



Education  
Centre for Education  
Statistics & Evaluation

LITERATURE REVIEW

# The transition to school

Centre for Education Statistics and Evaluation



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## The transition to school

In 2015, almost 100,000 students started primary school in New South Wales, including 69,585 students at government schools (Australian Bureau of Statistics 2015). For many of these children, the transition to school will be a positive experience. However, some students may find this transition difficult, and this could have lasting impacts on their educational outcomes.

The importance of a positive transition to school is well recognised across the literature. It is considered a significant event for both children and their families, and one that can have a considerable impact on a child's later educational and social outcomes.

This paper examines the existing literature on the transition to primary school from home and/or early childhood education and care. This encompasses a number of issues, including:

- What constitutes a successful transition to school.
- How school readiness is defined and measured.
- What factors contribute to a positive transition and what factors can make this transition more challenging.
- How the transition to school fits with learning frameworks and progressions.

Although there is a significant amount of literature on this topic, there are few robust studies into what factors and practices contribute to a positive transition. There is also a lack of clarity surrounding some key concepts, including how to define and measure the transition to school.



## Defining the transition to school

Starting school is widely recognised as one of the most significant transitions individuals make, and is certainly one of the earliest. The transition has been described as ‘a major change for children and their families’ (Research Institute for Professional Practice 2011), a ‘landmark event’ (Pianta & Cox 2002) and an event that ‘sets the tone and direction of a child’s school career’ (Pianta & Kraft-Sayre 1999, cited by Dockett & Perry 2001).

The transition to school is not a single event, but can be thought of as a process that occurs over a period of time (Victorian Auditor-General 2015; Research Institute for Professional Practice 2011). There is not a clearly defined time period for this transition, but it is thought that this process begins well before children start school and extends to the point that children and their families feel settled and develop a sense of belonging in their new school (Research Institute for Professional Practice 2011; Australian Institute of Family Studies 2012). This transition not only involves the child, but also their family and the school itself (Pianta & Cox 2006).

A report by the Victorian Auditor-General (2015) divides the transition to school into four stages:

- Preparation: preparing the child to move.
- Transfer: transferring the child from one setting to another.
- Induction: settling the child into their new learning environment.
- Consolidation: continuing to monitor the child’s development and providing necessary support.

When thinking about this transition, it is important to bear in mind that children’s experiences and attitudes during this process may change. Some children may find the initial transition difficult but settle in without problems, whereas others may not have any problems initially but find the longer term transition difficult (New Zealand Ministry of Education 2010). In light of this, ‘definitions of successful transition now consider long-term trajectories rather than focusing solely on initial adjustments’ (Petriwskyj et al. 2005, cited by New Zealand Ministry of Education 2010).

Children will experience a number of changes as part of this transition. Some of these changes are physical, such as the size of school buildings and play areas, and the presence of much older children. They may also have to adjust to wearing a uniform, carrying their school bag or packing their own lunch. Other changes are less tangible. For example, children may experience a change in their own role and identity as they shift from ‘child’ to ‘student’ (Lam & Pollard 2006).

Children will also experience changes to rules and procedures, including more structured times for attending class or putting their hand up to speak. Learning in schools tends to be more structured than in early childhood education and care settings, and interactions between students and teachers are usually more formal than interactions between children and early childhood educators or their parents (Rimm-Kaufman & Pianta 2000). As Rosier and McDonald comment, ‘Teachers in the school setting are more likely to be viewed by children as authority figures than those in early learning environments where a more “caring” approach is common’ (Communities and Families Clearinghouse 2011, p. 6).



## What does a successful transition look like?

There is not one, uniform definition of what constitutes a successful transition to school. The diversity of children's experiences and contexts makes it difficult to establish a single notion of what a successful or unsuccessful transition looks like. Moreover, what constitutes a successful transition may vary depending on whose perspective it is being considered from (e.g. a parent or teacher).

The success of the transition can be measured by both the absence of negative outcomes, such as problematic behaviour or distress, as well as the presence of positive outcomes, such as children feeling comfortable and safe, making friends and displaying positive attitudes towards learning. Kay Margetts, Professor of Early Childhood Studies at Melbourne University, suggests children who have settled into school well 'Listen to and follow instructions, interact well with others, share and take turns, cope with normal day-to-day conflicts and are able to manage their feelings and emotions appropriately' (Kids Matter n.d.).

The importance of all stakeholders feeling a sense of belonging is mentioned frequently across the literature (New Zealand Ministry of Education 2010; Victoria University 2009). For example, Professor Bob Perry, who has written extensively on transitions to school, said in an interview (Queensland Department of Education and Training n.d.):

*When the child feels that they belong in the new place, whatever it is, when the educator feels that they belong as part of this new group of children, when the family feels that they belong - I think then you can say they have all made an optimal transition.*

Although parents and teachers may share some expectations of the transition, they can also have different views as to what constitutes a successful transition for the particular child (Kids Matter 2011; Perry & Dockett 2003). A study by Perry and Dockett (2003) for example, found parents, teachers and students tend to focus on different aspects of the transition. The authors gathered data from questionnaires and interviews with approximately 300 parents, 300 educators and 300 children to examine their perceptions and expectations of starting school. They then coded the responses into eight categories: knowledge; adjustment; skills; disposition; rules; physical; family issues; and educational environment. They found the majority of responses for children fell into the categories of disposition and rules, whereas the most common response categories for parents were adjustment and educational environment. For teachers, the main response categories were adjustment and disposition<sup>1</sup>.



<sup>1</sup> The authors defined Disposition as 'Attitudes towards, or feelings about school or learning', Rules as 'Fitting in with the school and school expectations', Adjustment as 'Adjustment to the school context, including interpersonal and organisational adjustment' and Educational Environment as 'The nature and/or characteristics of the school environment'.



## Defining school readiness

The concept of school readiness is central to discussions about the transition to school. However, the term school readiness has been the subject of significant debate across the literature (Melbourne Graduate School of Education 2008). Traditionally, the concept has focussed on a child's age and skills. However more recent literature tends to adopt a broader definition, incorporating not only a child's readiness for the learning environment, but also the learning environment's readiness for the child (Hair et al. 2006; Secretariat of National Aboriginal and Islander Child Care 2013; Royal Children's Hospital Melbourne 2008).

Dockett, Perry and Kearney (Closing the Gap Clearinghouse 2010) comment 'Readiness must be conceptualised as a broad construct that incorporates all aspects of a child's life that contribute directly to that child's ability to learn' (p. 3). They suggest that in addition to the child's readiness, the concept of school readiness also encompasses the school's readiness for the child and the capacity of families and communities to provide the necessary opportunities and support to optimise children's learning and development. Similar conclusions have been reached in international literature. In the United States, for example, this broad approach to readiness has been presented as an equation: ready families + ready communities + ready services + ready schools = children ready for school (Rhode Island Kids Count 2005).

## Ready children

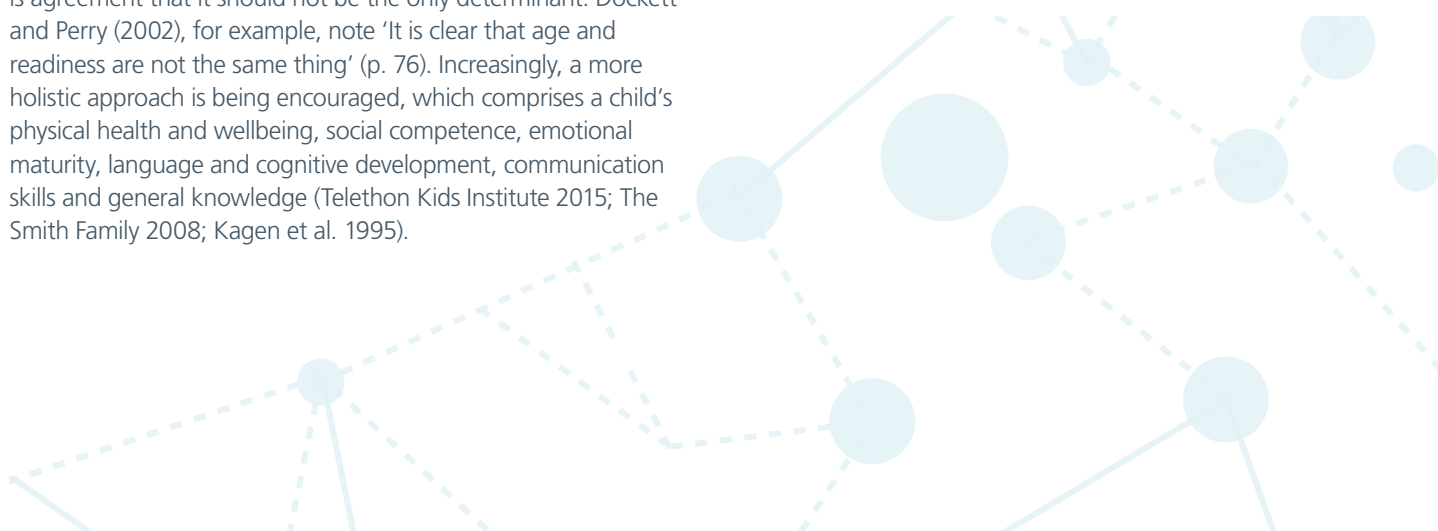
Historically, the main criterion for assessing a child's school readiness has been age (NSW Centre for Parenting & Research 2003). In Australia, each state has its own policy on when children start school. In NSW, children born in the first half of the year (January to the end of July) can start school either in the year they turn five or the year they turn six. Parents/caregivers are able to choose when their child will start and the NSW Department of Education encourages parents to consider whether the child is physically, emotionally and socially ready for school (NSW Department of Education n.d.).

While age is one element of assessing a child's readiness, there is agreement that it should not be the only determinant. Dockett and Perry (2002), for example, note 'It is clear that age and readiness are not the same thing' (p. 76). Increasingly, a more holistic approach is being encouraged, which comprises a child's physical health and wellbeing, social competence, emotional maturity, language and cognitive development, communication skills and general knowledge (Telethon Kids Institute 2015; The Smith Family 2008; Kagen et al. 1995).

A report by The Smith Family (2008) identifies five dimensions of a child's readiness: physical health, social/emotional development, language development, cognition and general knowledge and approaches to learning. These dimensions are very similar to the five domains of the Australian Early Development Census (AEDC) and the dimensions identified across international literature (for example, see Kagen et al. 1995). While presented separately, these five domains are inextricably linked. Development in one dimension often influences and/or is contingent on development in another. It is, therefore, important to consider the dimensions holistically (Kagen et al. 1995).

In the United States, a national survey asked 1,148 teachers about their views of school readiness (National Center for Education Statistics, 1993). Respondents tended to emphasise the importance of the physical and socio-emotional dimensions of readiness over specific skills or knowledge (i.e. being able to count to 20 or more). Children being physically healthy, rested and well-nourished; being able to communicate needs, wants and thoughts; and being enthusiastic and curious in approaching new activities were seen as the most essential qualities for children to be ready for kindergarten (National Center for Education Statistics, 1993).

In Perry and Dockett's study (2003), teachers' responses indicated that they felt children needed to have certain skills, more than specific knowledge, in order to transition to school. Such skills include children being able to use the toilet independently, dress themselves, recognise their own belongings and pay attention. Parent respondents mentioned a similar list of skills, but overall, parents mentioned skills much less than teachers (4.4% of responses compared with 12.1% of responses). Overall, relatively little mention was made of what children need to know in order to start school. Teachers referred to aspects of knowledge more often than parents, with approximately 4 per cent of teachers' responses containing reference to children knowing their name, the alphabet, shapes and colours. Children's responses mentioned knowledge more frequently, including needing to know how to write their name, colour in and how to count.



## Ready schools

While a child's individual competencies are important, there is growing emphasis on the readiness of the school itself. Geoff Masters, Chief Executive of the Australian Council for Educational Research, comments 'Although the traditional focus has been on ensuring that all children are ready for school, equally important is ensuring that schools are ready and able to respond to the very different stages that children have reached upon entry to school' (Masters 2016).

The Smith Family (2008) defines school readiness as the school's 'Commitment to ensure the success of every child, parent and teacher who is involved'. A similar definition is used in a report by Kids Matter (2011):

*'Ready schools' are synonymous with flexible, adaptable, supportive environments, guided by strong leadership and positive relationships, that are responsive to the children attending and facilitate family engagement and connections with local prior-to-school settings and the broader community (p. 13).*

Indicators of a school's readiness include: the existence of processes to plan and monitor a child's transition to school, the adequacy of facilities, the school's approach to student wellbeing and whether families feel welcome and comfortable talking to their child's teacher (Victorian Department of Education and Early Childhood Development 2009).

## Ready communities

The concept of 'community readiness' is generally used as an index of how well a community has served a cohort of children through their early childhood years (NSW Centre for Parenting & Research 2003). However, there does not appear to be a clear definition of what constitutes a 'ready' community. A literature review by the Secretariat of National Aboriginal and Islander Child Care (SNAICC) (2013) suggests that community readiness is critically important but that, based on the existing literature, a more comprehensive understanding is needed as to what constitutes a 'ready community'. The review notes that "'Ready communities' are safe, supportive and nurturing. What this means in an Australian context is not clear' (p. 27).

## The importance of school readiness to later student outcomes

A lack of readiness can impact on a child's ability to grasp the literacy and numeracy concepts expected in Kindergarten, as well as meet the behavioural and social demands of the classroom and playground (Human Resources Development Canada 1997). Evidence suggests the impact of children arriving at school without the necessary skills extends well beyond the initial years of school and can affect the likelihood of successfully completing school, gaining employment and becoming an active, engaged citizen (Royal Children's Hospital Melbourne 2008).

Analysis of data from the Australian Education Development Census (formerly the Australian Education Development Index) shows that a child's development in their first year of school can be predictive of their future educational achievement (Brinkman 2014). While the AEDC is not a measure of readiness per se, it reflects the learning and development that occurs for children in the years before they reach school. The timing of the assessment (six months into the first year of school) also gives some indication of how children may have transitioned into the school environment. Brinkman (2014) conducted analysis using data from a small roll out of the AEDC in Western Australia which was then linked to later education records. She found all five of the AEDC domains predicted literacy and numeracy outcomes for children as measured by the National Assessment Program – Literacy and Numeracy (NAPLAN) in Years 3, 5 and 7. The Language and Cognitive Development and Communication Skills and General Knowledge domains were found to be the best predictors of NAPLAN scores (Brinkman 2014).

A study using data from the Longitudinal Study of Australian Children (Telethon Kids Institute 2015) investigated patterns and predictors of children's oral language and literacy abilities at age four, six, eight and 10. It found the highest risk for low literacy ability at age 10 was low school readiness as measured by the *Who Am I?* instrument at age four.

2 The 2009 Australian Education Development Census (AEDC) was the first nationwide assessment of child development, but the instrument has been used in Australia since 2002 when it was first used in Western Australia.

This finding is consistent with other studies that have shown that the explicitly taught, pre-academic skills that children bring to school make a major contribution to their academic progress at school. The report concludes:

*The magnitude of risk associated with low school readiness at age 4 for low literacy at age 10 provides strong evidence of the importance of the preschool period for reducing inequalities in literacy acquisition at school through the provision of developmentally enriched opportunities and programs (p. 22).*

International research has reached similar conclusions. For example, Duncan et al. (2007) used six longitudinal data sets<sup>3</sup> to estimate the links between three key elements of a child's school readiness – academic, attention and socioemotional skills at school entry – and later school reading and maths achievement. Across all six studies, school-entry maths, reading and attention skills were the strongest predictors of later achievement. This was the case even when considering students' gender and socioeconomic status.

There appears to be a popular perception that it is better to start school later. However the evidence suggests that while there can be initial benefits, these tend to wane as children progress through school. The National Foundation for Educational Research (2009) in the United Kingdom conducted a review of 18 studies which had been carried out in Australia, Chile, the United Kingdom and the United States and published between 2000 and 2008. They found the impact of school starting age is significant at an early age but becomes progressively smaller as children grow older. An American study by Elder and Lubtovsky (2009) reached similar conclusions. Based on analysis of two longitudinal studies in the United States, the authors found that age related differences in school performance tend to fade away as children progress through school.

## Australian Early Development Census 2015

The Australian Early Development Census (AEDC) is a nationwide data collection of early childhood development. Data for the AEDC is collected every three years, with the first national collection conducted in 2009. Kindergarten teachers use the instrument to assess development in five broad domains: Physical health and wellbeing; Social competence; Emotional maturity; Language and cognitive skills (school-based); and Communication skills and general knowledge. These domains have been shown to predict later health, wellbeing and academic outcomes.

Results from the 2015 AEDC show that while most children are on track for each domain, one-fifth of children in New South Wales are vulnerable on one or more domains and almost one in ten are vulnerable on two or more domains.

Source: Australian Early Development Census 2016, *Australian Early Development Census National Report 2015*.

	New South Wales	Australia
Vulnerable on one or more domains	20.2%	22%
Vulnerable on two or more domains	9.6%	11.1%

	New South Wales			Australia		
	On track	At risk	Vulnerable	On track	At risk	Vulnerable
Language and cognitive skills	87.9%	7.3%	4.8%	84.6%	8.9%	6.5%
Communication skills and general knowledge	75.9%	16.1%	8.1%	76.3%	15.1%	8.5%
Emotional maturity	79.1%	14.0%	6.8%	76.4%	15.3%	8.4%
Social competence	76.5%	14.3%	9.2%	75.2%	15.0%	9.9%
Physical health and wellbeing	77.8%	13.7%	8.5%	77.3%	13.0%	9.7%

<sup>3</sup> Two were nationally representative of children in the United States, two were from multisite studies in the United States, one was from the United Kingdom and one from Canada. All six data sets provide measures of children's academic skills as well as assessment of their attention and socioemotional behaviours at school entry.



# Factors associated with a successful transition to school

A number of factors have been found to contribute to a child's school readiness and the success of their transition to school. These include: the home learning environment and support from families; attendance at high-quality early childhood education and care and collaboration between families; early childhood and care services and schools. While this review examines these factors separately, it is important to acknowledge that they are all integrally linked. As observed in a paper by Charles Sturt University, 'Over-emphasis on any one of these factors has the potential to ignore the interaction between factors and the broader processes of relationship building which are the core of a positive transition to school' (p. 8).

## Home learning environment

Parents and guardians play a significant role in helping children prepare for, and transition to, school. The home learning environment<sup>4</sup> can have a significant impact on children's development of skills, such as reading acquisition, which may impact on their school readiness (Australian Institute of Family Studies 2014). Parents and guardians can also play an important role in helping children familiarise themselves with the school environment and prepare for the changes involved in the transition to school.

The Smith Family (2008) found a number of parental characteristics impacted on a child's readiness for school. Hostile and inconsistent parenting style, lower parenting warmth and low use of reasoning were all found to influence the social/emotional aspects of a child's school readiness. Children in families with lower parental consistency were at a somewhat greater risk of low scores on the Peabody Picture Vocabulary Test (PPVT). Children were also at greater risk of low PPVT scores if they were read to on fewer than three days a week or if they had fewer than 30 children's books in the home. This is consistent with other research, which has found a positive association between mothers reading to their child and their child's vocabulary and language development (Deckner, Adamson & Bakeman 2006, cited by South Australian Department of Education and Children's Services 2007).

The Effective Provision of Pre-School Education (EPPE)/Effective Provision of Pre-school Primary and Secondary Education (EPPSE) longitudinal study in the United Kingdom<sup>5</sup> examined the impact of a child's home learning environment, family, neighbourhood and other social experiences on their learning and development (United Kingdom Department of Education 2015).

The study found that parents/caregivers performing activities such as teaching their child songs and nursery rhymes, visiting the library and playing with letters and numbers had a positive impact on their child's intellectual and social/behavioural scores. The home learning environment was more strongly associated with children's intellectual and social development than either parental education or occupation. The impact of the home learning environment had a continuing effect, and was still evident at ages 17 and 18 (United Kingdom Department of Education 2015).

Parents' and caregivers' attitudes can also have an impact on their child's transition to school (Kids Matter n.d.; Communities and Families Clearinghouse Australia 2011). Children can be sensitive to their parents' or caregivers' feelings, and are more likely to have difficulties adjusting if their parent or caregiver is stressed or anxious about the transition (Kids Matter n.d.). An Australian study (Giallo et al. 2008), involving 763 mothers whose children were starting primary school, showed high parental self-efficacy in managing the transition was associated with children having better social adjustment outcomes as they started school. Results also found greater levels of parent worry about managing the transition period were associated with poorer academic and social adjustment outcomes. The authors point out that the relationship between parental self-efficacy and child adjustment to school is likely to go both ways. That is, parents whose children were experiencing early learning, behavioural or social difficulties may feel less efficacious in their ability to help their children adjust than parents whose children had no reported difficulties.

There are a number of suggestions for ways families can support their children during the transition process. These include: talking about school with their child; attending orientation activities; driving past or visiting the school; and practising school activities (i.e. trying on their school uniform and using a lunch box) (NSW Centre for Parenting & Research 2003; The Benevolent Society n.d.). Families can also support their children's development of social and emotional competencies by providing opportunities for them to socialise with other children, playing games that involve sharing or taking turns and using positive labels to help build their self-esteem (such as 'helpful' or 'responsible') (NSW Centre for Parenting & Research 2003; New Zealand Ministry of Education 2010).

<sup>4</sup> The home learning environment is generally measured by a range of factors such as the number of books in the house, the frequency of home activities such as playing games and doing arts and crafts and the frequency of out-of-home activities such as visiting the library.

<sup>5</sup> To investigate the effects of pre-school education, the EPPE team collected a wide range of information on 3,000 children. Children were assessed on their cognitive/academic and social-behavioural development at entry to the study and their parents were interviewed to obtain social demographic and background information.

## High-quality early childhood education

There is significant research to suggest that attending a high quality early childhood education program can improve children's school readiness, and that these benefits can continue through their education. In Australia, the National Partnership Agreement on Early Childhood Education and the National Partnership Agreement on the National Quality Agenda for Early Childhood Education and Care recognise that access to high quality early childhood education can improve long term education, employment and health outcomes. Under the first agreement, all governments committed to working together to ensure all children have access to a quality early childhood education program for 600 hours in the year before they go to school (Australian Department of Education and Training n.d.). The second agreement established national quality standards for centre-based care (preschools, long day care and outside school hours care) and family day care, including enhanced qualification requirements and improved staff ratios.

Analysis of AEDC 2009 data (Commonwealth of Australia 2014) found children who attended a pre-school program were less likely to be vulnerable on one or more AEDC domains than those who attended other types of care or had parental care only. Twenty per cent of children who attended preschool were vulnerable on one domain, compared with 28 per cent of those who attended day care without a preschool and 37 per cent who were in parental care only. Similarly, the Sydney Family Development Project found an association between competence in learning, such as task orientation and creativity, in the first year of school and attendance at formal, regulated day care (Harrison & Ungerer 2000, cited by the Australian Department of Families, Housing, Community Services and Indigenous Affairs 2009).

The EPPE/EPPSE study found preschool attendance had a positive and enduring impact on children's education outcomes (United Kingdom Department of Education 2015). At school entry, children who had attended preschool had

better attainment in language, pre-reading and early number concepts than those who had not, even after controlling for the influence of background characteristics. Children who had attended preschool also had higher scores for independence, concentration, co-operation, and peer sociability, suggesting the preschool group were better socially adjusted. Attending preschool for longer and/or attending a high-quality preschool had added benefits. For example, the quality of the preschool had a positive impact on a range of academic outcomes, particularly for pre-reading. These benefits were still evident at age 16, with preschool attendance associated with higher total GCSE score, more GCSE entries and better grades in GCSE English and maths<sup>6</sup>. These benefits were slightly higher for children who attended a high-quality preschool or attended any preschool for two years or more. Preschool attendance was also associated with a greater likelihood of progressing to AS or A-levels (United Kingdom Department for Education 2015).

Currently, quality varies across Australian early childhood services. Across Australia, 29 per cent of centre-based care services<sup>7</sup> are rated as Exceeding NQS (National Quality Standard) compared with 22 per cent of family day care services. Among centre-based services, 52 per cent of preschool/kindergarten services are rated as Exceeding NQS compared with 25 per cent of long day care services (Australian Children's Education & Care Quality Authority 2016). Ratings vary across the seven Quality Areas<sup>8</sup>, and services are less likely to meet the NQS for Quality Area 1, Educational Program and Practice, than any other Quality Area. Quality Area 1 focuses on ensuring that educational program and practice is stimulating and engaging and enhances children's learning and development. Of all the Quality Areas, Quality Area 1 is seen as 'arguably the most critical to longer term child outcomes' (Australian Children's Education & Care Quality Authority 2016a, p. 40). In New South Wales, almost one third of services (29%) are rated as Working Towards NQS for this Quality Area (Australian Children's Education & Care Quality Authority 2016).

6 GCSE stands for the General Certificate of Secondary Education. It is a qualification awarded to secondary students in the United Kingdom.

7 A centre-based service is an education and care service other than a family day care service. This includes most long day care, preschool and outside school hours care services that are delivered at a centre.

8 The National Quality Framework consists of seven Quality Areas: Educational Program and Practice; Children's Health and Safety; Physical Environment; Staffing Arrangements; Relationships with Children; Partnerships with Families and Communities; and Leadership and Service Management.

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## Links between early childhood services, schools and families

There is agreement across the literature about the importance of collaboration between schools, early childhood education and care services and families during the transition process (Ashton et al. 2008; Harvard Family Research Project 2002; Harvard Family Research Project 2015). Collaboration between these stakeholders is important for creating continuity between settings and sharing information (Royal Children's Hospital Melbourne 2008).

There are a number of suggestions for how links between these stakeholders can be achieved. These include: implementing processes for sharing information between early childhood education and care services, schools and families; ensuring greater alignment between early childhood and school curricula; and establishing transition programs and activities to support children and their families before, during and after they start school (Royal Children's Hospital in Melbourne 2008a; Harvard Family Research Project 2002).

The Victorian Department of Education (2015) conducted a mixed method study to gain insights into the views of families, early childhood educators, teachers and children in their first year of school. It found families who were comfortable with their child's transition to school valued conversations with trusted teachers, both prior to and soon after starting school, as well as school transition programs. On the other hand, families who were less happy with their children's transition expressed concern about the lack of communication, including unclear processes and lack of personalised attention to their child's needs. When asked about what types of information parents would like, responses included more detailed information about the curriculum and expectations, as well as how parents can incorporate learning at home.

### *Transition to school programs*

A transition to school program is a set of planned activities or processes established by early childhood education and care services, schools and sometimes other community services. These programs occur prior to, and during, the transition process and may include parent information sessions and workshops, social activities for families, orientation days and school tours (NSW Department of Education n.d.).

Transition programs aim to help children familiarise themselves with the school environment and ensure continuity between early childhood education and school settings (Margetts 2002). However, while there is a growing acknowledgement of the importance of transition programs generally, few studies have been conducted that link specific transition practices to positive child outcomes.

There is no 'one-size-fits all' approach to transition programs and some have suggested that transition programs must be adaptable to suit local community needs (Victorian Department of Education and Early Childhood Development 2009; Harvard Family Research Project 2002). For example, Bonhan-Baker and Little comment 'What "works" in one community may not be effective in another' (Harvard Family Research Project 2002, p 3). It is also important to bear in mind that transition programs should cater for the diverse needs of students, including those from an Aboriginal background or those with special educational needs.

In Tasmania, the Launching into Learning (LiL) program has been found to have significant impacts on children's general development, reading and maths performance (Tasmanian Department of Education 2014). The program is designed for children and their families in the years before they begin school (usually from birth to age four), and is now available in all Tasmanian government schools and Child and Family Centres. The program aims to foster relationships between children, their families and their local school while also providing opportunities for children to develop their social, physical and cognitive skills through activities such as playground, music and kinder gym (Tasmanian Department of Education 2016). A longitudinal study of the program has found that regular participation in LiL is associated with improved performance in the Kindergarten Development Check (KDC) and in Year 3 NAPLAN<sup>9</sup>. These benefits were found when taking socioeconomic status and Aboriginality into account, with students from disadvantaged socioeconomic backgrounds benefiting the most.

Margetts' study (2002) also examined the impact of transition activities on children's adjustment to school. The study found children who attended schools that conducted a high number of transition activities adjusted better to school than children who attended schools that conducted fewer transition activities. Margetts concludes that the results suggest transition programs that provide multiple opportunities for children and parents to familiarise themselves with the school environment have a positive association with children's adjustment to school.

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9 KDC data is based on 1,382 students who regularly attended LiL in 2011. NAPLAN data is based on the 2008 LiL cohort who sat NAPLAN in 2013.

## Transition Statements

Sharing information between services, schools and families is important for facilitating a successful transition (Kids Matter 2011). To help schools plan for a child, early childhood education and care services and families can share information about the child's prior learning, learning preferences or special education needs (Early Childhood Intervention Australia n.d.). Schools can also support parents and caregivers by providing them with information about the school, such as enrolment processes; the curriculum; and school procedures, including drop-offs and pick-ups (United Nations Educational, Scientific and Cultural Organization 2007; Kids Matter 2011). It is important that this information is accurate and provided in a simple, accessible way (United Nations Educational, Scientific and Cultural Organization 2007).

Across Australia, a number of initiatives have aimed to improve communication between schools and early childhood education and care services. The Transition to School Statement<sup>10</sup> (the Statement), for example, was introduced in NSW in 2014 to improve communication between early childhood education and care services, families and schools.

An evaluation of the Statement (Centre for Education Statistics and Evaluation 2015) found that both parents and Kindergarten teachers who had received Statements felt better informed about the child's strengths and interests as well as ways to help their transition to school, than respondents who did not receive Statements. Most families surveyed felt that their children made a smooth transition to school, but families with Statements were slightly more likely than those without Statements to feel that their child was well supported in their transition. The evaluation found that the Statement was seen as a valuable resource by early childhood educators, but that workload and time constraints made it challenging to complete.

A report by the Auditor-General in Victoria (2015) emphasises the importance of information-sharing between educational settings. As part of this, the report assessed Victoria's *Transition Learning and Development Statement*, which is similar to the Statement used in NSW. It notes that while this statement can help facilitate information-sharing, it can be time-consuming to complete and explain to parents. The report recommended that the use of early-years transition statements be reviewed, with a focus on the adequacy of information captured, relationships between early childhood and school-based educators and training for staff in both sectors.



<sup>10</sup> The Statement records a child's strengths, interests and preferred ways of learning. Its aims are to improve communication between early childhood (EC) services, families and schools about children's transition and provide greater assistance for school teachers to prepare for children entering Kindergarten and thus, to plan appropriate learning and teaching programs.

## Risk factors for a poor transition

Evidence suggests the transition to school can be more challenging for certain groups. These include Indigenous children, children from low SES backgrounds, children with special educational needs and children from culturally and linguistically diverse families (Communities and Families Clearinghouse Australia 2011; New Zealand Ministry of Education 2010).

Despite the expansion in provision, access and funding for early education and care over the past decade, there are still groups of children who are either not attending preschool, or who are not attending for the hours needed to make a difference to their development (Productivity Commission 2015). Groups that are currently underrepresented, such as children from language backgrounds other than English and children from disadvantaged backgrounds, are also those who could benefit the most from access to high-quality early childhood education (Productivity Commission 2015; Mitchell Institute 2016). These groups also tend to find the transition to school more challenging.

Children from language backgrounds other than English, for example, are underrepresented in enrolments in both early childhood education and care and preschool services. While these children make up about 20 per cent of the population, they made up only 18.5 per cent of early childhood enrolments and 10.2 per cent of preschool enrolments<sup>11</sup>. Aboriginal children are underrepresented in early childhood education and care enrolments, but only slightly underrepresented in preschool enrolments<sup>12</sup> (Productivity Commission 2015). Aboriginal children are also less likely than non-Aboriginal children to attend at least 15 hours of preschool per week (65.8% versus 68.5%) (Mitchell Institute 2016). Similar patterns emerge for financially disadvantaged children and children with additional learning needs (Productivity Commission 2015). Lower access amongst these groups can arise for a number of reasons, including cultural factors; prohibitive costs; a lack of services in the area, such as in remote communities; or because parents do not see the benefits of early childhood education.

A report by the Mitchell Institute (2015) used AEDC 2012 data to examine differences in educational opportunity for different groups. It found the most significant risk factors for not being school ready are Aboriginality, being male and coming from a low socioeconomic (SES) background. The report found that gender differences are most apparent in the AEDC domains of Social Competence and Emotional Maturity but that differences by Aboriginality and SES are widest in the Language and Cognitive Skills and Communication Skills and General Knowledge domains. The latter two domains are most strongly correlated with subsequent academic achievement (Brinkman 2014).

### Aboriginality

Persistent and substantial gaps between Aboriginal and non-Aboriginal children emerge before they start school. Results from the 2015 AEDC, for example, show that while the majority of Aboriginal and Torres Strait Islander children are developmentally on track in each of the five developmental domains, they are twice as likely as non-Aboriginal children to be developmentally vulnerable on one or more and two or more domains. The largest difference between Aboriginal and non-Aboriginal children is on the Language and Cognitive Skills domain, where Aboriginal children are nearly four times more likely to be developmentally vulnerable than non-Aboriginal children (20.2% and 5.7%).

Some have criticised the AEDC for being a culturally inappropriate measure of Aboriginal children's development. A literature review prepared by Secretariat of National Aboriginal and Island Child Care (SNAICC) notes that the AEDC has been criticised for failing to take into account cultural factors and for possessing 'innate contextual bias' (Secretariat of National Aboriginal and Island Child Care 2013, p. 31). Similarly, the Mitchell Institute Report (2015) notes that Aboriginal children may demonstrate strong relationships with family and a well-developed sense of cultural identity, two things that are very important in Aboriginal culture, yet these outcomes are not measured by the AEDC.

While the elements for successful transitions described above apply to all students, additional considerations may be necessary to support Aboriginal students to make a successful transition to school. The literature review prepared by SNAICC (2013) states 'For Aboriginal and Torres Strait Islander children, the importance of applying a cultural lens to all aspects of the transition is critical' (p. 3). The review notes that Aboriginal children and families can face particular challenges throughout the transition process. The review attributes these challenges to higher levels of disadvantage, lower participation in early childhood services and a lack of 'cultural competence'<sup>13</sup> amongst many mainstream schools.

The transition to school for Aboriginal children can sometimes involve adapting to a setting that is socially, culturally and physically very different from their home environment. The more recent SNAICC (2013) literature review comments 'Most Aboriginal and Torres Strait Islander children must make a significant shift in cultural contexts when moving into mainstream schools' (p. 5).

There is currently little research regarding what specific transition practices best facilitate a successful transition to school for Aboriginal children (Melbourne Graduate School of Education 2008).

<sup>11</sup> In 2013, LBOTE children made up 21.2 per cent of the population (age 0-5) and 18.5 per cent of early childhood education and care enrolments. In 2012, LBOTE children made up 20 per cent of the population and 10.2 per cent of preschool enrolments (age 4-5).

<sup>12</sup> In 2014, Aboriginal children ages 4-5 made up 5.5 per cent of the total population and 4.6 per cent of preschool enrolments.

<sup>13</sup> There is not a consistent definition of the term cultural competence, but it is understood to include a number of factors including cultural awareness, respect and responsiveness.



There are, however, a number of suggestions as to how schools can support Aboriginal children and their families during this transition. These include promoting 'cultural competence' amongst staff, employing and valuing Aboriginal staff, using culturally appropriate approaches to teaching and learning and facilitating relationships with the child, their family and their community (Closing the Gap Clearinghouse 2010; Secretariat of National Aboriginal and Islander Child Care 2013).

## Socioeconomic background

Evidence consistently suggests that children from lower socioeconomic backgrounds are at risk of making less successful transitions than their more advantaged peers (The Smith Family 2008; Statistics Canada 2006). However, the relationship between socioeconomic background and the transition to school is complex and it can be difficult to isolate from other environmental factors.

A study by The Smith Family used data from *Growing Up in Australia: The Longitudinal Study of Australian Children* to assess the relationship between financial disadvantage and school readiness (The Smith Family 2008). The study found that children from financially disadvantaged families were more likely to experience low school readiness, both in terms of cognitive and socio-emotional development, than those from non-financially disadvantaged families. Differences were most marked in the language area, with approximately 40 per cent of children having low scores on the Peabody Picture Vocabulary Test, compared with 20 per cent of children from families with higher incomes. These differences were still evident two years later, with children from financially disadvantaged families being more likely to experience literacy and numeracy difficulties than their peers from non-financially disadvantaged families.

International research has reached similar conclusions (Brookings Institute 2012; Hair et al. 2006; Statistics Canada 2006). A paper by the Brookings Institute (2012) in the United States found an association between family income and the likelihood of being ready for school at age five. Similarly, a Canadian study (Statistics Canada 2006) found household income was a significant predictor of six of eleven readiness to learn measures, with children from lower income households scoring lower than those from higher income level households in every case. Significant differences were found between income levels in receptive vocabulary, communication skill, copying and symbol use, number knowledge, attention and cooperative play.

However, the above studies (The Smith Family 2008; The Brookings Institute 2012; Statistics Canada 2006) all found financial disadvantage is not a strong independent risk factor once other factors are taken into account. That is, the association between financial disadvantage and school readiness occurs largely because a number of other predictors are more common amongst those who are financially disadvantaged.

Australian Early Development Census 2015

	Vulnerable on one or more domains	Vulnerable on two or more domains
Non-LBOTE Students	20.4%	10.2%
LBOTE Students	27.8%	14.2%
LBOTE Students: Proficient in English	19.1%	8.4%
LBOTE Students: Not Proficient in English	94.1%	59.2%

Source: Australian Early Development Census 2016, *Australian Early Development Census National Report 2015*.

For example, Statistics Canada (2006) found children from lower SES backgrounds were less likely to experience home environment factors that were linked to higher scores on readiness measures, such as being read to or participating in organised sports or physical activities. The Brookings Institute paper states 'It is not poverty alone that places poor children at risk, but also the fact that their parents have low levels of education, higher rates of smoking, higher rates of depression, and lower parenting skills than children from moderate- and high-income families' (2012).

## Language and cultural background

In the 2015 AEDC, 21.5 per cent of Australian students were from a language background other than English (LBOTE)<sup>14</sup>. Of these students, most were proficient in English when they started school (87%) although 13 per cent were not. Children with a LBOTE background were more likely than other children to be developmentally vulnerable on one or more and vulnerable on two or more domains. Among LBOTE students, those who were not proficient in English were significantly more likely to be developmentally vulnerable on one or more and two or more domains compared with LBOTE students who were proficient in English.

A study using 2009 AEDC data assessed the factors that provide opportunities for bilingual children to develop English language skills before they enter school. The study found bilingual children who attended a preschool program had significantly higher odds of being proficient in English at school entry than those who had not attended a preschool program (Commonwealth of Australia 2014b). In contrast, bilingual children who attended childcare without preschool, informal non-parental care, or parental care only, had decreased odds of English proficiency at school entry. The study did not measure the quality of early childhood education and care settings directly, but the authors suggest quality is likely to play a part in the impact of these services on language development.

14 In NSW, the 2015 collection of language background data shows that 32.3 per cent of students in NSW government schools come from homes where languages other than English are spoken.

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The literature suggests there are a number of things educators should be aware of, and responsive to, when supporting transition to school processes for culturally and linguistically diverse families. These include varying levels of English language proficiency and different notions of 'family', as well as racism and discrimination (Australian Institute of Family Studies 2011; NSW Government 2011). Students from refugee backgrounds are likely to have experienced disrupted or no formal education and may also have complex physical and/or mental health issues. As a result, refugee students may require more support than other newly arrived migrant students (NSW Government 2011).

### Special educational needs

While the transition to school can be a stressful time for all children, it can be particularly challenging for children with special needs.

Results from the Pre-Elementary Education Longitudinal Study (PEELS) in the United States found differences in a child's scores on the disability severity index<sup>15</sup> were related to the ease of the child's transition (National Centre for Special Education Research 2009). Children whose parents reported easier transitions had significantly lower severity index scores than those who had hard transitions. Similarly, children whose teachers reported a 'somewhat' or 'very easy' transition had significantly lower severity index scores than those who had difficult transitions.

In 2012, NSW Parliament's Standing Committee on Social Issues published the final report for the inquiry into *Transition support for students with additional or complex needs and their families*. The report identified a number of challenges for children with special needs and their families. For example, the report suggests that choosing the right school can be particularly daunting for parents of children with special needs and that more support is needed for families during this process. Under the *Education Act 1990 (NSW)*, every child in New South Wales is entitled to enrol in the government school that is designated for the area where they live and that they are eligible to attend. However, the report suggests that mainstream education is not suitable for every child with a disability, and families often need assistance when deciding which school will be best for their child.

The Inquiry also found inadequacies with the transfer of information between services to be an issue. This was the case across a number of transition points within a child's education, including starting school, progressing through different grades and changing schools. A number of submissions to the Inquiry noted that families often had to tell their story 'over and over' because information about their child and their needs had not been shared between services or teachers. In providing evidence to the Inquiry, Professor Bob Perry, Murray School of Education, Charles Sturt University, observed that while many early childhood education and care services have extensive portfolios about their children, kindergarten teachers often don't have the time to read these portfolios or 'digest' what they mean (p. 36). A study conducted by Charles Sturt University (Research Institute for Professional Practice 2011) examined the experience of families with complex support needs. This included families who were supporting children with a disability or behavioural difficulties as well as families responding to violence or trauma, experiencing isolation and/or drug and alcohol issues. Parents of children with a disability expressed concern about how their knowledge of their child's needs could be shared with, and used by, the school to best support their child. Participants also expressed anxiety about assessments undertaken by schools to determine children's access to additional support and resources. One mother described how she felt about her child being assessed as having a 'severe intellectual disability'. While she was pleased this made him eligible for additional support, she was upset about the assessment process and the labelling of her child.

In New South Wales, the Transition to School Resource<sup>16</sup> (Early Childhood Intervention Australia n.d.) provides information and tips to support children with disabilities to make a successful transition to school. It advocates a community-wide approach to the transition to school, recognising the role of families, services, schools and communities in supporting children to transition. In line with the literature noted above, the resource highlights the importance of collaboration and information-sharing. It recommends forming a 'transition team', made up of family members, school staff, early childhood services staff and early childhood intervention professionals (e.g. a support worker or therapist) to help coordinate the child's transition, develop and work towards shared goals and ensure information about the child's needs is shared.

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<sup>15</sup> The study used a measure of severity based on parent report across six domains: cognition, communication, overall health and limitations due to health, regulation of activity level, regulation of attention, and understanding of language.

<sup>16</sup> This resource was developed by Early Childhood Intervention Australia and funded by the NSW Department of Family and Community Services.

# Learning and development in the early years

It is widely recognised that children begin learning well before they start school, and that this learning and development can have long term impacts. Advances in neurological science have provided insights into how the brain develops, including the importance of development in the first few years of life (UCLA Center for Healthier Children, Families and Communities 2001; Shonkoff & Phillips 2000). It is now known that the early years are critical for the development of an individual's 'brain architecture' and that stimulating early experiences lay the foundation for later learning (National Scientific Council on the Developing Child 2007). This growing recognition of the importance of the early years is said to have 're-positioned infants beyond notions of "waiting to learn" to that of "learners from birth"' (Cheeseman, Sumsion and Press 2015, p. 39).

Evidence shows that the time from birth to starting school is a critical period for the development of the key components of school readiness. These include vision and cognitive, language and social skills (Human Resources Development Canada 1997). This development is influenced by a variety of factors and experiences, such as nutrition, safety and security as well as early learning opportunities (Shonkoff & Phillips 2000; Human Resources Development Canada 1997). In order to support children's development, families and caregivers should aim to develop warm and caring relationships, provide a 'rich and responsive language environment' (i.e. through reading, songs and talking) and encourage children to explore their surroundings (UCLA Center for Healthier Children, Families and Communities 2001).

The development of literacy skills begins in the first year of life, with the years before school being crucial in children's longer term literacy achievement (Royal Children's Hospital Melbourne 2008a; South Australian Department of Education and Children's Services 2007). The term 'emergent literacy' is often used to refer to the skills, such as language ability and letter identification, that can help facilitate a child's transition

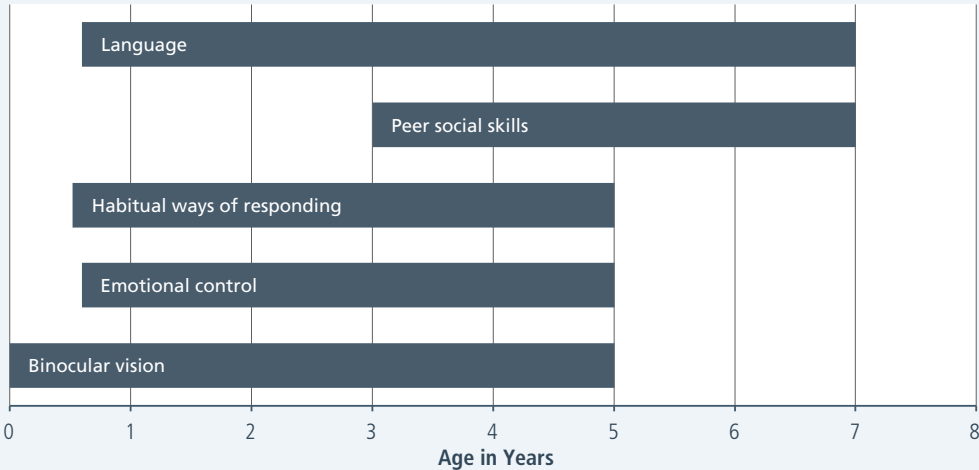
from pre-literacy to literacy (Whitehurst & Lonigan 2001, cited by Royal Children's Hospital 2008a). Research shows performance on an array of emergent literacy tasks reliably predicts children's later literacy achievement, with children who perform well on emergent literacy tasks tending to have better longer term outcomes compared with children with lower levels of performance (South Australian Department of Education and 2007). In light of this, a literature review published by the South Australian Department of Education and Children's Services (2007) comments:

*It is clearly imperative therefore that the development of emergent literacy is supported in children at risk in order to facilitate their acquisition of literacy when formal schooling commences (p. 12).*

Evidence suggests that early numeracy skills are also very important. It is thought the mastery of foundational numerical concepts allows for a deeper understanding of more complex mathematical concepts (Baroody 2003, cited by Duncan et al. 2007). In their meta-analysis, Duncan et al. (2007) found that early math concepts, such as knowledge of numbers and ordinality, were the most powerful predictors of later reading and maths achievement. Other predictors across studies were early language and reading skills, such as vocabulary, knowing letters and beginning and ending word sounds.

Other international studies have also found that early mathematical knowledge is predictive of later mathematical performance. Aubrey, Dahl and Godfrey (2006), in their study of 300 students in the United Kingdom, found that children who began school with numerical and relational knowledge tended to do better in mathematics as they progressed through school. Similarly, a Finnish study found that the acquisition of counting and relational skills before formal schooling was predictive of the acquisition of basic arithmetical skills and overall performance in maths in children's second year of school (Aunio & Niemivirta 2010).

Critical periods for some components of school readiness



Source: Human Resources Development Canada 1997, Zero to six: the basis for school readiness, prepared for by G Doherty, p. 55

## Learning frameworks and progressions

### Early learning frameworks and curricula

The increased interest in early childhood education and care over the past two decades has focussed attention on the education of infants and assessments of their learning (Cheeseman, Press & Sumsion 2016). This is reflected in the implementation of early childhood curriculum frameworks in a number of countries around the world, including Australia, as well as the use of assessments and diagnostic tools in the early years. These frameworks and tools vary in purpose and scope, but reflect a shared recognition of the importance of the early years in children's longer term educational trajectories and outcomes.

The term curriculum has been defined as 'The contents and methods that substantiate children's learning and development' (Organisation for Economic Co-operation and Development 2012, p. 14). In other words, curricula and learning frameworks answer the questions of 'what to teach?' and 'how to teach it?'. Curricula and learning frameworks are thought to play a pivotal role in ensuring more consistent service provision across early childhood education and care services, contributing to a more equitable and higher quality system (Organisation for Economic Co-operation and Development 2015).

Although mandated curricula have been used in schools and higher education for decades, these documents have only recently started to 'permeate' the early years (Cheeseman, Sumsion & Press 2014). This reflects a move away from thinking of infant learning as the responsibility of families, to considering it as a social responsibility that falls within the scope of education policy (Cheeseman, Press & Sumsion 2015). It is also indicative of a shift in early childhood education, particularly in the case of infants, where there has traditionally been a bigger focus on wellbeing than on cognitive domains of learning (Cheeseman, Sumsion & Press 2014).

Most OECD countries now use some sort of curriculum or learning framework in early childhood services, although there is variation in terms of focus, age-range, depth and length. Some countries focus on the academic aspects of the curriculum, prioritising the cognitive elements of school readiness, whereas others take a more open and holistic approach (Organisation for Economic Co-operation and Development 2012). These frameworks also vary in terms of age-range. Some cover the entire early childhood education age group (0-5 years) and cease at the beginning of school, others start later (2.5-3 years) and some start at birth and go well into school.

In parts of Germany, for example, curriculum frameworks cover early childhood education, primary and secondary school in a single document. Similarly, Scotland's Curriculum for Excellence covers children in early education from age three up until age 18. The curriculum is broken into a number of stages: early, first, second, third, fourth and then senior, which encompasses the progression to post-school qualifications.

In Australia, the Early Years Learning Framework (EYLF) has been developed to guide early childhood educators to develop quality, early childhood education programs and has been implemented nationally under the National Quality Framework. The aim of the document is to 'extend and enrich children's learning from birth to five years and through the transition to school' (Australian Department of Education, Employment and Workplace Relations 2009, p. 5).

The EYLF is structured around three interrelated elements: Principles, Practices and Learning Outcomes<sup>17</sup>. It does not prescribe what children should know or be able to do at certain stages, nor does it state what educators must teach. However, it does provide examples of how children may demonstrate the competencies within each Learning Outcome and what educators can do to promote this learning. As Cheeseman, Sumsion and Press (2014) comment 'The notion of a 'framework', rather than a content-oriented curriculum, lends itself to a broader understanding of curriculum with weaker emphasis on inputs and outputs and a greater emphasis on local interpretation' (p. 409).

### THE EARLY YEARS LEARNING FRAMEWORK

#### Literacy

Literacy is the ability, confidence and disposition to use language in its many forms. Literacy includes a range of modes of communication such as music, storytelling, visual arts and drama, as well as talking, listening, reading and writing.

#### Numeracy

Numeracy is the ability, confidence and disposition to use mathematics in daily life. Becoming numerate requires children to understand mathematical ideas such as numbers, spatial sense, pattern and measurement.

<sup>17</sup> The five learning outcomes of the Early Years Learning Framework are: Children have a strong sense of identity; Children are connected with and contribute to their world; Children have a strong sense of wellbeing; Children are confident and involved learners; and Children are effective communicators.

The Framework does not provide any explicit advice on the alignment between early childhood and primary education, but it does highlight the importance of a smooth transition between preschool and primary school. Although they are not explicitly linked, the Australian Curriculum is aligned to the EYLF and builds on the Learning Outcomes contained in the Framework (Australian Curriculum, Assessment and Reporting Authority 2012). These two documents are seen as complementary and, when taken together, 'can provide an articulated pathway of learning from prior-to-school, into school and beyond' (Early Childhood Australia and Australian Curriculum, Assessment and Reporting Authority 2012, p. 29).

New Zealand's early childhood curriculum, Te Whariki, has been widely praised since it was introduced in 1996 (Blaklock 2013). Te Whariki covers the years from birth to school entry age, and identifies three broad, overlapping age groups: birth to eighteen months, one to three years and two and a half years to school entry. Like the EYLF, the curriculum does not prescribe what educators must teach but describes learning outcomes and experiences that may help children reach these outcomes. Links have been made between the strands of Te Whariki (wellbeing, belonging, contributions of children) and the learning areas and skills in the New Zealand Curriculum Framework for schools, in order to make the transition from early childhood education and care to school more smooth.

In 2011, Te Whariki was evaluated by the Early Childhood Education Taskforce as part of their review of early childhood education in New Zealand. The Taskforce's final report found that Te Whariki is 'considered a model of best practice, nationally and internationally' (p. 106). However, more recently, an evaluation of the implementation of Te Whariki (Education Review Office 2013) found that the non-prescriptive and open nature of the document is both a strength and weakness. The report states:

*On the one hand Te Whariki enables services to adopt many different philosophical and pedagogical approaches to curriculum within the broad framework of principles and strands. On the other, it is evident that Te Whariki can accommodate considerable variability in quality (p. 16).*

## The use of learning progressions

The idea that learning is a cumulative process is reflected in the use of learning progressions or continua. The term learning progression has been defined as 'A carefully sequenced set of building blocks that students must master en route to a more distant curricular aim' (Popham 2007) and 'A description of skills, understanding, and knowledge in the sequence in which they typically develop: a picture of what it means to "improve" in an area of learning' (Masters & Forster 1997, cited by Behavioral Research and Teaching 2012). These differ from curriculum or learning frameworks, but are often designed to support or sit alongside these documents (Behavioral Research and Teaching 2012).

The above definitions reflect the view that learning is not a series of discrete events, but rather a trajectory that involves developing skills that build upon each other. Presenting learning as a progression can assist educators to understand what is to be learned, support instructional planning and support formative assessment (Council of Chief State School Officers 2008). It is thought that when educators understand the continuum of learning in a domain (i.e. literacy or numeracy), they are better able to make decisions about how to support students' progress (Popham 2007; Council of the Chief State School Officers 2008).

The table on the next page contains a summary of some of the learning progressions currently used in Australia and overseas. This is not a comprehensive list but provides an insight into how the content of learning progressions varies, particularly in terms of how early childhood learning is linked to school-based learning.



New South Wales	<p>The Literacy continuum K-10 in New South Wales describes how students progress in literacy across the curriculum. It identifies the behaviours that demonstrate how a student's skills and understandings develop in eight elements of literacy. While the current continuum focusses on school age students, it does include reference to the foundational literacy skills students are expected to have prior to school. These are divided across the eight elements, and include recognising their own name, responding to stories read aloud and engaging in writing-like behaviour.</p> <p>The Numeracy continuum K-10 describes how students progress from using simple to increasingly sophisticated strategies in mathematics. The continuum consists of seven aspects, including: counting sequences and numerals, measurement and fraction units. These aspects are seen as overlapping and interrelated.</p> <p>As part of the Literacy and Numeracy Strategy 2017-2020, ACARA is working with the NSW Department of Education to develop the National Literacy and Numeracy Learning Progressions that will replace the NSW continua. They will provide an evidence-based map of student literacy and numeracy development from Kindergarten to Year 10 enabling teachers to accurately locate a student's current skills and identify the learning and teaching that should follow.</p>
New Zealand	<p><i>The Literacy Learning Progressions</i> describe what students should know and be able to do at particular points in their schooling, and is designed to support the New Zealand curriculum (New Zealand Ministry of Education 2010). While the document focusses on progressions during schooling itself, rather than early childhood, it does recognise the importance of the early years in children's literacy development. The document includes examples of the types of skills that can support children's transition into school literacy, such as a curiosity about language, the ability to retell an experience or event and an awareness of how words rhyme or start with the same sound. However, the document notes that these examples should not be treated as a definitive list of what children need to know and be able to do when they start school.</p>
Canada	<p>In Ontario, Canada, the <i>Best Start Early Learning Framework</i> contains a Continuum of Development. The continuum describes the progression of development for infants, toddlers, pre-schoolers and school-age children (age eight) (Best Start Expert Panel on Early Learning 2007). The Continuum covers five domains: Social; Emotional; Communication, Language and Literacy; Cognitive and Physical. It is divided into four stages: birth to 24 months, 14 months to three years, two and a half to six years and five to eight years. These stages overlap, reflecting that the sequence of developmental skills will be achieved within a broad range of time. It is designed to help early childhood educators and teachers observe and document children's emerging skills and is not intended to be used as a tool to assess children's progress against a set of benchmarks or outcomes.</p>
United States	<p>In the United States, Early Learning Guidelines (ELGs), also referred to as Early Learning Standards, are used in all States. ELGs define the trajectory of children's learning and describe the skills and abilities young children should develop for a successful start to school (Daily, Burkhauser &amp; Halle 2010). The majority of ELGs are organised around a number of areas of development, such as: language development, literacy, mathematics, science, creative arts, emotional development, approaches to learning and physical health.</p> <p>As of 2010, all States had their own ELGs for children age three to five and almost half had, or were in the process of developing, ELGs for infants and toddlers (birth to age three). Although a number of States had ELGs prior to 2002, many States developed these guidelines after the launch of the <i>Good Start, Grow Smart</i> initiative. A key part of this initiative was addressing the poor alignment between learning in the early years and learning in school.</p> <p>Literature about ELGs emphasises the importance of aligning these guidelines with K-12 standards and guidelines (Zero to Three 2008; National Association for the Education of Young Children and the National Association of Early Childhood Specialists in State Departments of Education 2002). However, some warn ELGs should not be developed by working backwards from existing K-12 standards or guidelines. That is, they should be based on research about the processes and sequences of early learning development rather than merely be a simplification of what older students do (National Association for the Education of Young Children &amp; the National Association of Early Childhood Specialists in State Departments of Education 2002, p. 5).</p> <p>The Head Start program aims to increase the school readiness of children from low-income families. The <i>Head Start Early Learning Outcomes Framework: Ages Birth to Five</i> describes the skills, behaviours and concepts that programs must foster in all children, including children from language backgrounds other than English and children with disabilities, before they start school (Administration for Children and Families 2015). It is intended to help adults better understand what they should be doing to provide effective learning experiences that support important early learning outcomes.</p> <p>The Framework describes how children progress across key areas of learning and development and specifies learning outcomes in these areas. It describes children's developmental progression across two age groups: 36 to 48 months (3 to 4 years) and 48 to 60 months (4 to 5 years). The Framework also contains indicators, which describe specific, observable skills, behaviours, and concepts that children should know and be able to do at the end of Early Head Start (by 36 months) or at the end of Head Start (by 60 months).</p>

## Readiness assessments and other diagnostic tools

A wide variety of tools are used within the education sector to enhance our understanding of students' learning and development. These vary in format, scope and purpose – from teachers' in class observations to national examinations. In the early years context, there are a number of instruments designed to assess students' capabilities and skills. Some of these aim to monitor the development of a nation or state-wide cohort while others are designed to identify individual students who may need additional support

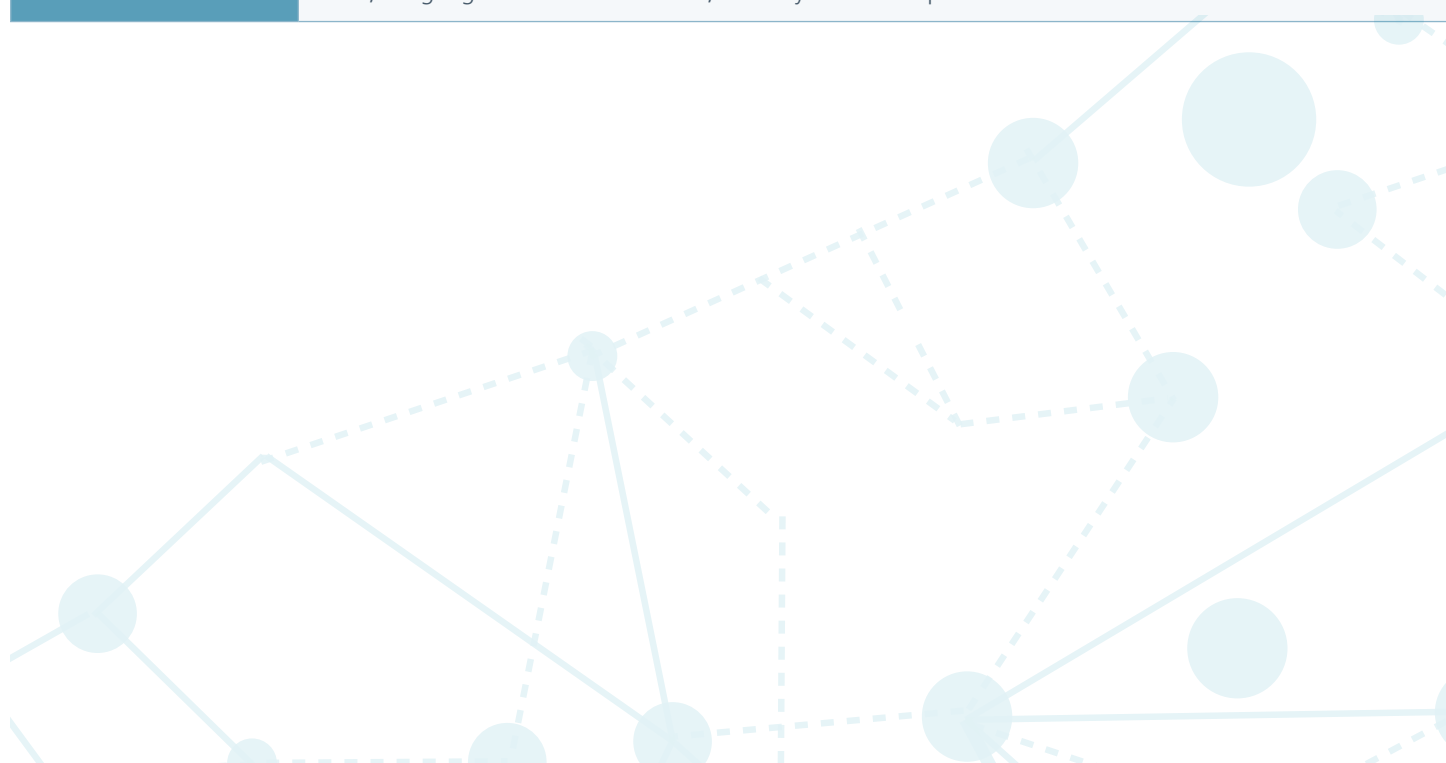
(Australian Department of Education, Employment and Workplace Relations 2009). Some are broad in scope and assess a number of domains, while others focus on a specific skill (e.g. phonemic awareness).

The table below briefly outlines some of the assessments of school readiness and/or early childhood development that are currently used in Australia and other comparable countries across the world. This list is not exhaustive, and purpose and scope of these assessments varies.

<b>Australian Early Development Census (National)</b>	<p>Data for the AEDC has been collected every three years since 2009, with the third round of national data collection completed in 2015 (Australian Early Development Census 2015). Data is collected from children half way through the first year of formal school.</p> <p>Teachers use the instrument to assess development in five broad domains: Physical health and wellbeing; Social competence; Emotional maturity; Language and cognitive skills (school-based); and Communication skills and general knowledge. AEDC cut-offs were established during the first data collection in 2009. Scores ranked in the lowest 10 per cent were classified as 'developmentally vulnerable' and those ranked between 10 per cent and 25 per cent were classified as 'developmentally at risk'. Scores ranked above the 25th percentile were classified as 'developmentally on track'.</p> <p>While the AEDC is not a measure of school readiness specifically, it largely reflects the learning and development that occurs for children before they reach school.</p>
<b>Best Start Kindergarten Assessment (New South Wales)</b>	<p>The Best Start Kindergarten Assessment is used by teachers to find out about each student's early literacy and numeracy knowledge, skills and understandings. The assessment is conducted at the beginning of Term 1 and is intended to help teachers develop effective learning programs to build upon what students currently know.</p> <p>The numeracy assessment tasks are designed to assess skills such as how well students count, which numbers they can recognise and whether they can recognise simple patterns (NSW Department of Education n.d.). The literacy assessment tasks are designed to identify whether students can recall details about a story that has been read to them, write their name and recognise and use sounds and letters (NSW Department of Education n.d.).</p> <p>In 2016, the NSW Department of Education announced it would make changes to the Best Start assessment as part of the Literacy and Numeracy Strategy. For the Kindergarten assessment, level descriptors will be clarified and overlap between comprehension and oral language will be removed.</p>
<b>Kindergarten Development Check (Tasmania)</b>	<p>In Tasmania, the Kindergarten Development Check (KDC) is a tool for teachers to identify those who are at risk of not achieving expected developmental outcomes (Tasmania Department of Education n.d.). The KDC is a stand-alone assessment tool, and is not directly linked to any curricula or the Early Years Learning Framework. The tool consists of 21 'critical markers'<sup>18</sup> that cover a number of aspects of early childhood development.</p> <p>The check is conducted in May and November in a child's first year of school. If a child has not achieved one or more markers by the second check, teachers will discuss this with the child's family and design an intervention program where appropriate.</p>

<sup>18</sup> As an example, markers include: 'Ask questions', 'Talks fluently without stuttering' and 'Can complete an 8 to 12 piece jigsaw puzzle'. These markers are thought to be the most relevant future predictors of literacy and numeracy and ongoing learning and assist in consistency of identification of students not achieving developmental outcomes.

<b>Performance Indicators in Primary Schools (PIPS) Baseline Assessment</b>	<p>The PIPS On-Entry Baseline Assessment was developed by the University of Durham in England, and is the most commonly used on-entry assessment in England. In Australia, the assessment is administered by the University of Western Australia and offered to schools and systems across the country (University of Western Australia n.d.). In 2016, more than 400 schools across all Australian states and territories are registered to use the tool. PIPS is also used in New Zealand, Scotland and the Netherlands.</p> <p>PIPS is designed to assist educators to assess the progress of their students, diagnose individuals' learning needs and devise appropriate learning strategies. It allows teachers to assess what skills and knowledge students have when they arrive at school, and what they gain during the year in terms of Reading, Maths and Phonological Awareness.</p>
<b>Early Development Instrument (International)</b>	<p>Developed in Canada, and the instrument on which the Australian Early Development Census is based, the Early Development Instrument (EDI) is a questionnaire that measures children's development across five domains: Physical health and well-being; Language &amp; cognitive development; Social competence; Emotional maturity and Communication skills &amp; general knowledge (Early Development Instrument 2015). The 103-item questionnaire is completed by Kindergarten teachers in the second half of the school year.</p>
<b>Early Years Evaluation</b>	<p>Also developed in Canada, the Early Years Evaluation (EYE) is designed to assist educators to assess the skills of children aged three to six years as they prepare for, and make the transition to, school. The EYE is often used as part of a transition-to-school program, and consists of two components: the EYE-Teacher Assessment (EYE-TA) and the EYE-Direct Assessment (EYE-DA).</p> <p>The EYE-DA is an individually administered direct assessment of children aged three to five before they start school (Early Years Evaluation, 2016). It assesses four key areas of early childhood development: Awareness of self and environment; Cognitive skills; Language and communication and Gross and fine motor skills.</p> <p>The EYE-TA provides a framework for Kindergarten or Year 1 teachers to use to structure their observations and informal assessments during a child's first few months of school (Early Years Evaluation, 2016a). It assesses five domains of early learning closely associated with a child's school readiness: Awareness of self and environment; Social skills and approaches to learning; Cognitive skills; Language and communication; and Physical development.</p>



## Conclusion

There is clear agreement across the literature about the importance of a positive transition to school. Evidence shows that the impact of children arriving at school without the necessary skills extends beyond the initial years of school, and can have significant long term effects.

There is growing recognition that the early years are a critical period for the development of the key components of school readiness. This is reflected in the increased use of early childhood curriculum frameworks and assessment tools around the world, including in Australia. Although these documents vary in focus and scope, they reflect a shared recognition of the importance of the early years in an individual's transition to school and beyond.

Increasingly, the literature in this area is employing a broader, more holistic approach to the transition to school. Definitions of school readiness now incorporate not only a child's readiness for the learning environment, but also the learning environment's readiness for the child. In light of this, there is increasing emphasis on the role of families, early childhood services and schools in facilitating successful transitions to school.

A wide variety of child, family, school and community factors can influence a child's readiness for this transition. Factors associated with a successful transition include a positive home learning environment; attendance at high-quality early childhood education and care, particularly preschool programs; and collaboration between early childhood services, schools and families. There is also evidence that certain groups, including Aboriginal children or children with special educational needs, may also find this transition more challenging and require additional support to make a successful transition.

Despite the large body of literature on this topic, there are few rigorous studies into the specific practices that can best facilitate a successful transition to school. There also remains a lack of clarity around certain areas and concepts, particularly in regards to the concept of school readiness. The term 'community readiness', for example, is being increasingly used across the literature but has not yet been well-defined.

The greater collection of data about learning in the early years is promising. This data may increasingly be used to expand understandings of the transition process and inform practices that can best support successful transitions for all children.



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