the family and community learning environments?

The Education Benalla Program commenced implementation in 2009/10 after two years of enquiry and development, and Program effects have started to be in evidence. It may now be time to approach a suitable higher education research institution to partner with us to help define a place based approach that recognises the home learning environment and the community learning environment as educational environments as real as the school educational environment. The purpose of such a partnership would be to develop a framework for families and communities - and all the agencies that work with families - to support learning and improve literacy and numeracy in disadvantaged communities. Tomorrow Today Foundation, in partnership with an education research institution and in collaboration with young people, organisations, clubs and businesses across Benalla, is in a position to take such an approach.

Without losing sight of the main focus of our efforts, Tomorrow Today may also have a role to play in drawing public policy attention to the reality that children develop and grow in three learning environments - the family, the school and the community. The continuing public debate on the quality and effectiveness of school education for disadvantaged students needs to be challenged to recognise that schools are one learning environment and "place based" approaches such as the Education Benalla Program need assistance to achieve a narrowing in the performance gap between advantaged and disadvantaged communities. It is obscene that a child's level of educational achievement in Australia today is pre-determined by their family's and community's level of disadvantage.

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