Improving school readiness: what works?

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Snapshot

- Improved school readiness for children is not only likely to contribute to a positive experience of starting school, but is also likely to have indirect impacts on their later educational attainment, economic opportunity, housing security, community participation, empowerment and health.
- The Department of Communities and Justice (DCJ) commissioned Western Sydney University to complete an evidence review to identify programs that help to improve school readiness for vulnerable children aged 0-6 years. Only systematic reviews, meta-analyses, or studies that used a randomised controlled trial or quasi-experimental design were included.
- Six programs were found to contribute to improving school readiness for vulnerable young children. These programs vary in setting, mode and length..
- The review identified three core components that are common across these effective programs:
    - Relationship building
    - Academic preparedness
    - Readiness of the child for the classroom
- The review highlights a need for more high quality Australian research focusing on how schools can prepare for children, and on the effectiveness of programs in diverse Australian contexts, particularly with Aboriginal and culturally and linguistically diverse families.

Introduction

The transition to school is a pivotal life stage for both children and their families, and a significant event for educators.[1] A child's experience of this transition can have consequences for their longer-term academic, social and wellbeing outcomes.[2, 3, 4] Improved school readiness for children is not only likely to contribute to a positive experience of starting school, but is also likely to have indirect impacts on their later educational attainment, economic opportunity, housing security, community participation, empowerment and health.

This Evidence to Action Note describes research on programs and activities that have been designed to support children, their families and educational organisations to prepare for children's transition to school.

The evidence review was undertaken by Western Sydney University.[5]

The review was carried out following the technical specifications for the conduct of reviews for DCJ's Evidence Portal. This ensures a rigorous and consistent approach to the assessment of program effectiveness.[6] The research team critically assessed the

strength of evidence for programs designed to improve school readiness using the Evidence Portal rating scale. Six programs were identified as contributing to improving the school readiness of vulnerable young children.

The programs used a range of approaches, including delivering sessions through home visits, embedding learning sessions with children into early childhood settings, and using video feedback to support positive parent-child learning interactions. Approaches to supporting the learning and development of younger children tended to require parent involvement, and approaches for older children tended to be delivered in early childhood settings. All but two of the programs were focused on working with parents and/or children rather than teachers and/or educational organisations.

Common core components and flexible activities of programs shown to improve school readiness were identified.

Why is this important?

The transition to school is a dynamic process that involves children, families and educators adjusting to changes in environments, identities, relationships, interactions and expectations, as children move into their first year of school.[7] 'School readiness' is widely understood as a multi-dimensional concept that includes:

- children's readiness for learning and development in the school environment
- schools' readiness, in terms of the school environment and practices that foster a smooth transition and learning journey for all children
- families' readiness, including parental/caregiver attitudes and involvement in their children's early learning, development and transition to school.[8]

Improved school readiness is likely to contribute to positive outcomes. For children, positive outcomes may include feeling comfortable and safe, making friends and participating and showing positive attitudes and dispositions to learning. For families, positive outcomes may include being involved in the school, being partners in their children's learning and having collaborative relationships with educators. Positive outcomes for educators may include feeling able to confidently plan and prepare for each child, providing opportunities for families to be involved and having respectful, responsive relationships with families.[9, 10] A successful school transition may also have longer-term consequences for children's educational attainment and other outcomes, such as economic opportunity, housing security, community participation, empowerment and health.

What did the evidence review find?

Method

The rapid evidence review was guided by the question: 'Which interventions improve school readiness for vulnerable children aged six years or younger?'

The evidence review followed the method outlined in the Evidence Portal Technical Specifications.

The search strategy returned 1,718 publications. The publications were screened to ensure that they fell within scope and were directly relevant to the guiding research question. Only systematic reviews, meta-analyses, or studies that used a randomised controlled trial or quasi-experimental design were included. A risk of bias assessment was then carried out, and only studies found to have a low to moderate risk of bias were included. Following all exclusions, seven studies were included in the review. These seven studies described six different school readiness programs.

The research team then conducted a content analysis of each program to identify core components and related flexible activities common across the evidence-informed programs. Core components are the fixed aspects of an intervention or program, while flexible activities are the different ways the intervention may be implemented, according to the local context.

For more information about how the evidence review was conducted see the Improving School Readiness Evidence Review Protocol.

Key Findings

Outcomes

The review identified outcome domains and client outcomes to determine program effectiveness. The most common outcome domain was school readiness (18 client outcomes), with all programs designed to improve child conduct, behaviour and engagement in the classroom, enhance prosocial skills and emotional development, and support academic preparedness and school adjustment. One program also had the positive parenting outcome domain, and aimed to enhance positive parent-child interactions.

Evidence-informed programs

Of the six programs identified:

- None of the programs achieved a 'well supported by research evidence' rating, which requires at least one high quality systematic review with meta-analyses based on randomised controlled trials to report statistically significant positive effects. Nor did any of the programs receive a 'supported by research evidence' rating, meaning that at least two high quality randomised controlled trial or quasi-experimental design studies report statistically significant positive effects.
- Two programs had 'promising' research evidence, meaning that at least one high quality randomised controlled trial or quasi-experimental design study reports statistically significant positive effects (The Incredible Years Teacher and Child Training Program and Smart Beginnings).
- Four programs were rated as having 'mixed research evidence with no adverse effects' (Second Step Early Learning, Kids in Transition to School, Roots of Resilience and Family Check-Up).

Therefore, **six programs were identified as contributing to improving the school readiness of vulnerable young children.** These were delivered in a range of settings. The six programs and their evidence ratings are listed in Table 1.

Table 1: Evidence ratings of school readiness programs

Program	Delivery setting	Outcomes	Evidence Rating
The Incredible Years Teacher and Child Training Program	Classroom	School readiness	Promising research evidence
Smart Beginnings	Paediatric primary health care Home	School readiness Positive parenting	Promising research evidence
Second Step Early Learning	Classroom	School readiness	Mixed research evidence (with no adverse effects)
Kids in Transition to School (KITS)	Classroom	School readiness	Mixed research evidence (with no adverse effects)
Roots of Resilience	Online	School readiness	Mixed research evidence (with no adverse effects)
Family Check-Up	Home	School readiness	Mixed research evidence (with no adverse effects)

The review identified a number of different program approaches

The programs used a range of different approaches, including embedding learning sessions with children on self-regulation and other behaviours into early childhood settings, home visiting sessions and video feedback methods to support positive parent-child learning interactions. There were also a range of different approaches in relation to the age of the child. Approaches to supporting the learning and development of young children focused on parent involvement, and approaches for older children focused on early childhood settings.

All but two of the programs worked directly with parents and/or children. This is noteworthy given that the school readiness research literature argues that school readiness requires three components: child readiness, family readiness, and readiness of the educators and school.[11] The reviewed studies show an understanding that schools must be willing to adapt, but are still focused on the preparedness of children and families. The two studies that do address school preparedness in the form of educator training still largely base their measures of success on child outcomes, rather than educator or school outcomes.

Core Components and Flexible Activities

The review identified three core components and eight flexible activities in programs that contribute to Improving school readiness. The three common **core components** are: **relationship building**, **academic preparedness** and **readiness of the child for the classroom**. See Table 2 for descriptions of the core components and flexible activities. See Appendix 1 for practice examples.

While it helps to identify common components of programs across the evidence base, the core components approach does not indicate which components are critical to program effectiveness, nor does it provide a measure of the acceptability of components with different groups. Many of the effective programs identified in the review had other components that may have been critical to their success in local contexts. Furthermore, the evidence of effectiveness relates to programs delivered in their entirety and does not indicate whether a new combination of components will be equally effective in achieving specific outcomes

Table 2: Improving School Readiness Core Components and Flexible Activities

Core Component	Description and Flexible Activities
Relationship building	Supportive relationships between parents/carers and teachers, between children and teachers, and between children and parents are fundamental to school readiness.
	Flexible activities to support relationship building include **teacher-initiated phone calls to parents, class newsletters sent to parents, joint student-parent homework, parent meetings,** along with **increased teacher responsiveness to students.** Teachers also play a role in enhancing the parent-child relationship by **providing at-home activities for parents and children to complete together**.
Academic preparedness	Helping children to build skills that prepare them academically for starting school is a core component of the identified programs.
	Flexible activities to support academic preparedness include **building executive functioning capacity**, which involves developing working memory, emotional

	regulation and organisational skills, and **progressing language development and pre-literacy competencies**. Some of the specific techniques used by the identified programs include letter recognition and phonological awareness, "brain games" and exposure to books.
Readiness of the child for the classroom	Children need certain behavioural skills for a successful transition to the school classroom environment. Flexible activities to enhance classroom readiness include **developing skills in self-regulation, cultivating social-emotional skills**, and **learning classroom protocols and behaviours.** Specific techniques to support appropriate behavioural skill building include encouragement of student engagement and on-task work, pro-social problem solving, developing a feelings vocabulary, explicit teaching, modelling and reinforcing, and compliance with rules and teacher directions.

Limitations

The evidence identified in this review has some limitations:

- The technical specifications for the review limited inclusion to programs that have been subject to a randomised controlled trial or a high quality quasi-experimental design study, and excluded non-peer reviewed and grey literature. This means the findings only relate to programs that met the narrow scope for inclusion and had a rigorous evidence base. There may be additional studies addressing relevant programs and program outcomes that were not captured. It is important not to confuse a lack of evidence unearthed in the review with a lack of program effectiveness.

- Requiring such a high standard of evidence resulted in a positive bias towards US-based programs – all of the programs reviewed relied exclusively on US-based studies. Consequently, the review did not report on outcomes in relation to children who experience marginalisation and adversity in the Australian context, in particular Aboriginal children and children from culturally and linguistically diverse (CALD) backgrounds.

Where to from here?

The findings from the review allow us to assess current practice against evidence-informed models and build more of what works into program design and practice across services targeting vulnerable children. Some of the programs identified in the review are already being implemented in NSW (e.g. Second Step Early Learning). DCJ is applying evidence from the review to improve child and family support services.

The findings have implications for the selection and implementation of programs.

Program ratings are one key consideration in deciding which programs to fund and deliver. The local context is also important. The best programs on offer should be implemented, however careful consideration should be given when adapting international programs to ensure that they are relevant to diverse Australian contexts. Programs should only be implemented after extensive consultation with practitioners and community members with cultural knowledge. Although the evidence base is currently limited, programs developed in the Australian context should not be overlooked.

In applying a core components approach, which seeks to overcome some of the challenges posed by manualised programs, the review helps to build a common evidence-informed framework that DCJ and service providers can use to develop and implement flexible, tailored services.

The reviewed studies focused on behavioural change in children and families to improve school readiness. The studies gave much less attention to educator preparedness, and no attention to school culture and the role of the educational organisation in supporting children during this pivotal life stage. There is a need to build evidence about how schools can prepare for children, and the approaches that are effective in responding flexibly to children's needs. The review also highlights a need for more high quality Australian research examining the effectiveness of childhood interventions and the implementation of international programs in diverse Australian contexts, including specifically with Aboriginal and CALD families. Greater investment in rigorous evaluation of programs to build the body of evidence is vital.

Implementation considerations

- whether the program has been manualised to help service providers deliver it with fidelity
- whether the program is flexible enough to be adapted to meet the needs of different groups without compromising program effectiveness
- characteristics of the target group/s that the program has been delivered effectively to
- the required skills and qualifications of the service provider
- how the program will work with other available services
- the purpose of implementing the program and how this aligns with current funding priorities
- program dosage.

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Appendix 1: Core Components Practice Examples

Practice example

Core component: Relationship building.

Flexible activity: Building teacher-parent relationships.

Implementation: This activity involves teachers consciously fostering trusting and warm relationships with the parents of their students. Teachers use a variety of opportunities to interact with parents: contacting parents via telephone, sending notes or newsletters home with students, preparing weekly handouts for parents, inviting parents to visit the classroom, and connecting with parents in small groups or via larger meetings.

Target groups: Teachers, parents.

Programs that use this flexible activity: The Incredible Years Teacher and Child Training Program, Second Step Early Learning.

Practice example

Core component: Academic preparedness.

Flexible activity: Progressing language development and pre-literacy competencies.

Implementation: This flexible activity helps children to develop language skills and pre-literacy capacities such as letter naming, phonological awareness, print conventions and comprehension. Specific literacy activities include a letter of the day (letter naming and letter–sound knowledge), a poem of the week (phonological awareness, concepts about print, language), and storybook and dramatic activities (understanding of narrative). It has also been implemented with infants during regular home visits. Here, coaches provide parents with developmentally appropriate learning material, such as a book or hand puppet, and demonstrate how to interact with infants in ways that develop language skills (e.g., imitating infant sounds).

Target groups: Children in foster care transitioning to kindergarten, pre-schoolers

Practice example

Core component: Readiness of the child for the classroom.

Flexible activity: Developing skills in self-regulation.

Implementation: It is important for children to develop skills in self-regulation, as it enables them to participate in learning in the classroom, behave in socially acceptable ways and make friends as they learn to take turns in games and conversations. These skills include learning to regulate reactions to strong emotions like frustration, excitement, anger and embarrassment, to calm down after feeling strong emotions, and to focus on a task and control impulses. This activity is implemented through explicit teaching, modelling, and reinforcing.

Target groups: Students transitioning to kindergarten.

Programs that use this flexible activity: Kids in Transition to School, Second Step Early Learning, Roots of Resilience.

Endnotes

[1] Centre for Education Statistics and Evaluation 2021, *Transition to school: literature review*, NSW Department of Education, Sydney, http://education.nsw.gov.au/cese.

[2] OECD 2017, *Starting Strong V: transitions from early childhood education and care to primary education*, Starting Strong, OECD Publishing, doi:10.1787/9789264276253-en.

[3] Sayers M, West S, Lorains J, Laidlaw B, Moore TG & Robinson R 2012, 'Starting school: a pivotal life transition for children and their families', *Family Matters*, vol. 90, pp. 45-56.

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[6] NSW Department of Communities and Justice 2021, *The Evidence Portal: Technical Specifications*, accessed 14 April 2021, https://evidenceportal.dcj.nsw.gov.au/content/dam/dcj/evidence-portal/documents/evidence-portal-technical-specifications.pdf.

[7] Centre for Education Statistics and Evaluation 2021, *Transition to school: literature review*, NSW Department of Education, http://education.nsw.gov.au/cese.

[8] NSW Department of Family and Community Services 2019, *Prevention and early intervention strategies,* NSW Government, Sydney.

[9] Victoria Department of Education and Training 2017, *Transition: a positive start to school resource kit*, Department of Education and Training, Melbourne, https://www.education.vic.gov.au/childhood/professionals/learning/Pages/transkit.aspx#link90.

[10] QCAA (Queensland Curriculum and Assessment Authority) 2015, *Successful transition to school: what does it look like?*, Queensland Government, https://www.qcaa.qld.edu.au/downloads/p_10/tts_success_trans_school.pdf.

[11] Centre for Education Statistics and Evaluation 2021. *Transition to school: literature review*, NSW Department of Education, Sydney, http://education.nsw.gov.au/cese.