

# Dolly Parton's Imagination Library

## Impact Assessment

October 2022

United Way Australia engaged dandolopartners to assess the impact and value of Dolly Parton’s Imagination Library based on available information.

## Background

United Way Australia (UWA) has been delivering Dolly Parton’s Imagination Library (the Imagination Library) in Australia since 2014. Today, the Imagination Library is operating in over 400 locations around Australia.

Building off the program’s success, UWA is exploring options to expand the program to reach more children. It is also considering options to deepen engagement with children and families by embedding a ‘wraparound’ approach in more locations; and launching a new information portal for parents and educators. UWA wanted to (a) understand the current impact and value of the Imagination Library; and (b) understand the implications of these proposed shifts in program direction.

## Scope of the project

UWA engaged dandolopartners to undertake an Impact Assessment of Dolly Parton’s Imagination Library in Australia. The purpose of the Impact Assessment was to draw reasonable conclusions about the effectiveness, impacts and value of the program in Australia, based on available evidence. **Unlike an evaluation, in which the evaluator seeks to gather substantial new information, dandolo conducted this impact assessment on the basis of existing information.**

As part of this Impact Assessment, UWA asked dandolo to deliver the following:

- Analysis on the effectiveness and impact of the program, in light of available evidence,
- A calculation of the return on investment of the program, and
- Consideration of proposed future program directions.

This Impact Assessment provides the results of this analysis.

This Impact Assessment delivers analysis on effectiveness and impact, estimated return on investment, and consideration of future program directions.

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# Findings on a page

Our Impact Assessment found that the Imagination Library is backed by robust peer-reviewed research and Australian program evidence, and likely delivers a strong return on investment.



Shared book reading helps children develop early literacy skills, resulting in improved Year 3 NAPLAN scores



The Imagination Library has a unique offering, and a track record of impact in Australia



There is a robust body of peer-reviewed research evidence showing that the Imagination Library improves shared reading behaviour and strengthens early literacy skills



Program evidence shows that the Imagination Library is also delivering strong results in Australia



It also suggests that the benefits of the program go beyond shared book reading and early literacy, and include strengthened connections within and between families and the broader community

1 / 20

Economic analysis suggests that the program breaks even on its original investment if around one in twenty families start reading to their child 6-7 days per week as a result of the program







# The program

# The importance of shared book-reading

Shared book-reading helps children develop critical early literacy skills.

Shared book-reading – that is, the act of a caregiver reading a book together with a child – is a well-known strategy for building children’s early cognitive development.

Shared-book reading is associated with improvements in:<sup>1</sup>

 Brain development	 Social-emotional skills	 Parent-child relationships
 Oral language skills	 Concepts of print	 Vocabulary development
 Phonologic knowledge	 Future reading proficiency	 Future maths performance

Key factors for shared book reading are:

- ✓ **Frequency and duration:** children who are read to daily for at least 10 minutes have better literacy outcomes<sup>2</sup>
- ✓ **Quality:** strategies such as dialogic reading and print referencing have greater benefit than engaging the child as a passive listener<sup>3</sup>
- ✓ **Starting early:** babies have been found to benefit from the practice from as young as 8 months old<sup>4</sup>

But some children miss out on shared book-reading and its benefits.

**16%** of children aged 0-2 are not regularly read to or told stories by their parents<sup>5</sup>

**1 / 4** children aged 0-2 are read to or told stories by their parents 3 times a week or less<sup>6</sup>


Low levels of shared book reading are associated with:

-  Lower socio-economic status<sup>7</sup>
-  Language other than English spoken at home<sup>8</sup>
-  Families with 3 or more siblings in the home<sup>9</sup>
-  Children with poorer levels of behavioural self-regulation (low task persistence and high emotional reactivity)<sup>10</sup>
-  Single parent households<sup>11</sup>


These children start school behind, and are unlikely to catch up.


Children’s educational trajectories are established long before their first day of school because:


**85-90%** of brain development happens in the first 5 years of a child’s life.<sup>12</sup>

 There is an ‘upward spiral of causality’ – children more proficient in early literacy skills read more and due to increased book exposure their reading skills improve every year.<sup>13</sup>

Children that miss out on developing these critical early skills are unlikely to catch up:

 Children whose parents read to them less frequently at 2-3 years old had Year 3 NAPLAN reading scores 26 points lower than children whose parents read to them every day – which equates to an additional 20 weeks of schooling.<sup>14</sup>

 88% of children who start school with developmental vulnerabilities are still behind by Year 3, and much more likely to be in the bottom 20% in NAPLAN all through school.<sup>15</sup>

 If a child is in the bottom 20% in NAPLAN in Year 9, they only have a 9% chance of getting an ATAR high enough for university entry.<sup>16</sup>

Note: For full citations, see Appendix 3: List of sources

1 Australian Institute of Health and Welfare, 2020

2 Ibid; Yu and Daraganova, 2014

3 Shoghi et al, 2013

4 Dickinson et al, 2012; AIHW, 2020

5 ABS, 2017

6 Ibid

7 Australian Institute of Health and Welfare, 2020

8 Ibid

9 Hayes and Berthelson, 2020

10 Ibid

11 Yu and Daraganova, 2014

12 Pascoe and Brennan, 2017

13 Mol and Bus, 2011

14 Yu and Daraganova, 2014

15 Pascoe and Brennan, 2017; Brinkman, 2014; Houg and Justman,

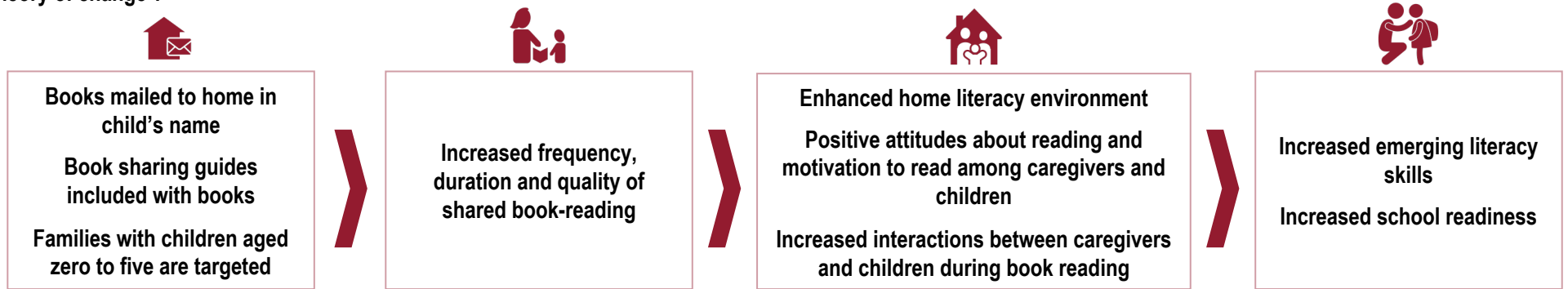
2014; Tayler et al, 2020

16 Ibid

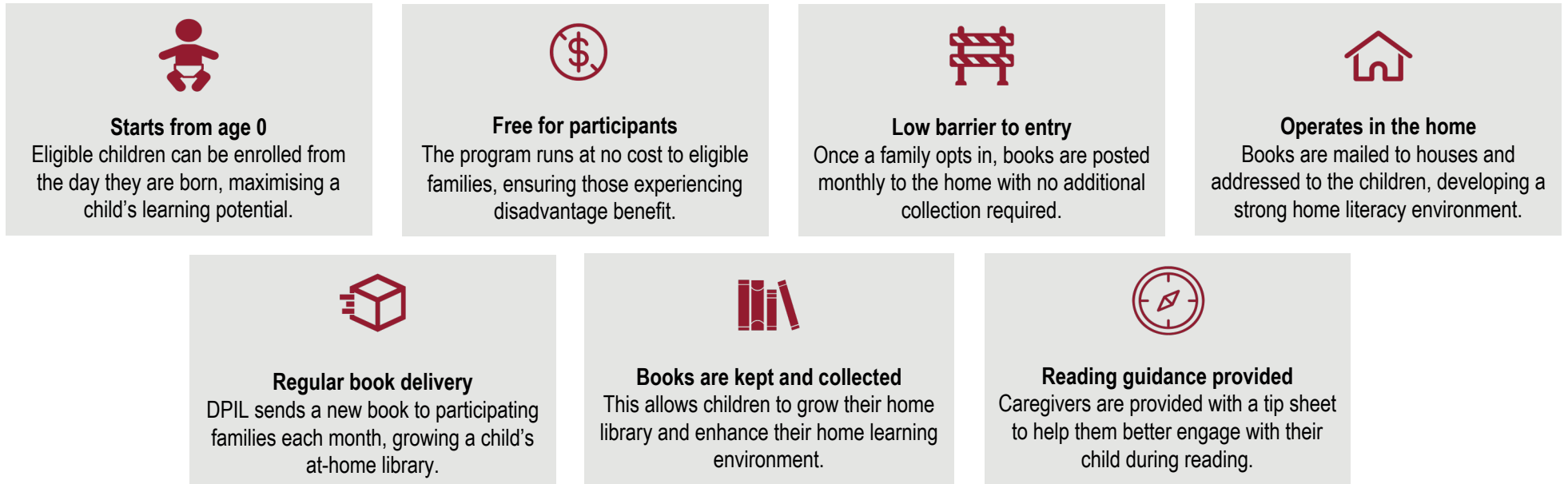
# How the Imagination Library works

The Imagination Library is a free book-gifting program aiming to build literacy readiness before children start school.

## Theory of change\*:



## Key features:



**The Imagination Library has a unique offering.** As part of this project, dandolo identified and analysed a number of other book gifting programs operating around Australia. Our analysis did not identify any other book gifting program that delivers all seven of the key features offered by the Imagination Library.

\*For detailed Imagination Library Logic Model, see Appendix 1.

# The Imagination Library in Australia

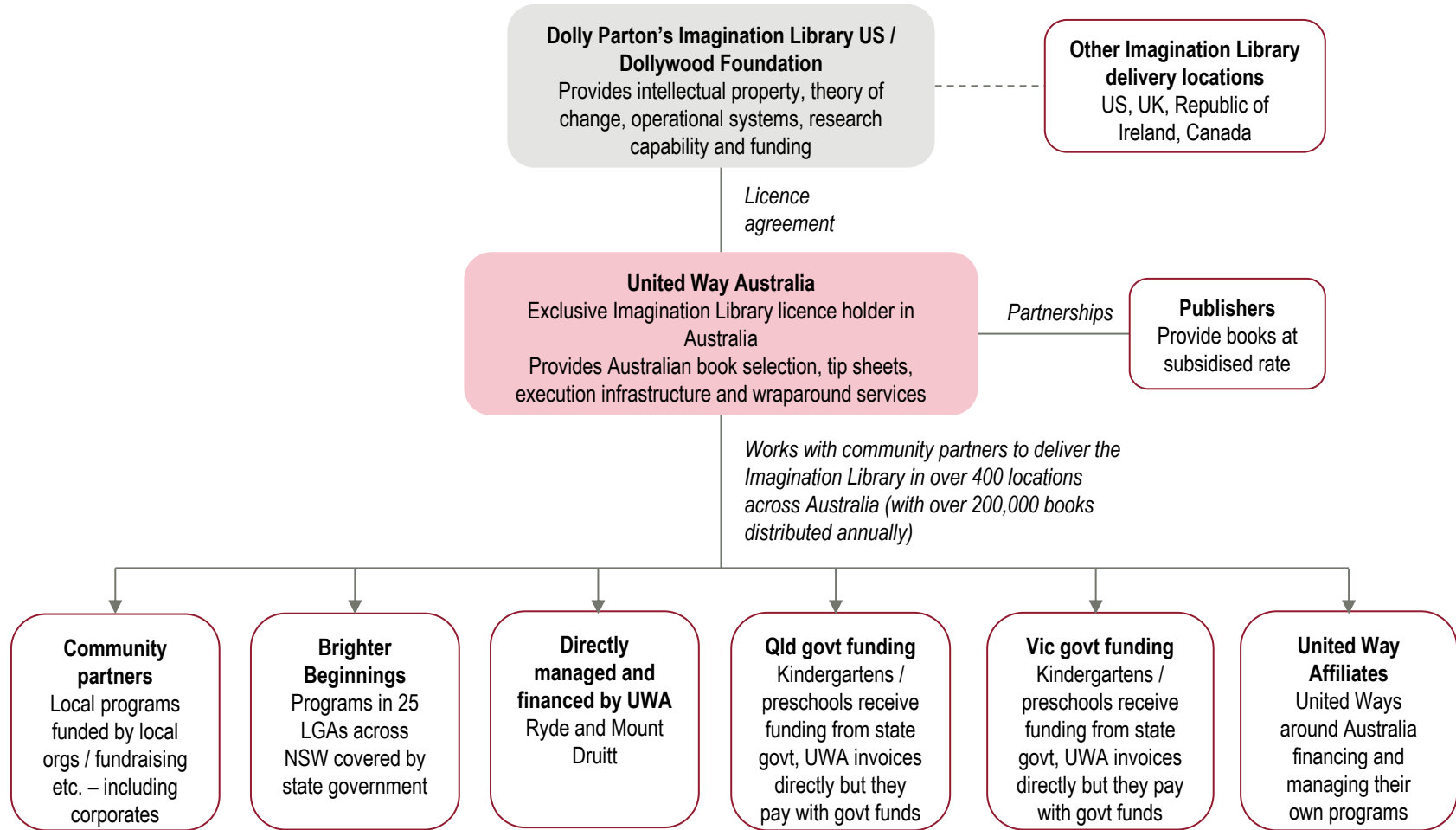
The program's infrastructure combines the institutional backing of a global program, combined with a flexible approach that enables the program to be tailored and adapted to meet the needs of particular communities in Australia.

## The Imagination Library...

*Has the institutional backing of a global program and operates at scale*

*Is delivered by an experienced Australian partner that has tailored the program to the Australian context*

*Leverages trusted local relationships to deliver and adapt the program to the needs of particular communities*



# Results and findings

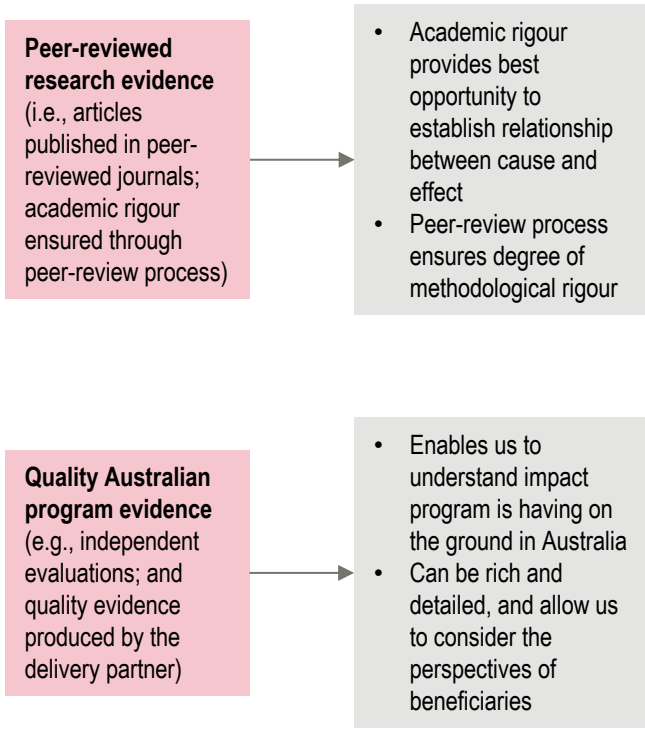


# Impact assessment framework

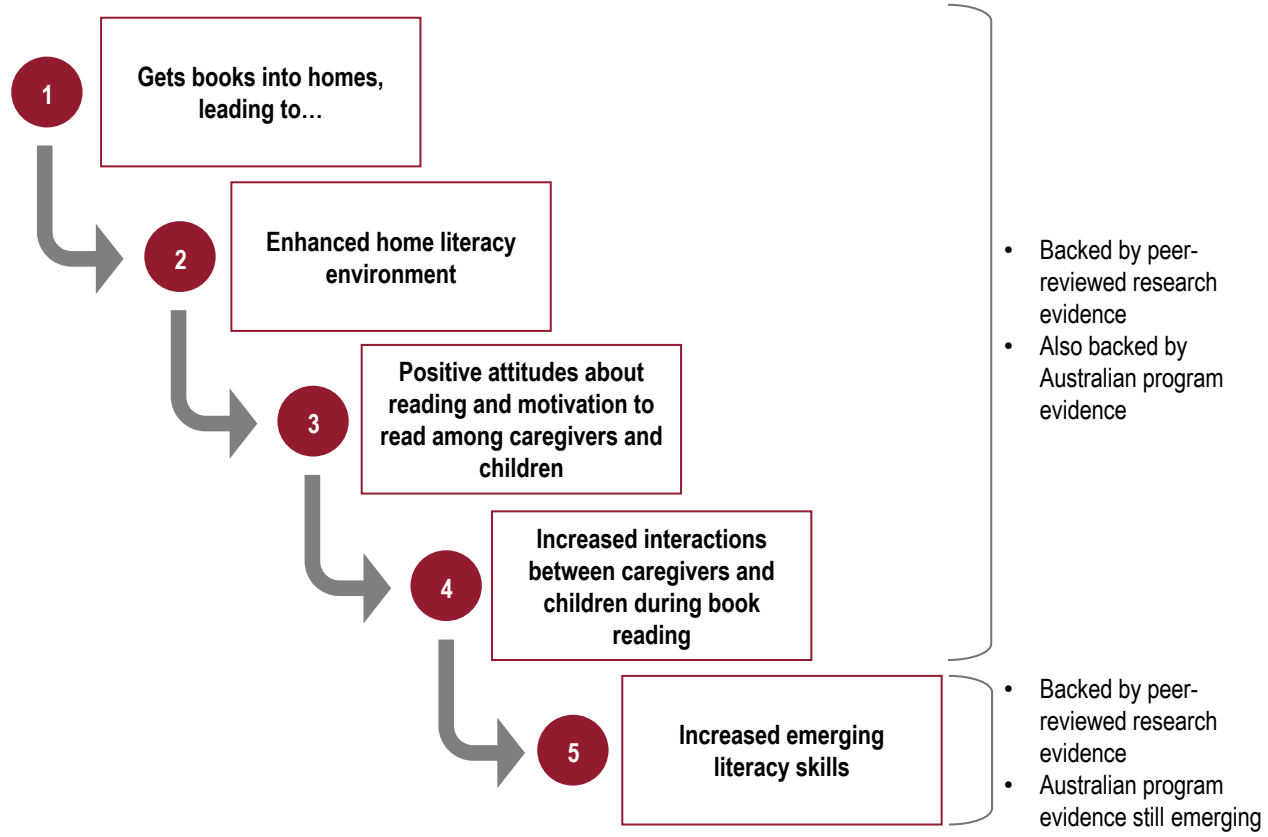
We considered two categories of evidence as part of our Impact Assessment: peer-reviewed research evidence; and Australian program evidence.

We conclude that there is robust peer-reviewed research evidence showing that the program contributes to all 5 steps of the Imagination Library's Theory of Change;\* as well as Australian program evidence showing that the Imagination Library contributes to steps 1-4.

Our Impact Assessment considered two general categories of evidence:<sup>^</sup>



The Imagination Library...



\*This is a simplified version of Dolly Parton's Imagination Library Theory of Change. The full Logic Model is available at Appendix 1.

<sup>^</sup> For information on how we have defined categories of evidence under this project, please see Hierarchy of Evidence at Appendix 2.

# 1. Getting books into homes

The Imagination Library selects quality, age- and culturally appropriate books.

In Australia, books are chosen by a Book Selection Committee made up of children's education experts, including librarians, academics and publishers. The books are:

- ✓ High quality
- ✓ Age appropriate and culturally appropriate (e.g., many iconic Australian authors and stories)
- ✓ Majority of books are locally procured

**97%** of caregivers surveyed in an Incus Group evaluation of the impact of the Imagination Library program for children in out of home care in Victoria said their children enjoyed the books

**93%** of caregivers surveyed in the Incus Group study felt books were age appropriate

'I strongly believe it is the program and the beautiful quality books that have helped mould Charlotte's interest in reading' – *Parent, Tamworth NSW*

'It is important for a child to be able to link their own lives to a story... that is available through DPIL as a lot of the stories are Aboriginal and the children can link to it'  
– *Principal, Tamworth*

Books are sent to the home for free, in the child's name, for the child to keep.

**Research and program evidence demonstrate numerous benefits flowing from the design of the program. These include:**



Having the book arrive in the mail free of charge lowers the barrier to entry for families with low resources or without easy access to a library.<sup>1</sup>



Children get excited when the books arrive and feel special because the book is addressed to them.<sup>2</sup>



Being able to keep the books enables children to 'build their own library before entering school', and benefit from repeated readings of the same book.<sup>3</sup>



The program builds pride in book ownership, and children value the books as their own possessions.<sup>4</sup>



For families with limited resources, Imagination Library books often constitute a significant proportion of total books in the home.<sup>5</sup>

'The findings... show that DPIL books delivered to the home hold a place of importance for the family and that pride in the books may actually be representing the importance families and children are placing on literacy and reading'.<sup>6</sup>

Packs include a book-sharing guide 'tip sheet' to get the most out of the book.

'The tip sheets have completely changed how I interact with the books and my children before, during and after reading.' – *Parent, Ryde NSW*

'Parents say it creates so much more conversation and it's great for engagement with kids.' – *Partner agency, VIC*

Tip sheets provide advice, techniques and ideas for engaging the child before, during and after reading, in line with strategies known to be beneficial for language acquisition and development.\* Tip sheets are developed to be specific to each book.

To enable engagement with families that do not have English as their first language, tip sheets for some books have been translated into nine community languages and made available online.

**88%** of caregivers surveyed in the Bendigo Reads study reported that using the tip sheets increased their confidence with regard to reading

**72%** of caregivers surveyed in the Incus Group study said the tip sheets were 'very useful' or 'somewhat useful'

\* For information on the type of techniques encouraged through the tip sheets, see page 12.

1 Incus Group, 2018

2 Ibid

3 Tamworth stakeholder interviews, 2022

4 Incus Group, 2018

5 La Trobe, 2008

6 Neyer, 2018

7 La Trobe, 2008

## 2. Enhanced home literacy environment

The Imagination Library enhances the home literacy environment by increasing the frequency of caregiver-child book reading.

**Numerous international research studies have found the program leads to increased reading frequency:**



Parents participating in the Imagination Library program read to their children more frequently than their peers that do not participate.<sup>1</sup>



Length of enrolment in the Imagination Library program was a significant and positive predictor of likelihood to read to one's child daily.<sup>2</sup>



Participation in the Imagination Library (and similar book-giving initiatives) helps families create traditions, routines and rituals around reading.<sup>3</sup>

**This is supported by Australian program evidence:**

**71%**

of caregivers surveyed in the Bendigo Reads study reported reading to their children more frequently as a result of the program

**90%**

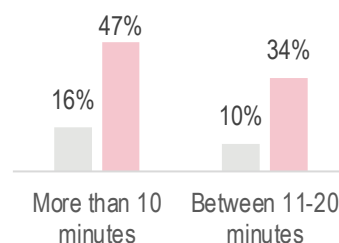
of caregivers surveyed as part of the Incus Group study reported that they are reading more often and for longer with their children as a result of the program

**11%**

increase in children read to once a day or more after 6 months of Imagination Library participation (from 61% to 72%) according to the UWA Impact Report 2020

The Imagination Library also increases duration of book reading and leads to earlier uptake of shared book-reading.

**Participation in the Imagination Library also leads to an increase in duration of book reading:**



After 6 months of participating in the Imagination Library program, the number of parents that reported reading to their child for more than 10 minutes in one session increased by 31%. The number of parents that reported reading to their child for between 11-20 minutes per session tripled.<sup>4</sup>

**Australian evidence has shown that participation in the Imagination Library program leads to families starting to read to their child at an earlier age:**



15% of caregivers surveyed in Tamworth reported before commencing the program that their child was too young to be read to, reflecting the common misconception that shared reading is for older infants and children. After six months, this had decreased to 1.6%<sup>5</sup>

'We explain that by reading to their baby it will build a better brain and establishing that reading is just something we do; it is engrained in the family from birth this is the norm' –  
*Child health nurse, Tamworth*

1 Zwierzchowska-Dod, 2022; Harvey, 2016

2 Ridzi, 2014

3 Neyer 2018; Vanobbergen 2009 [note: this study related to BookBabies, a Flemish program employing a similar model, not DPIL]

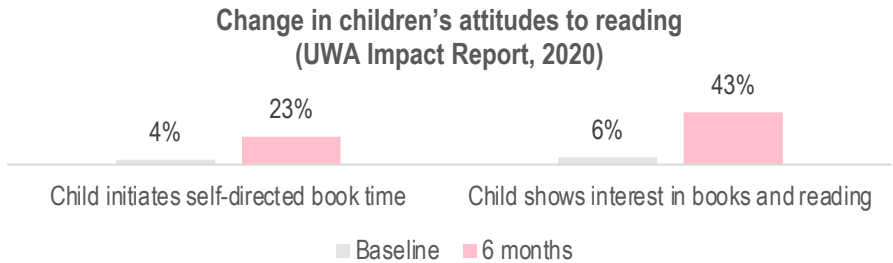
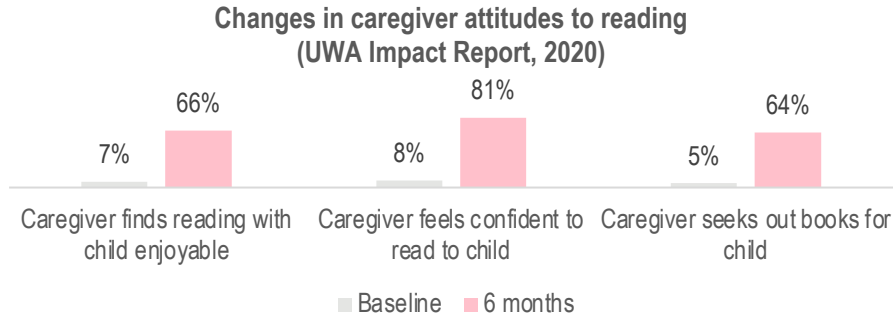
4 UWA, Impact Report, 2020

5 Ibid; UWA survey data [unpublished, provided to dandolopartners]

# 3. Positive attitudes about reading

Australian evidence shows significant improvements in caregiver and child attitudes toward reading. This is backed up by peer-reviewed international research.

**Program results have consistently found that Imagination Library participation leads to improved attitudes about reading and motivation to read among both caregivers and children:**









'Be.Bendigo's Chapter of DPIL has had a significant influence over the levels of Bendigo families' interest in reading.'  
- La Trobe researchers, 2018

'The excitement that getting a new book generated created lots of requests to be read to, countering tendencies to forget due to busyness. He still requests to be read to multiple times a day now the program is finished for him.' - Parent, UWA National Survey 2018

The Incus Group study found similar improvements: more than 80% of caregivers surveyed agreed that:

- ✓ 'I understand new ways to engage my child in reading'
- ✓ 'I want to read with my child more often'
- ✓ 'I feel more confident in my ability to read with my child'
- ✓ 'My child's requests for reading increased [as a result of the program]'

**International studies have found links between Imagination Library participation and:**

-  Interest in reading among children.<sup>1</sup>
-  Child-initiated reading.<sup>2</sup>
-  Enjoyment in reading among parents.<sup>3</sup>
-  Confidence reading among parents.<sup>4</sup>
-  Increased book ownership (beyond the books received from the program).<sup>5</sup>
-  Time spent at the library.<sup>6</sup>

1 Harvey, 2016 (a)  
 2 Tura, 2021  
 3 Zwierzchowska-Dod, 2022  
 4 Ibid.  
 5 Lelle 2011 [Note: Program evaluation, not peer-reviewed]  
 6 Funge et al, 2017

# 4. Increased interaction during book reading

The Imagination Library leads to increased interaction between caregivers and children during book reading.

- Research shows that engaging children actively throughout the reading process (rather than having them engage as passive listeners) leads to improvements in skills critical for literacy development.<sup>1</sup>
- The reading tip sheets provided alongside the books (see page 9) focus on teaching caregivers techniques to improve extra-textual talk, such as:
  - Asking children questions about the text
  - Describing / discussing / counting images or objects
  - Repeating / teaching letter sounds and rhyming words

## Peer-reviewed research evidence has repeatedly found a link between participation in the Imagination Library program and interactions while reading:



Length of enrolment in the program positively correlates with an increase in parents talking about the story and asking their child questions about the story.<sup>2</sup>

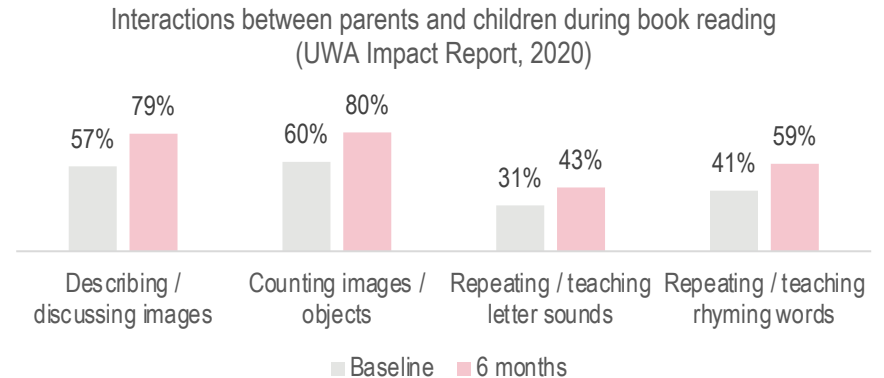


Imagination Library participants have increased book interactions compared to non-participants (including asking children about the pictures in the book, and talking about what is happening in the story).<sup>3</sup>



A study of book sharing behaviours of Imagination Library participants found that parents were likely to hold their child close while book sharing; to read all of the words or point out all of the pictures; and to use different voices when reading aloud.<sup>4</sup>

## Australian evidence shows that Imagination Library participation leads to increased interaction between caregivers and children during book reading:



'Extra-textual talk provided by parents can be especially valuable... and scaffold children's comprehension of and engagement with the text in ways that facilitate language and literacy development' – *Ridzi 2014*

'Both my grandchildren are on the program... the older grandchild is counting in the books, and they have the concepts of print with the younger one turning the page and pointing to things in the books' – *Grandparent, Tamworth*

1 Chow et al, 2008; Cameron and Pinto, 2009

2 Ridzi, 2014

3 Tura et al, 2021

4 Zweirzchowska-Dod, 2022

# 5. Increased emerging literacy skills

A robust body of international research evidence – including randomised control trials – shows that Imagination Library participants outperform non-participants on key indicators.

**Indicators on which Imagination Library participants have been found to outperform non-participants in peer-reviewed research studies:**

- ✓ Letter identification and letter knowledge<sup>1</sup>
- ✓ Understanding of text and illustration orientation<sup>2</sup>
- ✓ Word and letter concepts within text<sup>3</sup>
- ✓ Matching sounds to symbols of print<sup>4</sup>
- ✓ Oral reading skills<sup>5</sup>
- ✓ Application of phonics rules<sup>6</sup>
- ✓ Performance on academic reading measures<sup>7</sup>
- ✓ Competency pass rates in kindergarten, Grade 1 and Grade 2<sup>8</sup>

Australian program evidence also points to improvements in emerging literacy skills, though research is still under development.

- 58%** of caregivers surveyed reported that their child's vocabulary had grown as a result of receiving the Imagination Library books (UWA Impact Report, 2020)
- 89%** of caregivers surveyed agreed or strongly agreed that 'The Imagination Library program has helped my child's learning and development / growth' (Incus Group)
- 93%** of caregivers surveyed indicated that their child's vocabulary had increased 'a little' or 'a lot' (Incus Group)
- 77%** of caregivers surveyed reported that their child's understand and knowledge about the world around them had increased 'a little' or 'a lot' (Incus Group)

'The impact is evident in the home, the 3-year-olds are more vocal and better at communicating with us.' – *Child Health Nurse, Tamworth*

'We thought our son might need speech therapy, but since getting the books his speech has improved.' – *Parent, Vale Grove, SA*

'The children are coming to us with book knowledge, the text is powerful... and the language development hasn't happened if they are not being read to.' – *Principal, Tamworth*

1 Waldron, 2019  
2 Ibid.  
3 Ibid.  
4 Harvey, 2016 (b)  
5 Ibid.

6 Harvey, 2014  
7 Zwierzchowska-Dod, 2022 [Note: This is a recent PhD and has not yet been published in a peer-reviewed journal]  
8 Harvey, 2014; Harvey 2016 (b)

# Beyond literacy: strengthening connections

Emerging Australian evidence shows the Imagination Library connecting children with families, preschools and communities.



## Community connections

Emerging Australian program evidence indicates that the Imagination Library has been an asset for building connections between families and other services. While further research is required, such benefits appear to include:

✓ Increasing families' willingness to engage with other forms of community service delivery (Incus Group)

✓ Embedding formal linkages between early health and education programs for 0-5 year olds (Tamworth Interviews)

✓ Being used as a tool for agency workers supporting vulnerable families to facilitate positive engagement (Incus Group)



## Family-preschool connections

In many Imagination Library delivery locations, early learning centres receive a copy of the same book that families receive every month.

This creates the opportunity for the books to serve as a touchpoint between the family and the early learning centre, scaffolding and reinforcing the child's formal learning.

'This program gives me so much validation that my community cares about the future of my son.'  
- Parent, Tamworth



## Whole-of-family connections

**47%** of caregivers said after six months of participating in the program that people other than the primary caregiver were reading to the child, compared to 3% in the baseline survey (UWA National Impact Report 2020)

Incus Group found that multiple members of the family use the book, and multiple members of the household benefit from the program

'Now Harriet is in preschool the kids in the classroom talk about the book'  
- Ashleigh Dallas, DPIL Ambassador and parent

'It's even got my husband reading to the kids too'  
- Parent, Bendigo

'The children know the same book characters... when they have reading in the centres, the children say "I love this part"'  
- Tamworth council representative



## Child-caregiver connections

**79%** of caregivers agreed or strongly agreed that 'I feel more connected to my child through reading the Imagination Library books' (Incus Group)

"When the older brother reads to the little brother it's so special"  
- Parent, Tamworth

Incus Group found that increased connectedness due to shared reading can extend to siblings and strengthen whole-of-family relationships

# Return on investment



# Evidence for value of shared reading

We know that a modest increase in shared reading has a material impact on Year 3 NAPLAN scores.

**We know that a child read to 6-7 days per week at 2-3 years of age has:**



Year 3 NAPLAN reading scores 26.3 points higher on average (equivalent to 20 extra weeks of schooling in Year 3)



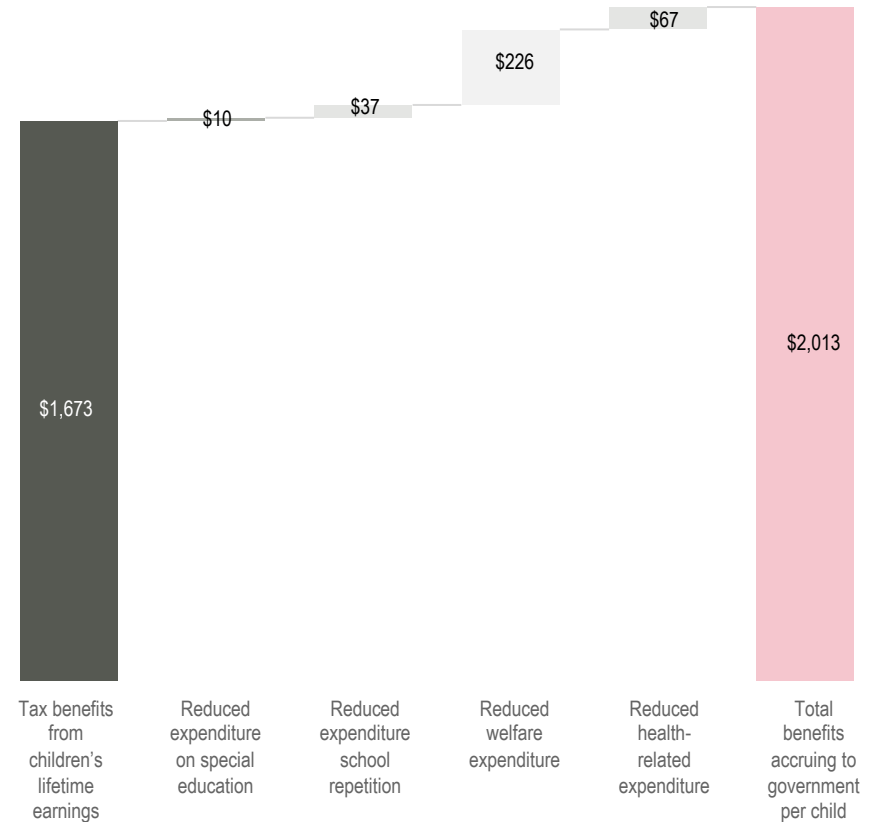
Year 3 NAPLAN numeracy scores 15.4 points higher on average (equivalent to 12 extra weeks of schooling in Year 3)

This difference in scores is in comparison to a child read to 0-5 days per week, after controlling for socio-demographic factors.<sup>1</sup>

*Note: We assume based on other research on shared reading that other changes in reading behaviour would also result in improvements to NAPLAN scores (for example, if a child went from being read to 0 times a week to 3 times a week; or if a child's engagement in shared reading doubled in duration). However, the research is not presented with sufficient granularity to confirm the impact of other changes on Year 3 NAPLAN scores.*

Previous analysis suggests that the monetary benefit to government of a 14-point increase in Year 3 NAPLAN scores is around \$2,000 per student.<sup>2\*^</sup>

Fiscal benefits accruing to government per child from 14-point increase in Year 3 NAPLAN scores



<sup>1</sup> Yu and Daraganova, 2014 (which draws from data from the *Longitudinal Study of Australian Children*).

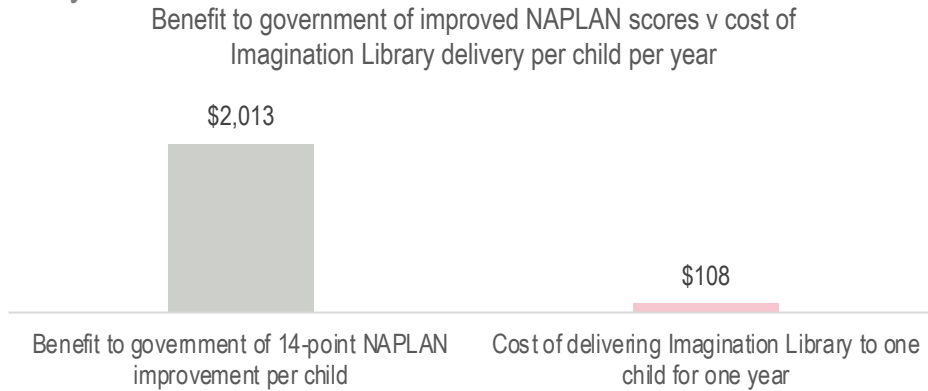
<sup>2</sup> PWC, 2019; Australian Productivity Commission, 2019

\* We based our analysis on a 14-point increase in Year 3 NAPLAN scores (combined literacy and numeracy) because this was the effect size used in the previous analysis on which we relied (PWC analysis on the monetary value of one year of early learning attendance). According to Yu and Daraganova 2014, the impact of shared reading on Year 3 NAPLAN scores is higher than 14 points, meaning our analysis is inherently conservative. For more information on our methodology, see Appendix 4.

^ 'Government' here includes both Federal and State / Territory Governments.

# Return on Investment for Imagination Library

For the program to break even, we estimate that around one in every twenty participating families would need to start reading to their child 6-7 times per week as a result of the Imagination Library.<sup>^</sup>



Data indicates that the program actually leads to one in five families reading to their child 6-7 times per week – meaning it potentially offers a four-for-one return on investment.

UWA survey data collected in 2020 shows that **22% of families started reading to their child 6-7 days per week** after 12 months of participation in the Imagination Library program.<sup>1</sup>

This would mean that the program offers a **four-for-one return on investment**.

Given our intentionally conservative approach, there is reason to believe the actual return on investment for government is even higher than that.

## Our methodology is intentionally conservative:

- Our analysis calculates the return on investment **on average across the Australian population**. Because the Imagination Library program presently focuses on lower socio-economic communities, the program is likely more cost effective than a program delivered on a whole-of-population basis (for more, see page 19).
- Research shows **shared book reading has a greater impact on Year 3 NAPLAN scores** than the effect size used in the economic analysis we relied on (which was based on a 14-point improvement in NAPLAN scores from one year of early learning).
- Because of data limitations, our analysis only captures a **subset of the monetisable benefits that flow from the Imagination Library**. Benefits not captured include those that accrue to other stakeholders (e.g., employers; children and families); or that did not rely on Year 3 NAPLAN results (e.g., most benefits flowing from reduced expenditure on health and crime); and benefits of the program not directly related to improved literacy and numeracy (such as connecting vulnerable families to other services through wraparound support; parent engagement in children's learning; increasing children's engagement with non-primary caregivers).
- The research we have on the impacts of shared book reading only compares children read to 0-5 times per week with children read to 6-7 times per week. There are likely also **monetisable benefits from other types of improvements** (for example, a child being read to 3 times per week instead of 0 times per week; increased duration of book reading) – however, research is not yet sufficiently granular to confirm this so these could not be included in our analysis.

\* We use the same standard for reading frequency here as Yu & Daraganova, 2014 (6-7 days per week).

<sup>^</sup> The cost of delivery based on program documentation provided by United Way Australia is \$9 per book per child x 12 books per year = \$108 per child per year. We calculated ROI on the basis of cost of delivery for one year because we consider this to be a reasonable approximation of the 'dosage' of Imagination Library required to achieve a change in shared reading activities (given most Australian evidence on the impact of the Imagination Library compares families at commencement of the program; and after 6 months of participation).

<sup>1</sup> UWA survey data, 2020 [unpublished, provided to dandolopartners]

## Future program directions

# Adopting a universal approach

UWA asked us to consider the benefits of adopting a universal approach to delivering the Imagination Library. A universal approach would deliver benefits to more children, but at a significantly higher cost.

## What does the approach involve?



A **universal approach** involves rolling a program out across the general population, without attempting to tailor it to the beneficiaries that need the services the most.



This differs from **targeted approaches**, which aim to deliver programs directly to particular groups of beneficiaries (for example, those in lower socio-economic areas).

Universal approaches have been adopted in other Imagination Library locations (for example, in a number of US states including Tennessee, the program is rolled out to every child).

In Australia, the Imagination Library is generally targeted by geographic area (but delivered to all children within a specific area).

## Potential benefits of the proposed approach:

- ✓ Even families that already practice shared reading and have books in the home stand to benefit from:
  - Increased awareness that shared book reading should start as early as possible (i.e., including newborns);
  - Increased frequency, duration and quality of reading;
  - Increased frequency of non-primary caregivers and other adults reading to the child; and
  - Strengthened connections with the community and other services, such as health and early learning.
- ✓ In a universal approach, the overall cost per child of delivering the program reduces due to economies of scale.
- ✓ When programs are targeted at the community level, individuals who need the program but do not live within the targeted community can miss out (for example, lower socio-economic families that happen to live in wealthier postcodes).
- ✓ Universal programs can reduce the stigma associated with receiving a 'handout'.
- ✓ Universal programs can make a broader contribution to lifting literacy and numeracy standards – which is essential for Australia's future economic prosperity.
- ✓ Even in a universal program, research is clear that the children that need the program the most will derive the greatest benefit. As such, even universal programs can serve as an equaliser.

## Potential risks / downsides to the proposed approach:

- Where the program is delivered universally, UWA will inevitably be delivering some services to families that already have best practice for shared reading, and will not derive as much value from the program.

UWA asked us to consider the benefits of deepening and further embedding the wraparound approach – currently in use in Tamworth, Ryde and Mount Druitt – more broadly. While more expensive, the program has the potential to create significant benefits for vulnerable families.

## What does the approach involve?

A wraparound approach is a 'structured means by which coordinated service is provided to individuals with complex needs'.<sup>1</sup>

For the Imagination Library program, taking a wraparound approach – as is currently in place in Tamworth, Ryde and Mount Druitt – involves the following key features:

### Guiding principle

United Way is connector / facilitator



### What it looks like in practice

UWA coordinates multiple partners in a particular community

Imagination Library acts as a catalyst for family bonding and shared reading



Imagination Library is a springboard for related initiatives and used in community literacy programming, deepening the program's impact (e.g., library activities; playgroups; speech pathology)

Community stakeholders design enrolment methods



Identify suitable entry points (e.g., in Tamworth, enrolment is done during initial infant hearing tests)

Based on need, community groups provide additional wrap-around services



Through outreach activities, vulnerable families are identified for referral to more intensive services (e.g., immunisation clinics and other health services, community playgroups)

Multiple funders engaged to ensure sustainability



Can include government entities; corporates; community organisations working together to ensure sustainability of funding

Local partners take ownership and drive outcomes



Program is owned by the local community, who are able to adapt in line with their needs

## Potential benefits of the proposed approach:

- ✓ Creates a soft entry point for vulnerable families to connect with services for holistic, integrated support
  - Enabling service delivery organisations to better engage with vulnerable families creates significant spillover benefits (e.g., from enabling delivery of other services such as health)
- ✓ Builds connections and capability across community services, local government, business and families, enabling service delivery to be carried out more efficiently
- ✓ Enables gaps in service delivery to be identified in a way that takes the real needs of communities into account
- ✓ Engagement of multiple partners and funders strengthens program sustainability

## Potential risks / downsides to the proposed approach:

- Because they involve numerous stakeholders, wraparound approaches delivered in collaboration require experienced delivery partners and careful management (for example, with regard to shared responsibilities; and monitoring and evaluation).

<sup>1</sup> Gonski Institute for Education, 2020

UWA asked us to consider the potential effectiveness of developing a portal for parents and educators. The approach has potential benefits, though there is a risk it may not be widely used.

## What does the approach involve?

To augment existing Imagination Library activities, UWA is planning to develop an online portal for parents and educators. The portal will contain resources for parents – developed in partnership with subject matter experts – that share knowledge and activities, and provide gentle encouragement to read regularly. Resources for parents would include:



Articles, videos and tip sheets on topics of interest to parents, such as choosing books for a child based on their age, and using different languages to read picture books



Demonstration storytime videos using Imagination Library books, which guide families through the story, to illustrate reading techniques and build parents' confidence with reading



Tip sheets for a subset of Imagination Library books translated into common community languages

In addition, an online partner hub will provide access to resources designed for those implementing the program, such as kindergarten services, playgroups and libraries. These resources will focus on information sharing among organisations, best practice in early literacy, and capacity building for staff.

A monthly email sent to participating early learning services will provide details of the month's book, the accompanying tip sheet, book-related activity ideas and a related resource designed to build capacity.

## Potential benefits of the proposed approach:

- ✓ Providing additional resources about Imagination Library books to parents and educators has the potential to strengthen the connection between families and early learning services and reinforce the benefits of formal learning at home
- ✓ Making translated versions of tip sheets available could strengthen program effectiveness for families that do not speak English as their first language – a group associated with lower levels of shared reading
- ✓ The online partner hub could support the deepening of the wraparound approach (see page 20), building connections between families and other services and strengthening connections with community
- ✓ It is a relatively low-cost intervention that, if used as intended, could reinforce the success of the overall program
- ✓ The online partner hub could result in broader spillover benefits, such as improved collaboration among partner organisations

## Potential risks / downsides to the proposed approach:

- There is already a significant amount of information and guidance online for parents on reading and literacy, which may reduce the portal's impact and create a risk of duplication
- Digital literacy is likely mixed among low socio-economic groups
- The level of demand for the portal among parents and educators is unclear, so hard to assess how much the portal would be used

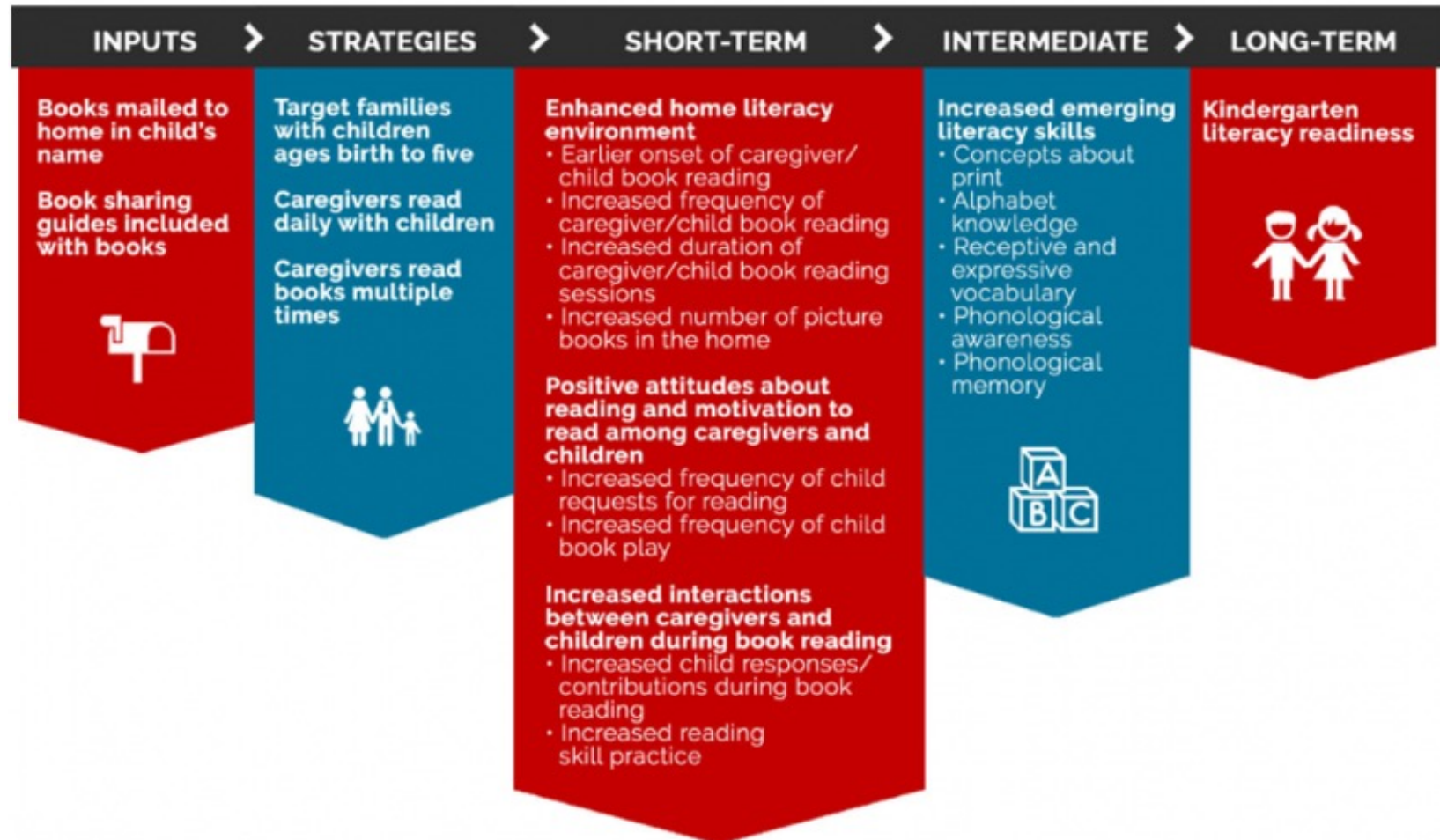
# Appendices

# Appendix 1: Imagination Library Logic Model

Formal version of Imagination Library Logic Model provided by Dollywood Foundation and used in Australia and internationally.

## Logic Model

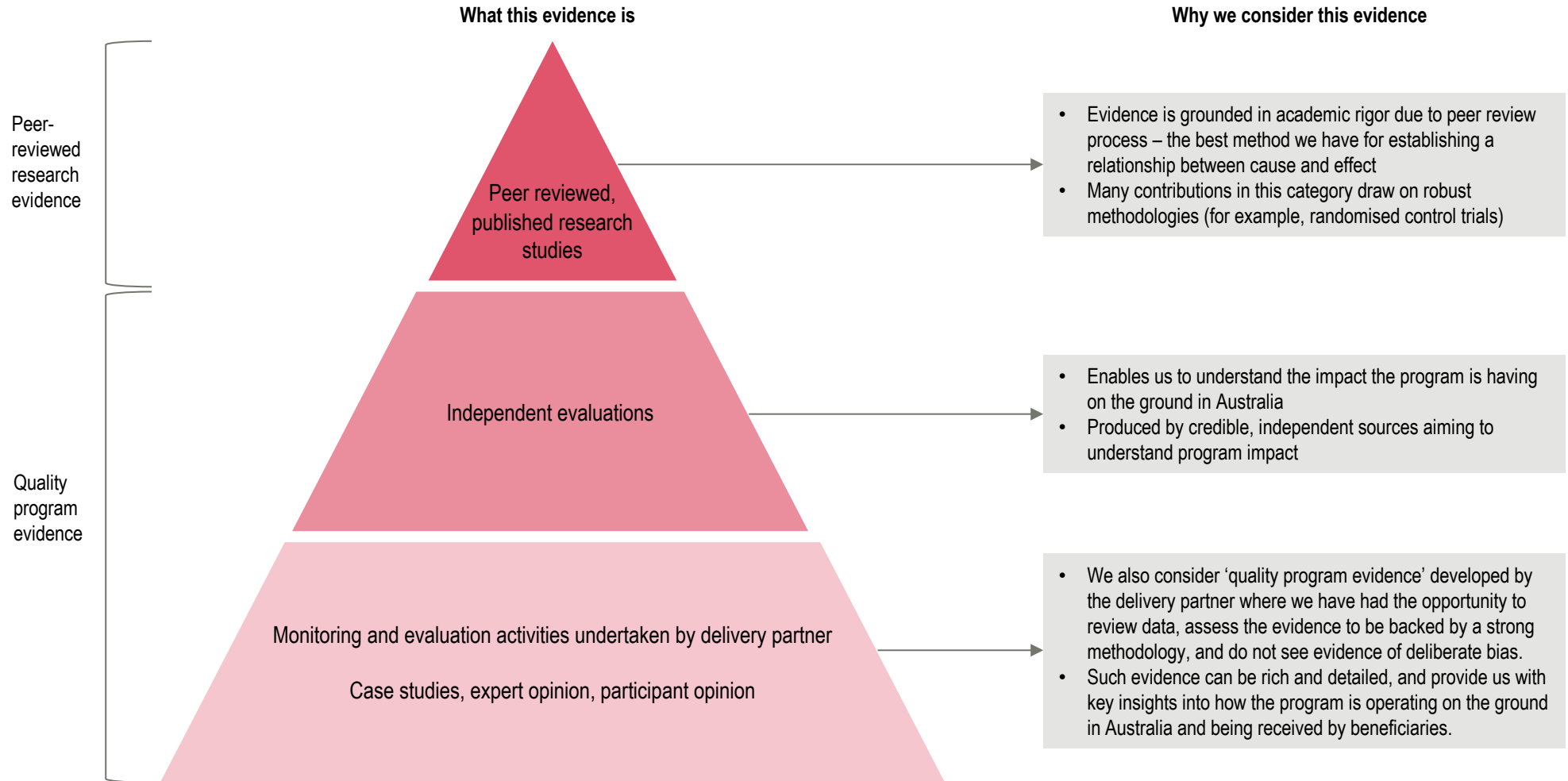
*Based on Imagination Library Research Findings and Literature Review*





# Appendix 2: Hierarchy of evidence

There is a body of peer-reviewed research evidence about the Imagination Library program, especially from international sources. Australian program evidence confirms these international findings.



Hierarchies of evidence are commonly used to assess available information (see for example Guyatt and Sackett, 1995). We have developed this streamlined version for the current project.

# Appendix 3: List of Sources

## Peer-reviewed research evidence on the Imagination Library

Authors	Title	Publication	Year	Country
Ann Harvey	Imagination Library: A Study of the Sustained Effects of Participation in an Early Reading Program	The Dela Kappa Gamma Bulletin: International Journal for Professional Educators	2014	USA
Ann Harvey	Improving Family Literacy Practices	Sage Open	2016 (a)	USA
Ann Harvey	Sustained Effects of Participation in Imagination Library	READ: an online journal for literary educators	2016 (b)	USA
Funge et al	Promoting Positive Family Interactions: Evaluating a Free Early Childhood Book Distribution Program	Early Childhood Education Journal	2017	USA
Neyer et al	Beyond the Numbers: social and emotional benefits of participation in the Imagination Library home-based literary programme	Journal of Early Childhood Literacy	2018	USA
Ridzi et al	From Read Ahead to Literacy Coalition: the Leadership Role of the Central New York Community Foundation in the Creation of a Local Institution	Community Literacy Journal	2011	USA
Ridzi et al	The Imagination Library Program: Increasing Parental Reading Through Book Distribution	Reading Psychology	2014	USA
Ridzi et al	The Imagination Library and Kindergarten Readiness: Evaluating the Impact of Monthly Book Distribution	Journal of Applied Social Science	2017	USA
Samiei et al	Examining the Association Between the Imagination Library Early Childhood Literary Program and Kindergarten Readiness	Reading Psychology	2016	USA
Singh et al	Exploring the Literacy Practices of Refugee Families Enrolled in a Book Distribution Program and an Intergenerational Family Literacy Program	Early Childhood Education Journal	2013	USA
Tura et al	Evaluating the Impact of Book Gifting on the Reading Behaviors of Parents and Young Children	Early Years	2021	UK
Waldron	“Dream More, Learn More, Care More, and Be More”: The Imagination Library influencing Storybook Reading and Early Literacy	Reading Psychology	2019	USA
Zwierzchowska-Dod	Books, Babies and Bonding: the Impact of Dolly Parton’s Imagination Library on parental engagement in book-sharing and on child development from 0-5 years old	Swansea University <i>[Please note: This is a recently released PhD and has not yet been through the peer-review process]</i>	2022	UK

# Appendix 3: List of Sources

## Australian Program Evidence

Authors	Title	Publication	Year	Country
Johnson et al	Bendigo Reads – Imagination Library	La Trobe University	2018	AUS
The Incus Group	Evaluation of the Dolly Parton’s Imagination Library For Children in Out of Home Care & Placement Prevention in Victoria	The Ian Potter Foundation	2018	AUS
United Way Australia	Macquarie Park Business Community Partnership	N/A	2022	AUS
United Way Australia	Early Literacy in Australia	N/A	2018	AUS
United Way Australia	The Impact of the Imagination Library on the Home Literacy Environment and associated Emerging Literacy Skills in Infants and Young Children	N/A	2020	AUS
United Way Australia	Tamworth Evaluation Report 2021	N/A	2021	AUS
United Way Australia	Transcript from interviews with Imagination Library stakeholders in Tamworth NSW <i>[collected as part of PhD research]</i>	N/A	2022	AUS
United Way Australia	Other program documentation and data made available to dandolopartners	N/A	2015–2022	AUS

# Appendix 3: List of Sources

## Other sources

Authors	Title	Publication	Accessed at	Year	Country
Australian Bureau of Statistics	Childhood Education and Care Australia	N/A	<a href="https://www.abs.gov.au/statistics/people/education/childhood-education-and-care-australia/jun-2017/44020do001_201706.xls">https://www.abs.gov.au/statistics/people/education/childhood-education-and-care-australia/jun-2017/44020do001_201706.xls</a>	2017	AUS
Australian Institute of Health and Welfare	Australia's Children	N/A	<a href="https://www.aihw.gov.au/reports/children-youth/australias-children/contents/executive-summary">https://www.aihw.gov.au/reports/children-youth/australias-children/contents/executive-summary</a>	2020	AUS
Australian Productivity Commission	Report on Government Services	N/A	<a href="https://www.pc.gov.au/ongoing/report-on-government-services/2019/child-care-education-and-training/early-childhood-education-and-care/rogs-2019-partb-chapter3.pdf">https://www.pc.gov.au/ongoing/report-on-government-services/2019/child-care-education-and-training/early-childhood-education-and-care/rogs-2019-partb-chapter3.pdf</a>	2019	AUS
Brinkman	The Predictive Validity of the AEDI: Predicting later Cognitive and Behavioral Outcomes	Fraser Mustard Centre and Telethon Kids Institute	<a href="https://www.acer.org/files/Brinkman.pdf">https://www.acer.org/files/Brinkman.pdf</a>	2014	AUS
Cameron and Pinto	A Day in the Life: Secure Interludes With Joint Book Reading	Reading, Journal of Research in Childhood Education	<a href="https://www.tandfonline.com/action/showCitFormats?doi=10.1080%2F02568540909594672">https://www.tandfonline.com/action/showCitFormats?doi=10.1080%2F02568540909594672</a>	2009	CAN
Chow et al	Dialogic reading and morphology training in Chinese children: Effects on language and literacy	Developmental Psychology	<a href="https://psycnet.apa.org/record/2007-19851-024">https://psycnet.apa.org/record/2007-19851-024</a>	2018	Hong Kong
Dickinson et al	How Reading Books Fosters Language Development Around the World	Child Development Research	<a href="https://www.hindawi.com/journals/cdr/2012/602807/">https://www.hindawi.com/journals/cdr/2012/602807/</a>	2012	AUS
Farrant and Zubrick	Parent-child Book Reading Across Early Childhood and Child Vocabulary in the Early School Years: Findings from the Longitudinal Study of Australian Children	First Language	<a href="https://journals.sagepub.com/doi/10.1177/0142723713487617">https://journals.sagepub.com/doi/10.1177/0142723713487617</a>	2013	AUS
Gelfer et al	Literacy Education and Families: A program and its progress	Early Child Development and Care	<a href="https://eric.ed.gov/?id=EJ633425">https://eric.ed.gov/?id=EJ633425</a>	2006	USA
Gonski Institute for Education	A Wraparound Approach to 'Whole of Student' Issues: Implementation Framework	N/A	<a href="https://www.gie.unsw.edu.au/sites/default/files/documents/Wraparound%20Guidelines_final.pdf">https://www.gie.unsw.edu.au/sites/default/files/documents/Wraparound%20Guidelines_final.pdf</a>	2020	AUS
Gordon	An Analysis of the First 18 Months of Dolly Parton's Imagination Library in Middletown, Ohio	N/A	<a href="https://drive.google.com/file/d/0BxGQ1Z0VwA4tNmpQamxrNmg2Rjg/view?resourcekey=0-IUpXApE-XrANF4rn4m8ydg">https://drive.google.com/file/d/0BxGQ1Z0VwA4tNmpQamxrNmg2Rjg/view?resourcekey=0-IUpXApE-XrANF4rn4m8ydg</a>	2010	USA

# Appendix 3: List of Sources

Authors	Title	Publication	Accessed at	Year	Country
Guyatt et al	Users' guides to the medical literature. IX. A method for grading health care recommendations.	JAMA	<a href="https://pubmed.ncbi.nlm.nih.gov/7500513/">https://pubmed.ncbi.nlm.nih.gov/7500513/</a>	1995	USA
Hayes and Berthelsen	Longitudinal Profiles of Shared Book Reading in Early Childhood and Children's Academic Achievement in Year 3 of School	School Effectiveness and School Improvement	<a href="https://www.tandfonline.com/doi/abs/10.1080/09243453.2019.1618347?journalCode=nses20">https://www.tandfonline.com/doi/abs/10.1080/09243453.2019.1618347?journalCode=nses20</a>	2019	AUS
Houng and Justman	NAPLAN Scores as Predictors of Access to Higher Education in Victoria	Melbourne Institute	<a href="https://melbourneinstitute.unimelb.edu.au/publications/working-papers/search/result?paper=2156513">https://melbourneinstitute.unimelb.edu.au/publications/working-papers/search/result?paper=2156513</a>	2014	AUS
Lelle, M A	Imagination Library Annual Evaluation Report: A Project of Willard Library funded by the W K Kellogg Foundation	N/A	<a href="https://drive.google.com/file/d/0BxGQ1Z0VwA4tUjJhY1ZkWTJiVXM/view?resourcekey=0-jJl9o-Y8oDs59DbKp7ZvZA">https://drive.google.com/file/d/0BxGQ1Z0VwA4tUjJhY1ZkWTJiVXM/view?resourcekey=0-jJl9o-Y8oDs59DbKp7ZvZA</a>	2011	USA
Li and Fleer	Family Pedagogy: Parent-child Interaction in Shared Book Reading	Early Child Development and Care	<a href="https://eric.ed.gov/?id=EJ1082507">https://eric.ed.gov/?id=EJ1082507</a>	2015	AUS
Lorio et al	A Systematic Review of Parent-Child Shared Book Reading Interventions for Infants and Toddlers	Hammil Institute on Disabilities	<a href="https://journals.sagepub.com/doi/10.1177/0271121421998793">https://journals.sagepub.com/doi/10.1177/0271121421998793</a>	2021	USA
Lelle, M A	Imagination Library Annual Evaluation Report: A Project of Willard Library	N/A	<a href="https://usa.imaginationlibrary.com/medias/file/Imagination%20Library">https://usa.imaginationlibrary.com/medias/file/Imagination%20Library</a>	2011	USA
Mol and Bus	To Read or Not to Read: a Meta-analysis of Print Exposure from Infancy to Early Adulthood	Psychological Bulletin	<a href="https://pubmed.ncbi.nlm.nih.gov/21219054/">https://pubmed.ncbi.nlm.nih.gov/21219054/</a>	2011	USA
Pascoe and Brennan	Lifting our Game: Report of the review to Achieve Educational Excellence in Australian Schools Through Early Childhood Interventions	N/A	<a href="https://www.education.vic.gov.au/Documents/about/research/LiftingOurGame.PDF">https://www.education.vic.gov.au/Documents/about/research/LiftingOurGame.PDF</a>	2017	AUS
PWC	A Smart Investment for a Smarter Australia: Economic analysis of universal early childhood education in the year before school in Australia	N/A	<a href="https://www.thefrontproject.org.au/images/downloads/ECO%20ANALYSIS%20Full%20Report.pdf">https://www.thefrontproject.org.au/images/downloads/ECO%20ANALYSIS%20Full%20Report.pdf</a>	2019	AUS
Shahaeian et al	Early Shared Reading, Socioeconomic Status, and Children's Cognitive and School Competencies: Six Years of Longitudinal Evidence	Scientific Studies of reading	<a href="https://www.tandfonline.com/doi/full/10.1080/10888438.2018.1482901?needAccess=true">https://www.tandfonline.com/doi/full/10.1080/10888438.2018.1482901?needAccess=true</a>	2018	AUS

# Appendix 3: List of Sources

Authors	Title	Publication	Accessed at	Year	Country
Shoghi et al	Let's Read Literature Review	Murdoch Children's Research Institute	<a href="https://www.letsread.com.au/About/Research/Resource/s/2013-Let-s-Read-Literature-Review">https://www.letsread.com.au/About/Research/Resource/s/2013-Let-s-Read-Literature-Review</a>	2013	AUS
Sim and Berthelsen	Shared Book Readings by Parents with Young Children: Evidence Based Practice	Australian Journal for Early Childhood	<a href="https://journals.sagepub.com/doi/10.1177/183693911403900107">https://journals.sagepub.com/doi/10.1177/183693911403900107</a>	2014	AUS
Sukhram and Hsu	Developing Reading Partnerships Between Parents and Children: a Reflection on the Reading Together Program	Early Childhood Education Journal	<a href="https://link.springer.com/article/10.1007/s10643-011-0500-y">https://link.springer.com/article/10.1007/s10643-011-0500-y</a>	2012	USA
Taylor et al	Associations between clusters of early life risk factors and developmental vulnerability at age 5: a retrospective cohort study using population-wide linkage of administrative data in Tasmania, Australia	BMJ Open	<a href="https://bmjopen.bmj.com/content/bmjopen/10/4/e033795.full.pdf">https://bmjopen.bmj.com/content/bmjopen/10/4/e033795.full.pdf</a>	2020	AUS
Vanobbergen et al	Bookbabies, their Parents and the Library: an evaluation of a Flemish reading program in families with young children	Educational Review	<a href="https://www.tandfonline.com/doi/abs/10.1080/00131910903045922?journalCode=cedr20">https://www.tandfonline.com/doi/abs/10.1080/00131910903045922?journalCode=cedr20</a>	2009	IK
Weadman et al	The Development and Psychometric Properties of a Shared Book Reading Observational Tool: The Emergent Literacy and Language Early Childhood Checklist for Teachers	First Language	<a href="https://journals.sagepub.com/doi/full/10.1177/01427237211056735">https://journals.sagepub.com/doi/full/10.1177/01427237211056735</a>	2021	AUS
Westerveld et al	Shared Book Reading Behaviours of Parents and Their Verbal Preschoolers on the Autism Spectrum	Journal of Autism and Developmental Disorders	<a href="https://pubmed.ncbi.nlm.nih.gov/32067147/">https://pubmed.ncbi.nlm.nih.gov/32067147/</a>	2020	AUS
Wick et al	Looking or Talking: Visual Attention and Verbal Engagement During Shared Book Reading of Preschool Children on the Autism Spectrum	Autism	<a href="https://www.researchgate.net/publication/339232714_Looking_or_talking_Visual_attention_and_verbal_engagement_during_shared_book_reading_of_preschool_children_on_the_autism_spectrum">https://www.researchgate.net/publication/339232714_Looking_or_talking_Visual_attention_and_verbal_engagement_during_shared_book_reading_of_preschool_children_on_the_autism_spectrum</a>	2020	AUS
Yu and Daraganova	Children's early home learning environment and learning outcomes in the early years of school	Australian Institute of Family Studies	<a href="http://talkingtogether.com.au/wp-content/uploads/2018/09/childrens-early-home-learning-environment-and-learning-outcomes-in-the-early-years-of-school.pdf">http://talkingtogether.com.au/wp-content/uploads/2018/09/childrens-early-home-learning-environment-and-learning-outcomes-in-the-early-years-of-school.pdf</a>	2014	AUS

# Appendix 4: ROI Methodology

Drawing from PWC analysis of the benefits of early childhood education, we calculated that the benefit to government from an average 14-point increase in Year 3 NAPLAN results across the population is \$595.74 million (equal to \$2,013 per child).<sup>1</sup>

1

To calculate the monetary value to government of improved Year 3 NAPLAN scores, we drew from PWC analysis of the value of early childhood education. The PWC analysis assumed one year of early childhood education led to an average 14-point increase in Year 3 NAPLAN scores. Research shows that more frequent shared reading leads to a greater than 14-point increase in Year 3 NAPLAN scores.<sup>2</sup>



PWC identified \$4.74 billion in benefits associated with providing 15 hours of early childhood education in the year before school. Of these benefits, governments received \$1.96 billion; the other benefits accrued to other stakeholders (parents / carers, children, and employers).

2

**However, not all categories of benefit that accrue to government as a result of early childhood education are relevant to shared book reading.** We selected only the categories of benefit that (a) flow to government, rather than other stakeholders; and (b) were calculated based on a change in Year 3 NAPLAN results. This conservative calculation of total benefits to government flowing from improved Year 3 NAPLAN results = \$595.74 million.



3

We then calculated the benefit per child to the government of a 14-point increase in NAPLAN results, by taking this number and dividing it by the number of children in enrolled in a preschool program in the relevant year, 2017 (295,826 children).<sup>3</sup>



4

Based on this calculation (\$595.74 million / 295,826), we estimate that the **benefit that accrues to the government per child across the population as a result of a 14-point increase in Year 3 NAPLAN results is \$2,013 per child.**

Benefit of early childhood education	Present value (3 % discount rate) \$ million	Group affected	Calculated through NAPLAN
Parental earnings benefits	\$1,463	Parents / carers	N/A
Taxation benefits of additional parental income	\$313	Government	N/A
Higher earnings for children over lifetime	\$1,064	Children	N/A
Additional productivity benefits from children	\$319	Employers	N/A
Taxation benefits from children's additional lifetime earnings	\$495	Government	Yes
Reduced expenditure on special education	\$3	Government	Yes
Reduced expenditure on school repetition	\$11	Government	Yes
Reduced health expenditure	\$605	Government	Part (\$19.74m)
Reduced crime-related expenditure	\$522	Government	No
Reduced welfare expenditure	\$67	Government	Yes
Reduction in welfare payments to individuals	-\$67	Children	N/A
Other costs – additional schooling costs	-\$58	Government	Yes
<b>Total early childhood education benefits</b>	<b>\$4,737</b>		
<b>Total benefit to government from 14-point increase in Year 3 NAPLAN results</b>	<b>\$595.74</b>		

1 PWC, 2019  
 2 Yu and Daragonova, 2014  
 3 Australian Productivity Commission, 2019