

# The Implications of Poverty on Children's Readiness to Learn

Focusing paper prepared for the Australian Research Alliance for Children and Youth



Australian Research Alliance  
for Children & Youth



## The implications of poverty on children's readiness to learn

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## The Australian Research Alliance for Children and Youth (ARACY)

ARACY is a national non-profit organisation working to create better futures for all Australia's children and young people.

Despite Australia being a wealthy, developed country, many aspects of the health and wellbeing of our young people have been declining. ARACY was formed to reverse these trends, by preventing and addressing the major problems affecting our children and young people.

ARACY tackles these complex issues through building collaborations with researchers, policy makers and practitioners from a broad range of disciplines. We share knowledge and foster evidence-based solutions.

## National Australia Bank

National Australia Bank is working in partnership with ARACY to develop an action plan for implementing community projects to address child poverty. As part of the partnership with ARACY, NAB Wholesale Banking is providing funding to support development of the "Child readiness to learn" project, provide expert assistance in kind to the project and play a central role on the project's advisory committee. The National Australia Bank are a signatory to the Commitment to Young Australians and view their involvement in the project as one way they can put this commitment into practice and make a contribution to supporting children in poverty.

## The “Child readiness to learn” project

Through a staged collaborative process, ARACY's 'Child readiness to learn' project aims to identify the points of intervention where most benefit will be achieved in reducing the impact of poverty on children's ability to learn. ARACY works with researchers, practitioners and experts in a range of fields related to poverty, social inclusion, early childhood development and education but also social entrepreneurs, business people and others who can help us drive ideas into action.

ARACY will develop action plans for up to two significant community projects focusing on these points of intervention, and a business case to secure the resources required to establish sustainable collaborations to implement the projects.

For more information see the ARACY website at:

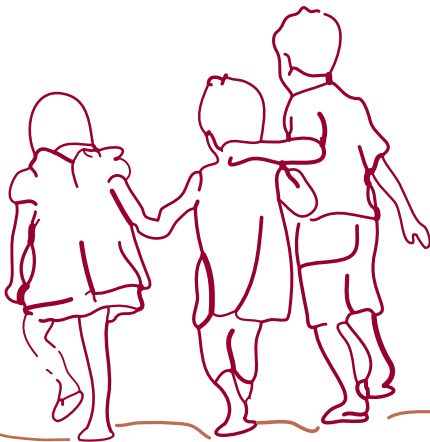
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## Summary

- One in 7 Australian children, including half of all Indigenous children, grow up in poverty.
- 'Readiness to learn' is the ability of children to develop and learn at each stage of life. This process starts at birth and builds on the many different experiences through which young children learn language, physical, emotional and social skills. Recent findings in neuroscience show that children's interactions with people and objects in their social environment create connections in the developing brain, shaping their ability to learn long before they go to school.
- Growing up in poverty can compromise children's readiness to learn. Differences between children affected by poverty and others start appearing in their language and behavioural development at two years of age. This is not simply the result of low income, because families often cycle in and out of poverty over time.
- There are a number of pathways through which disadvantage can affect children's readiness to learn: the quality of the interaction between parents and the child; the quality of the home environment; the quality of early learning and care outside the home and the physical and mental health of the parents.
- How parents relate to a child is the pathway with the greatest influence on a child's ability to learn: warm supportive parenting can protect against the negative impact of poverty.
- There is strong evidence that preventive programs – put in place before problems start – can make a real difference when they are of high quality, intensive and easy to access, and offer services to children and parents simultaneously at home and at childcare or school.

- Some successful examples of early intervention programs are:
  - » Let's Read, a program to promote reading with children from birth to five years, in disadvantaged communities (Centre for Community Child Health and The Smith Family)
  - » Home Interaction Program for Parents and Youngsters (HIPPY), a home-based parenting and early childhood enrichment program (Brotherhood of St Laurence)
  - » NEWPIN (New Parent Infant Network), a national program that offers peer support and quality education to families facing child protection issues (UnitingCare Burnside)
  - » the Nurse-Family Partnership (NFP), a US program of home visiting to low income first-time mothers, starting with support during pregnancy and continuing until the child is two years old.
- Integrated programs that offer support within a community setting such as a school or childcare centre as well as the home make early intervention more effective. Two programs from the US showed positive results for the children:
  - » the Abecedarian K-2 Educational Support Program, designed to improve the child's home learning support
  - » the Schools of the 21st Century program, which provides universal access to quality childcare, before- and after-school care, and extensive family support services within the school environment.

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# 1 Introduction

In Australia, about one in seven children (14.7%) live in families with incomes more than 50 per cent below the equivalised median income level – one of the most commonly used poverty lines (UNICEF, 2005). This rate is higher than most European nations (UNICEF, 2005), and is higher still among indigenous children. According to estimates from the 1990s, nearly half of all indigenous children live in families with incomes more than 50 per cent below the median income level (Ross & Mikalaukus, 1996).

In contemporary Australia, poverty is not a marginal phenomenon; it is a lived experience for a large number of children that significantly affects their early learning experiences and developmental outcomes.

**Everyday life for poor children can mean hardship and deprivation through insecure housing conditions and a lack of good food and basic necessities. For children, poverty also results in social isolation and exclusion from participation in activities that others may take for granted (Redmond, 2008; Ridge, 2003).**

Multiple studies have documented the substantial negative consequences that growing up in poverty has on children's cognitive, socio-emotional and behavioural functioning, especially during the earliest years of life (Brooks-Gunn & Duncan, 1997; Duncan & Brooks-Gunn, 2000; Ryan, Fauth & Brooks-Gunn, 2006). The list of adverse outcomes is expansive and indicates the broad range of effects that poverty can have. This paper examines the effect of poverty on children's readiness to learn, a concept that emphasises the developmental and transactional nature of learning. Such a conception enables consideration of the ways in which all of us, but especially parents and teachers, can nurture or neglect children's learning from birth.



The paper focuses on children's learning during early childhood, their transition to school, and their early learning at primary school.

The paper is divided into eight core sections:

Section two defines and examines readiness to learn as a concept

Section three outlines the paper's theoretical framework

Section four reviews research related to childhood poverty and the implications for children's capacity to learn

Section five examines the pathways through which poverty affects children's readiness to learn

Section six examines some exemplar programs that have had measurable success in minimising the impact of poverty on the development of young children. The limited scope of this paper and the large number of programs necessitated the adoption of inclusion criteria: the programs were evaluated, well known and there was much information readily available. Programs discussed include international benchmark studies such as the Nurse-Family Partnership and the Abecedarian K-2 Educational Support program, as well as effective national programs.

Section seven examines key challenges to the implementation of successful programs within Australia.

The method adopted for this project comprised extensive searching on multiple education and social science databases to identify relevant literature and evaluated, successful programs; drafting the paper; and revising in consultation with a reference group (refer Appendix A) as well as ARACY-appointed reviewers. All provided expert practitioner feedback.

This paper is intended as a stimulus to debate about the connections between child poverty and learning readiness in Australia and beyond, and to inform a new agenda for action.

## 2 What is 'readiness to learn'?

Two distinct, yet interrelated, models dominate the 'readiness' literature. These are 'readiness to learn' and 'readiness for school'. Within the literature, 'readiness for school' is defined as a 'finite construct' (Kagan & Rigby, 2003, p 2) that refers to the knowledge and skills needed for success at primary school. There has been much debate in the literature about the knowledge and skills that constitute school readiness. The 'readiness for school' model once narrowly focused on cognitive and verbal ability, yet has been expanded more recently to include non-cognitive skills such as children's ability to interact effectively in the classroom, listen with attentiveness, and follow simple instructions. This more holistic definition of school readiness emphasises that success in the education system is also dependent on a range of 'non-cognitive' skills such as persistence and the ability to maintain attention (Heckman, 2006). Such a definition stands in sharp contrast to earlier versions that used measurements of children's cognitive capacities as indicators of their school readiness.

**In contrast to school readiness, 'readiness to learn' is defined more broadly as the ability of children to develop and learn at each stage in life. Learning within this conception is viewed as an ongoing and multi-faceted process, incorporating children's physical wellbeing and motor development, social and emotional development, language development and cognitive development.**

Many early intervention and learning programs draw on this model and are designed to enhance children's physical, social, verbal and intellectual competencies, on the basis that the domains are interdependent, and are all powerfully shaped by a child's early experiences.

The two 'readiness' models are inter-related: 'readiness to learn' refers to children's capacity to effectively engage in learning in formal and informal settings, from infancy to adolescence, and 'readiness for school' refers to the learning required for success at school. Recently, however, concepts of readiness that focus on individual child development have been exposed as being somewhat limited. The last decade has seen dramatic changes in the thinking of educators and researchers about children's development and learning. The critical importance of early developmental experiences on children's brain functioning is now recognised and has resulted in accelerated interest and investment in the early childhood period. McCain and Mustard (2002) demonstrated how the pathways through which brain development occurs are susceptible to sources of stimulation. They have highlighted how connections or synapses in the developing brain are created through input from a child's interactions with people and objects in their social environment. This work corresponds well with other important advances that are taking place in the arena of neuroscience. This area of research highlights the importance of rewarding and warm interactions between parent and child for healthy brain development; the role of love as a foundation for intellectual and emotional development; and the ways in which the developing brain, even before birth, can be damaged by stress, specifically by persistent elevation of the stress hormone cortisol (UNICEF, 2008). Such advances in neuroscience show that school readiness is not something that suddenly happens, but rather is an outcome of a child's life up to school entry (Blair et al, 2007).

Contemporary theorists have drawn upon this work to assert that readiness to learn does not reside only in the individual child, but rather is a transactional construct situated at the intersection of person, process and context (Vernon-Feagans, Odom, Pancsofar & Kainz, 2008).

**This definition incorporates a conception of learning as interactive and relational – learning comprises the ways children individually and collectively produce knowledge in interaction with their environment, particularly their family, early childcare setting, school and community. Within this paradigm, readiness to learn is a shared responsibility (Farrar, Goldfeld & Moore, 2007) – with parents, teachers, carers and others all responsible for transmitting knowledge that will enable children to succeed in mainstream society.**

This new understanding applies an ecological framework to the concept, which maintains that readiness to learn reflects the characteristics and abilities of children as fostered by their parenting and early care experiences, and the multiple environments in which children live and grow (Kagan & Rigby, 2003). Within these multiple settings, child and family characteristics such as parenting practices and the home environment are more consistently and more strongly linked to child development outcomes than child care and community characteristics (NICHD, 2006).



### 3 Examining readiness to learn within an ecological framework

A transactional conception of readiness to learn is largely informed by Bronfenbrenner's ecological theory of human development (Bronfenbrenner, 1995; 1979). This theory emphasises multiple interacting systems of influence and the dynamic interactions between person, process and context. Different contexts such as family, school and community are conceptualised as nested systems of influence, varying in proximity to the individual. According to this theory, the developing child is embedded within interrelated microsystems –activities and contexts in which he or she directly participates. The processes that take place within these primary contexts are known as proximal processes.

**The most important microsystem for a young child is the family, with research confirming the predominant influence of family on a child's cognitive and language functioning (NICHD, 2006).**

Bronfenbrenner's mesosystems comprise interconnections between microsystems, such as parents' interactions with schools and work; and exosystems, which include those contextual factors with which the child does not come into direct contact, but which affect the developing child, such as community characteristics and the economic situation. The fourth structure, the macrosystem, comprises societal features such as cultural values and government policies. Bronfenbrenner's key point is that a child's developmental outcomes are shaped by the interaction of genetic, biological, psychological and sociological factors in the context of environmental support.

An ecological conception of readiness has resulted in research that highlights the complexity of processes that foster a readiness to learn how parenting practices, the quality of education, and the resources of a community, for example, interact and are implicated in the poor learning outcomes of disadvantaged children (Ryan et al, 2006). Such research is vitally important, as it highlights how interactional processes in the home, classroom, school and community produce developmental trajectories for children. Some theorists working within this paradigm have asserted that disadvantaged children are set on a trajectory of failure that becomes evident at school entry and remains fairly stable after first grade (Entwistle & Alexander, 1996). These developmental trajectories begin long before school entry, with poverty researchers identifying differences in developmental outcomes between children from low and high income families, particularly in the cognitive domain, beginning to appear at around two years of age (Ryan et al, 2006).

**Intervening early in the developmental trajectories of disadvantaged children by identifying factors within their families and communities that create problems, and strengthening those that promote resilience, can redirect trajectories. As has been shown by the success of many intervention programs and policies, the future of disadvantaged children is not predetermined, but is open to positive transformation.**



## 4 The impact of poverty on child development

Much research has highlighted how children from low income families often do not experience the supportive conditions that foster their readiness to learn, and how they are disproportionately exposed to harsh physical and social environments that impact negatively on their capacity and desire to learn. For example:

*[Low-income children] suffer greater family turmoil, violence, and separation from their parents. Their parents are more nonresponsive and harsh, and they live in more chaotic households, with fewer routines, less structure, and greater instability ... [They] have fewer cognitive enrichment opportunities both at home and in their neighbourhoods. They read less, have fewer books at home ... and spend considerably more time watching TV than their middle income counterparts ... Poor children reside in more polluted, unhealthy environments. They breathe air and drink water that is more polluted. Their households are more crowded, noisier, more physically deteriorated and contain more safety hazards ... Poor children are more likely to attend schools and day-care facilities that are inadequate. (Evans, 2004, p 88)*

This description conveys a sense of how growing up in economic poverty significantly impacts on a child's development – especially their ability to reach their full learning potential. It needs to be remembered, however, that poverty does not simply mean low

income. As Susan Mayer states, children can be poor “in all kinds of ways” (1997, p15). Such a comment acknowledges the compounding nature of poverty and the impact of related factors such as parental mental health problems, drug and alcohol abuse, and social isolation.

**The impact that these related factors can have on children’s readiness to learn is great, and indicates that programs to improve the developmental outcomes of children living in poverty should be accompanied by a range of community development, housing and health projects that simultaneously seek to reduce the causes of poverty.**

Research carried out largely in the US and the UK over the past 20 years has consistently linked childhood poverty with adverse cognitive, verbal and behavioural outcomes. As indicated above, differences between low and middle income children appear at around two years of age and either stabilise or increase by age five. Without significant intervention, the achievement gap between low and middle income children at the start of school generally remains, with poor children exhibiting lower school achievement, and higher rates of placement in special education programs, grade retention, and early school leaving (Smith & Brooks-Gunn, 1997). This relationship between parental income and child outcomes is complex, however, and simple correlations between the two can overstate the impact of poverty and can miss important distinctions (Bradbury, 2003) such as the fact that families often cycle in and out of poverty. Particularly harmful for children is deep poverty experienced consistently over time and beginning in early childhood (Ryan et al, 2006; Wise, da Silva, Webster & Sanson, 2005).



Analysis of the data produced by the Longitudinal Study of Australian Children (LSAC) shows that the pattern in Australia is consistent with international literature. Drawing on LSAC data to explore the relationship between measures of children's competence across domains and family socio-economic position (SEP<sup>1</sup>), Blakemore (2008) found that children from low SEP families were reported as having the least sociable temperaments and the lowest competence scores, and knowing fewer words when compared to children from families in medium or high SEPs. Blakemore (2008) has used these findings to substantiate the presence of a socio-economic gradient for two to three-year-old children (the cohort she examined). As yet, she has been unable to determine the relative strength of the gradient. Bradbury's (2007) study similarly drew on LSAC data<sup>2</sup> to explore the relationship between family socio-economic characteristics and the physical, socio-emotional and learning outcomes of infants and children. Bradbury (2007) found that the relationship is stronger for children than for infants – a finding that replicates international literature.

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<sup>1</sup> Blakemore uses a measure of SEP that combines parent's income, education and occupational prestige.

<sup>2</sup> First wave, infant and child cohort data.

In a recent study that used LSAC data to explore the relationship between financial disadvantage and school readiness, Smart, Sanson, Baxter, Edwards & Hayes (2008) found clear links between a family's financial position and their children's readiness for school.

**When age categories were examined they found that children at four to five years of age from low income families showed lower school readiness over all domains, but particularly in the area of language development. Two years later, at six to seven years of age, more children from low income families were experiencing literacy and numeracy difficulties than children from middle income families.**

Teachers also reported that children from low income families were more likely to show low engagement in school-based learning and more commonly displayed behavioural problems in class.

Studies using LSAC data, such as those outlined above, are consistently able to establish a relationship between material and social wellbeing and developmental outcomes in early childhood. The Smart et al (2008) study provides further detail, however, by exploring the multiple influences on school readiness that span the child, family and community domains. This study's finding – that the effects of family financial disadvantage seem to be expressed through family factors – is illustrative, especially when examined in conjunction with theoretical discussions of the pathways through which poverty affects child development.



## 5 Pathways through which poverty affects children's readiness to learn

The concept of pathways helps to explain the mechanisms by which poverty exerts its effects on children. This concept acknowledges that poverty may not have a direct affect on children's overall wellbeing or readiness to learn, but that the effects of poverty are mediated by the context in which the child is developing – in particular the family and community context. Elaboration of these pathways may lead to the identification of what Duncan and Brooks-Gunn (2000) refer to as 'leverage points' that may be open to policy and program intervention. Duncan and Brooks-Gunn (2000) identify a number of potential pathways through which income might influence a child's readiness to learn. These pathways include:

- the quality of the home environment
- the quality of parent-child interactions
- the quality of early learning and care received outside the home
- parental health
- community conditions.

According to Ryan et al (2006), most pathways posited in the poverty literature can be grouped under two theories:

- the Family Stress Model
- the Investment Model.

## 5.1 The Family Stress Model

The 'family stress model' (Conger & Elder, 1994) focuses on the impact of poverty on relationships and interactions within families. Within this theory, parental stress, brought on by financial pressure and material deprivation, can lead to emotional distress in parents, such as increased levels of depression and anxiety. These states, it is argued, can hinder a parent's ability to be responsive and can result in less consistent, and more hostile, parenting.

**Parenting characterised by hostility, arbitrary discipline or emotional detachment has been linked with a negative effect on children's socio-emotional and cognitive outcomes (Shonkoff & Phillips, 2000). In contrast, warm, responsive parenting throughout early childhood facilitates children's cognitive and social development (Landry, Smith & Swank, 2003).**

The family stress model hinges on parenting and parent-child relationships – one of the most influential pathways that can mediate the impact of poverty on children's development (NICHD, 2000). Warm supportive parenting that incorporates positive learning experiences can significantly protect children against the harmful effects of poverty (Ryan et al, 2006). A key role that parents can play to foster child development is reading to their child on a regular basis in ways that require him or her to think and provide information about the story (Landry & Smith, 2008; Whitehurst & Lonigan, 1998). Rich language experiences in the home promote cognitive readiness for children. Children from low income families, however, are the least likely to experience rich language input. Differences in the quality

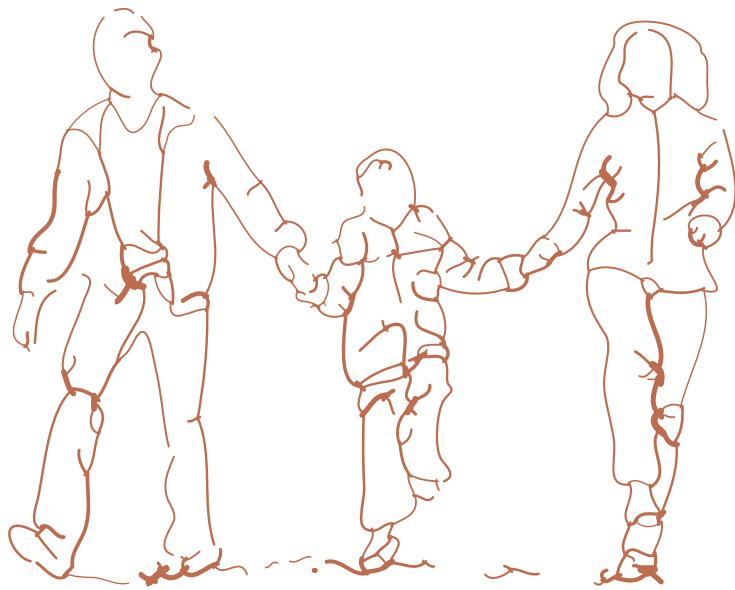
of language experiences within high and low income families are strongly correlated with children's academic achievement in the early school years (Hart & Risley, 1995). Cognitive readiness needs to develop in parallel with social competence and therefore parents must also enact an appropriate parenting style. A child's ability to develop independence in regulating their behaviour is more likely to occur when parents provide clear expectations and consistency (Baumrind, 1989).

## 5.2 The Investment Model

The 'investment model' (Haveman & Wolfe, 1994), on the other hand, emphasises the links between poverty and resources. According to this theory, children living in poverty have fewer opportunities to extend their learning because their parents cannot afford to purchase the materials, experiences and services that facilitate positive development. These goods and services include stimulating learning materials, nutritious food, safe living conditions, and quality childcare and schooling. The investment model can be used to interpret the findings by Katz and Redmond (2008), who drew on LSAC data to explore differences in developmental outcomes among children from middle and high income families. Katz and Redmond (2008) found that high income is a protective factor, and makes a significant and positive difference for 'vulnerable' children (defined as those who scored low on a range of developmental outcome tests at age four to five).

The family stress and investment models are not the only theories concerned with the association of poverty and developmental outcomes, nor are they without limitations. These two models fail to address two further aspects of child development that have been

highlighted in recent research – first, the interactive nature of parenting i.e. the finding that children influence their parents' behaviour as well as parents' influencing children's outcomes (O'Connor & Scott, 2007); and second, the differential effects of parenting on different children (Brazelton & Cramer, 1991). The models are helpful however, as they elaborate pathways through which low income may influence developmental outcomes. The pathways are not mutually exclusive, but rather act as mechanisms that may operate simultaneously in children's lives, with dimensions that change as children grow older. Intervention programs can play a role in moderating the pathways through which poverty affects child development. The three program types that attempt to address disparities in children's readiness to learn are early intervention programs, school-based programs, and integrated programs.

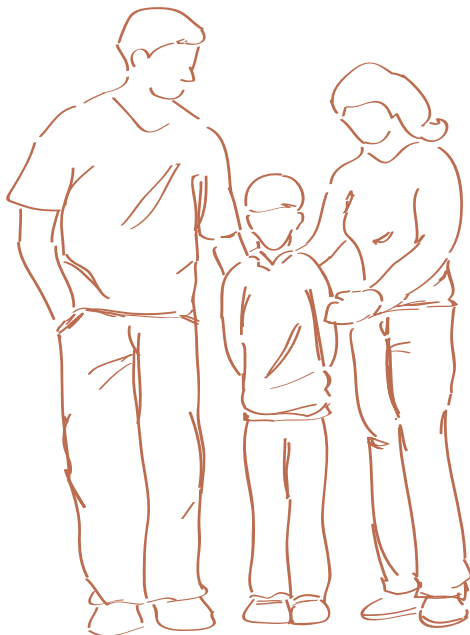


## 6 Programs that attempt to mediate the effect of poverty on the development of children and their readiness to learn

Exploration of the causal pathways through which poverty influences developmental outcomes has assisted researchers and policymakers in formulating intervention programs aimed at mitigating the effects of poverty on children. A broad range of programs exist. Programs vary on a number of different dimensions, including form (universal or targeted); location of service (home, childcare centre, parenting group, school); client target (child, student, child/mother, family, community); timing; intensity; and curriculum to name a few variations.

This section focuses on three types of programs:

- early intervention programs
- school based programs
- integrated programs.



## 6.1 Early intervention programs

Early intervention programs seek to alter the developmental trajectories of participants. The benchmark report *Pathways to Prevention* defines early intervention as “early in the developmental pathway” (Homel et al, 2006, p vii), indicating that early intervention programs are not always targeted at children. The early intervention programs discussed in this paper, however, are those that have been designed to improve children’s cognitive, socio-emotional and language development, and to stimulate learning within a structured and supportive environment.

Program evaluations over the last four decades have built a strong body of evidence that attests to the positive effect these programs can have on enhancing children’s readiness to learn (Anderson et al, 2003).

**The most successful early intervention programs have been aimed at socially disadvantaged families and have used combined strategies that target both child and parent (Watson & Tully, 2008).**

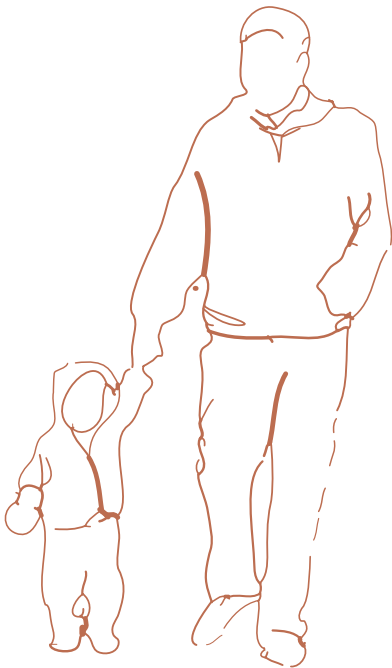
Brooks-Gunn (2003), who undertook a review of several program evaluations, asserts that high quality centre-based programs enhance vulnerable children’s school-related achievement and behaviour; that the positive effects are strongest for poor children, and for children whose parents have little education; that the benefits of early intervention on school achievement are greatest at the beginning of primary school; and that programs that continue into primary school and are intensive in nature often have the most sustained long-term effects.

Despite these positive findings, the early intervention literature shows that some well-intentioned programs have been unable to demonstrate measurable benefits. Jane Waldfogel says of such programs:

*Parental care and preschool care and education (both) play a role in facilitating or hindering children's development in the early years, (but) what parents do matters more than what preschools do ... however ... interventions that provide high quality care and education for children are more effective in changing outcomes ... than interventions aimed at improving home environments and parental behaviour. Thus although parenting may be more important, interventions to improve nonparental care and education may be more effective. (Waldfogel, 2005, p 32)*

A comparative review of successful and unsuccessful programs highlights the importance of four features:

- programs need to provide pre-service and/or in-service training for teachers to ensure that children receive a consistently high-quality learning and language environment;
- programs need to be intensive. The successful Abecedarian Project for example placed children in special programs five days per week for 50 weeks of the year;
- programs need to have a preventive rather than a remedial focus; and
- programs that target vulnerable families need to include direct intervention for the child such as the explicit teaching of important cognitive and language concepts (Ramey & Ramey, 2004).



The most commonly used early intervention strategies are home visiting, childcare, and parenting education (Watson, White, Taplin & Huntsman, 2005). The most promising home visiting results reported have been from the Nurse Family Partnership (NFP) program, particularly from the first study site in Elmira, New York (Olds & Kitzman, 1993). The participants of this program were low-income first-time mothers, who received home visiting by registered nurses, which began as prenatal support and concluded when the child was two years old. Improved prenatal health, especially by helping mothers reduce their use of cigarettes, alcohol and drugs – and therefore the incidence of related disorders such as foetal alcohol syndrome – and improved school readiness for children are some consistent program effects. Olds & Kitzman (1993) assert that maternal participation early in pregnancy is essential to the success of the NFP program. There is some evidence that engaging mothers prior to the birth of the child is an effective intervention recruitment strategy as it gives the mother the clear message that the visitor is there to provide support, rather than to monitor whether the baby needs protection (Watson & Tully, 2008).

**Moreover, some research indicates that intervention is best provided during key transition points in people’s lives – such as the birth of a first child or when a child starts school – as this is when people are most likely to be both in need of assistance, and more receptive to learning new ways of doing things (Duncan & Brooks-Gunn, 2000).**

High quality childcare is argued to be the most successful and cost effective single early intervention strategy to improve developmental outcomes, particularly language and cognitive development (Watson & Tully, 2008). The link between high quality childcare and positive child outcomes is especially strong for children from disadvantaged families. More recently-designed early intervention programs comprise multiple strategies that offer a

range of supports and services to children and parents. These types of programs have been shown to be more effective than interventions that focus only on one outcome or dimension (Feldman, 2004). Watson and Tully (2008) argue that programs that are easily accessible within a community, and include high quality childcare and a strategy that simultaneously targets the parents, are those most likely to change the developmental pathways of disadvantaged children towards more positive outcomes. Multi-component interventions such as these fit well with a conception of children's readiness to learn as a transactional process that begins before birth, is ongoing, and is undertaken within overlapping contexts of influence.

A large variety and number of early intervention programs targeting vulnerable children and their families now operate throughout Australia. Examples of programs include Let's Read, an early literacy program developed by the Centre for Community Child Health in partnership with The Smith Family Australia, aimed at promoting literacy development for children in disadvantaged communities; Brighter Futures (NSW Department of Community Services), a multiple strategy program aimed at halting families' escalation through the child protection system; the Home Interaction Program for Parents and Youngsters (HIPPY) – a home-based parenting and early childhood enrichment program that is implemented by various non government agencies throughout the country; and the New Parent Infant Network (NEWPIN) – a national program coordinated by UnitingCare Burnside that offers peer support and quality education to families facing child-protection issues.

**All of these programs adopt a strengths-based practice model that seeks to influence the extent of participants' engagement in program services; increase family efficacy and empowerment; and enhance families' relationship-building capacity and social support networks (Green, McAllister & Tarte, 2004).**

The development and rollout of some of these programs as public policy can be viewed as part of an international shift that reflects ongoing efforts to reconceptualise child protection within a broader child and family welfare orientation. According to Watson and Tully (2008), this shift in policy has been accompanied by a corresponding change in early intervention practice that is informed by a socio-ecological framework, rather than models of individual or family dysfunction. This shift in policy and practice is supported by a wealth of international evidence that advocates early intervention as a successful strategy that is more cost-effective for governments in terms of long-term savings in the health, education and criminal justice systems (Schweinhart et al, 2004).

## 6.2 School-based programs

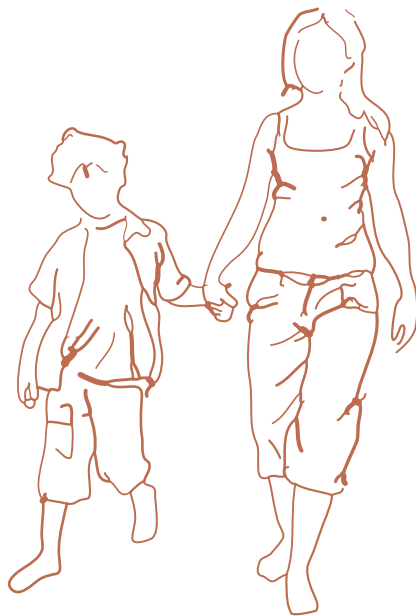
**Research indicates that early intervention programs cannot achieve long term success alone, and that extended early intervention programs that continue into the primary school years (see section 6.3 following), as well as specific school-based programs, are the essential next step in addressing disparities in children's readiness to learn (Ramey et al, 2004; Ryan et al, 2006).**

Governments, teachers and others throughout Australia have attempted to improve the learning outcomes of children from low income families through two types of school-based programs. These are equity and teaching and curriculum-based programs. Equity programs (previously referred to as 'compensatory' programs) comprise a range of supplementary educational and funding provisions for disadvantaged students and/or schools. Funding is

distributed differently within each state and territory. For example, NSW provides funding directly to schools located within disadvantaged communities and SA provides discounts to low income parents on necessary educational purchases like school uniforms. Currently in Australia there is an emphasis on 'broadband' equity programs in state and territory school systems. These programs emphasise literacy, numeracy and the special learning needs of disadvantaged students.

An example of an equity program that has been evaluated is NSW's Priority Schools Funding Program (PSFP; previously known as the Disadvantaged Schools Program). This program has been in operation for more than 30 years and provides additional funding to identified schools located within disadvantaged communities. PSFP aims to reduce the achievement gap in student learning and improve the literacy, numeracy and participation outcomes of students adversely affected by their socio-economic circumstances (NSW Department of Education and Training, 2004). Identified schools may use the supplementary funding to employ extra teachers; enable teachers to undertake professional development; purchase additional resources; and design and implement community-based intensive learning and behaviour management programs. The aim is to allow flexibility, as the learning needs of Indigenous students in a remote primary school are vastly different from the needs of culturally and linguistically diverse students in an inner city school. Research conducted by Lamb and Teese (2005) shows that despite the long term existence of this program, significant and persistent gaps in students' achievement and outcomes remain, particularly in the most disadvantaged schools.

The literature also reveals that while extensive policy development has occurred and there is an array of equity programs currently in use across the country, there has been little evaluation of these programs (Ayres, 2007). Moreover, the research that has been undertaken, including international research, is largely descriptive in nature. Some programs



have been unable to sustain improvements in children's developmental outcomes much beyond the intervention and have been unable to compensate for what Connell refers to as "the structural consequences of poverty" (1994, p 133).

While equity programs tend to draw on deficit models of learning, teaching and curriculum-based programs offer an alternative approach. These programs seek to address the achievement gap between students from low and high income families, and Indigenous and non-Indigenous families, through curriculum-based programs that seek to engage students through successful pedagogy in meaningful learning.

**Research indicates that the learning difficulties of students from disadvantaged backgrounds – often defined by low income as well as limited opportunities to learn and lack of support from home – are often exacerbated by students' emotional reactions, where learning failure undermines a learner's self esteem and confidence (Westwood, 2008).**

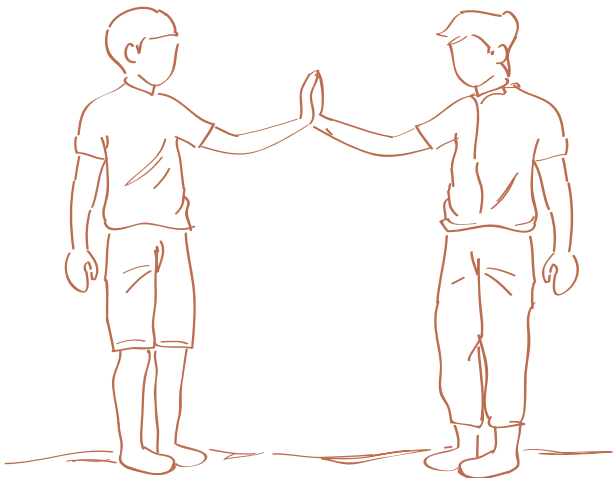
Quality teaching that can provide students with a taste of academic success therefore has the potential to transform the learning outcomes of disadvantaged students.

School-based programs are designed to improve teaching and learning within the school context. However, as evidenced throughout this paper, child development occurs within multiple and interacting systems of influence. The quality of the school environment is only one of a number of pathways that mediate the effect of poverty on child development. The limited and inconclusive results shown by equity programs may reflect the fact that intervention needs to occur within multiple contexts (Munns, 2004).

## 6.3 Integrated programs

Findings from successful integrated programs – those that offer support within a community setting (usually a school or childcare centre) and the home – can enhance and sustain the efficacy of early intervention and school-based programs (Ramey et al, 2004).

The successful Abecedarian K-2 Educational Support Program is an illustrative example. This program was designed to aid children's transition into school, as well as to test whether cognitive and achievement benefits were proportional to the duration of the intervention. The program provided additional support to children and their families who had participated in their early intervention program. The program was based largely on the view that parental involvement in school work is an important factor in school success. Consequently, it was designed to improve the child's home learning support, and to provide additional learning over the summer holidays as this had been identified as a period when high risk children can lose ground academically (Entwistle and Alexander, 1996). Classroom teachers were given continuing assistance to ensure that children's school experiences were developmentally appropriate, and parents were shown how to enhance schoolwork by engaging in supplemental educational activities at home. These educational support services were provided by expert teachers known as Home-School Resource Teachers (HSTs). HSTs developed individualised learning activities for their assigned children (approximately 12 children per HST), based on objectives established with the classroom teacher, and with a major focus on the development of basic skills in reading and mathematics. Results from the Abecedarian project showed that the advantages gained by children from the early intervention program were enhanced by the specific and intensive school program that provided specialised support for early school learning (Ramey et al, 2004).



Another form of integrated intervention that aims to improve the wellbeing of children emphasises the role of schools as bases within the community. The Schools of the 21st Century (21C) program was developed in response to changing patterns of work and family life, and the pressing need of families in the US to have access to affordable, quality childcare. The 21C program provides universal access to quality childcare, before- and after-school care for school-aged children, and extensive family support services within the school environment. Additionally, the program provides support and training for childcare providers. The 21C model has been implemented throughout the US where it has become the basis for an expanded array of family support services (Barnes, Katz, Korbin & O'Brien, 2006). A longitudinal evaluation of the 21C program confirms the effectiveness of the model, finding significant differences between the experimental and control groups in academic achievement (Barnes et al, 2006).

The ecological theory of development suggests that the success of these two programs is related to the multiple contexts (home, school, childcare centre, community) and targets (child, student and parent) that receive and benefit from program supports and services. Few school-based programs within Australia offer such comprehensive supports and services.

**Indeed equity programs are the dominant model developed to address the social stratification of learning outcomes within Australian schools, focus largely on the student, and have generally been unable to reduce disparities in educational outcomes (Connell, 1994; Lamb & Teese, 2005).**

Further, a number of systemic issues hinder the implementation of intensive, multicomponent, interventions that target both child and family within Australia. These are discussed in section 7.

## 7 Successful intervention programs in Australia: barriers to implementation

This discussion of early, school-based, and integrated interventions indicates that the programs that have had the most success in facilitating enhanced cognitive, socio-emotional, and behavioural outcomes for children in poverty:

- are intensive in nature
- comprise multiple components – particularly centre-based early childhood education and a simultaneous family support strategy
- intersect both home and childcare settings, or home and school
- include quality education and direct teaching of child and support for parents and teachers
- include a curriculum that children can meaningfully connect with; and
- begin in the preschool period and extend into the early school years



Some of the barriers to implementing such a program throughout Australia are discussed below.

- Multi-sector coordination

**An effective program would require greater collaboration and coordination between multiple sectors (especially early childhood and primary school education, and state and territory based education, and family and community service authorities).**

Recent studies have highlighted collaboration difficulties between childcare centres and primary schools within Australia (Curtis & Simons, 2008; Firlik, 2003). Currently these sectors are not well integrated (Centre for Community Child Health, 2008), starkly differ in terms of industrial conditions and accreditation systems, and do not share a unified conception of learning in childhood. This has significant implications for continuity of care during the transition of children into school. Greater collaboration is needed to ensure a smooth transition from childcare settings to school.

- High cost

An intensive, long term program that provides direct intervention to children and support for parents and teachers is expensive to implement. While some research has demonstrated the cost-effectiveness of early intervention in providing long term savings within the health, justice and education systems (Schweinhart et al, 2004), there have been no cost-benefit analyses of Australian programs (Wise et al, 2005). Lamb and Teese's (2005) review of equity programs for government schools in NSW indicates that a greater concentration of funds within the most disadvantaged

schools is required. Equity funding needs to be based on the costs of providing context-specific programs designed to meet the additional educational and social needs of children from disadvantaged backgrounds.

- **Workforce issues**

There are systemic or structural factors that seriously limit the potential impact of early intervention, school-based, and integrated programs within Australia. The research indicates that quality teaching is required for programs to be successful. It is often difficult, however, to secure qualified, experienced and stable teaching staff within disadvantaged communities (especially in remote and regional areas). A national shortage of university-trained early childhood teachers means that childcare centres often rely upon underqualified staff who are less likely to provide a consistent high quality educational environment. The situation is similarly disheartening in the school sector with staff turnover significantly higher in identified disadvantaged schools than those in more socioeconomically advantaged locations (Lamb & Teese, 2005). High staff turnover means that the benefits of professional development and capacity building, particularly delivered through new and innovative programs designed for disadvantaged students, do not stay with the school. This issue seriously undermines the implementation of equity programs, and is detrimental to a quality early learning environment. Continuity of teaching staff is fundamental to any intervention program, especially in disadvantaged schools.

**Teachers are fundamentally important to any attempt to improve children's readiness to learn, yet they are absent from much of the policy debate. If the education of children in poverty is to be changed, teachers will be the workforce of reform (Connell, 1994).**

To ensure that teachers are able to meet the needs of our country's most disadvantaged students, they require both pre-service and in-service training on ways to enhance learning and engage students in ways that enable them to reach their full potential.

Similar workforce problems are evident within the non government sector, with high levels of staff attrition evident across Australia. This threatens the relationship between the practitioner and the child and the practitioner and parent. These relationships are known to be crucial to the success of early intervention programs (Watson & Tully, 2008).

- **Lack of targeting strategy**

There is no clear and consistent targeting strategy for early intervention and school-based programs aimed at mitigating the effects of poverty on children's readiness and ability to learn. Not all children need supplementary education or enrichment in the form of intervention and educational support programs, yet the research consistently indicates that of the children and families who need additional support, those most vulnerable are the most likely to refuse to engage from the start or drop out early (Watson & Tully, 2008).

**Research suggests that providing services that target disadvantaged children and their families is a more cost-beneficial strategy than universal service delivery, however, stigmatisation of the service and service users can result from this strategy. Watson & Tully (2008)**

therefore propose an approach that targets vulnerable subgroups (such as disadvantaged children) on a universal basis by location – the method adopted by the NSW Priority Schools Funding Program.

## 8 Conclusion

Children who live in poverty, especially for an extended period of time, experience limited learning opportunities that can affect their ability and readiness to learn, and result in significant developmental delays.

**Research indicates that early intervention programs – including those that extend into primary school – and integrated programs that draw upon schools and childcare centres as a community base for the delivery of a wide range of services that impact across various contexts (home, school and community), can redirect children’s developmental pathways towards improved learning outcomes.**

Ecological theory suggests that the success of these programs lies in their capacity to reach multiple targets (child, student, parent, family) within multiple contexts and reinforce the learning that takes place within each. This model of intervention draws upon a transactional conception of learning that acknowledges the multiple influences on a child's readiness to learn, as well as the prevailing influence of the family context.

Finally, an ecological conception is especially relevant to an examination of inequality in children’s readiness to learn because this conception shifts the focus towards an examination of the readiness of families, teachers, communities and governments to provide conditions that support children’s ability and readiness to learn. Such a focus is helpful as it is a child’s environmental conditions, rather than genetic endowment, that are open to transformation and policy intervention.



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