



Centre for the Study of Higher Education

## **Education, Science and the Future of Australia**

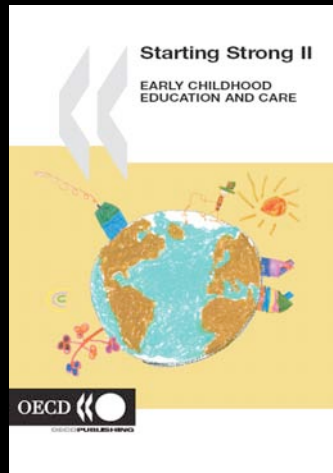
A Public Seminar  
Series on Policy

### **Early childhood education and care**

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# Early childhood education and care



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Early Childhood Education and Care (ECEC)



Sources of evidence  
Why consider ECEC?  
Australian data in OECD context  
Challenges

Challenges....

- quality programs and outcomes
- access & persistent social inequalities
- the conceptual basis of ECEC : policy, community
- preparing EC professionals



## Starting Strong evaluation

• Australia 	• Finland 	• Mexico 
• Austria 	• France 	• Netherlands 
• Belgium Fl 	• Germany 	• Norway 
• Belgium Fr 	• Hungary 	• Portugal 
• Canada 	• Ireland 	• Sweden 
• Czech Rep. 	• Italy 	• UK 
• Denmark 	• Korea 	• USA 

### *Why did OECD conduct an ECEC Thematic Review?*

ECEC programs are conceptualised as important in life-long learning and there are economic reasons to address ECEC. This area is a producer of social, human and identity capital. It builds the foundations of knowledge, skills, competencies and personal attributes that allow people to contribute to their own personal and social wellbeing – as well as that of their country.

### *What was the review process?*

Countries chose to take part. Each national government prepared a Background Report (see OECD these on website), under the guidelines set up by John Bennett..

An OECD Expert team (and Rapporteur) was selected for each country, having regard to the specific issues and profiles that were evident.

The relevant team undertook a country visit (usually 10 days) for investigations and review (after close study of the Background Report).

An OECD Country Note was prepared by Rapporteur in collaboration with John Bennett (see OECD website). The Country Note was then verified (for factual content) by the relevant national government.

Starting Strong II (co-authored with John Bennett) is of a meta-analysis of the evidence from the 20 countries and a synthesis of contemporary research and literature addressing each of the domains of investigation (ECEC purposes, policy, provision, approaches, curriculum and pedagogy, partnerships, access, funding, quality, professional preparation and development, data collection, monitoring and accountability, research)



# Queensland Preparing for School Evaluation 2003-2004

Funded by the Queensland Department of Education and the Arts.

For final report see: Thorpe, K., Tayler C., Bridgstock, R., Grieshaber, S., Skoien, P., Danby, S. & Petriwskyj, A. (2004). *Preparing for School. Report of the Queensland Preparing for School Trial 2003/04*. DETA: Queensland Government.

Participants:

1862 children + their families, principals, teachers and assistants

Purpose:

To identify key success factors in the pre-primary year. (Measuring the effects of a new, full-time play-based program for children approximately 4-6 years.)

Measures (multiple) at baseline, end of program year and early the following year. A particular focus was to identify factors that might explain differences in child outcome. The value added by 'program' for children at-risk was central to the study analysis.



## Setting standards and assuring quality in Australian child care services 2006

## Early Interventions and cost-benefit studies review 2007

The first, is a report for the Community and Disability Services Ministers Conference of COAG. See:

See: Tayler, C., Wills, M., Hayden, J. & Wilson, C. (2006). *A review of the approach to setting national standards and assuring the quality of care in Australian child care services*. Ministers Conference, Canberra: Department of Families, Community Services and Indigenous Affairs.

The second is a study just completed and, as yet, unavailable for access. Tayler, C., Cloney, D., Thorpe, K., & Wilson, C. (2007). *Investing in early childhood intervention programs and services in Australia: Examining the feasibility and setting options for cost-benefit research*. A report to the Australian Education Senior Officers Council (AESOC) Early Childhood Reference Group. The AESOC serves the Ministerial Council on Education Employment Training and Youth Affairs.



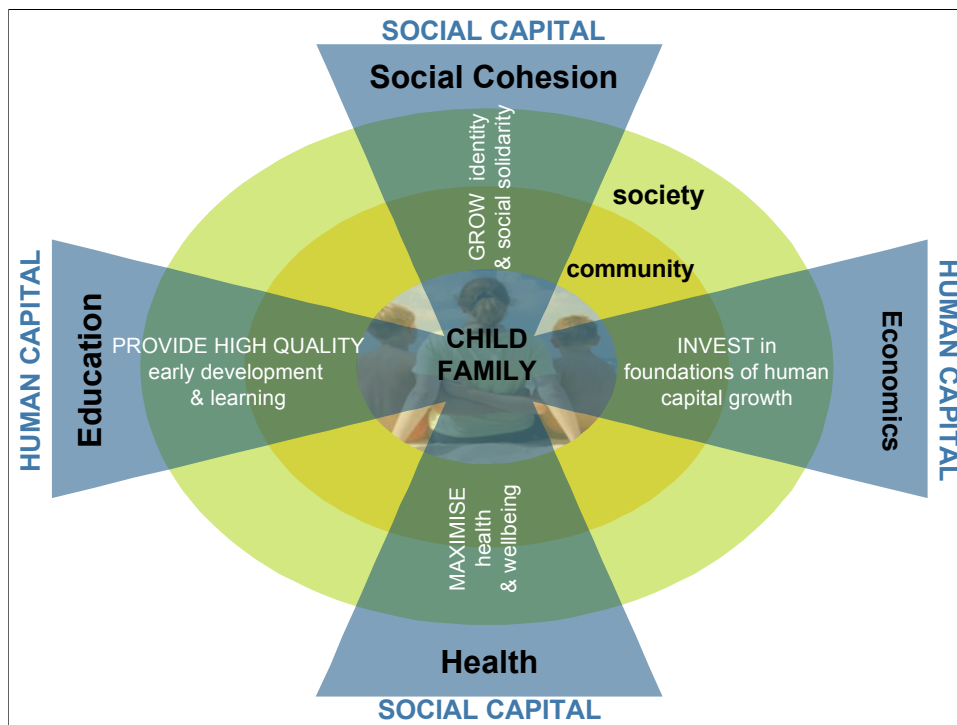
## **Why OECD countries invest in ECEC?**

**EDUCATION** reasons: Children (as citizens) are supported by governments in this period of personal, social and identity formation. Kindergartens (the generic term used for most preschool services in Europe) serve children from approximately 2.5 years to age 6 or 7 after which they enter primary school. The Nordic countries, France, Belgium programs are built on broad educational reasoning, the focus being on the care, education and upbringing of young children, in close collaboration with families. An extreme example of educating children from the earliest phase (in this case the first year) is North Korea where many children are enrolled in full-day full week, residential kindergartens.

**ECONOMIC** reasons: Women's labour participation for economic growth and supporting issues related to family-work responsibilities (UK, CC AUST).

**SOCIAL WELFARE** reasons: To act against poverty & disadvantage, address demographic challenges (fertility, immigration...). USA, some CONTINENTAL EUROPE





This conceptualisation (Tayler & Thorpe, 2007) attempts to capture the multi-disciplinary orientation of ECEC. The ‘push’ of economics in the field needs to be balanced by the ‘pull’ of education if children are to receive effective development and learning experiences in a program that is sensitive to their age and capacity, interesting to them and promoting positive learning and development.

The child and family, in the first instance are key beneficiaries of program investment but most benefit is returned over time through externalities – community and society make the greatest gain (see key evidence from longitudinal studies of early intervention programs).

The reasons underpinning the supply of services shape ECEC policy in each country. Some of the resulting policy parameters include various positions regarding the provision of:

UNIVERSAL or TARGETED Services (the QUANTITY and SCALE ISSUE)

The PUBLIC and/or PRIVATE FAMILY investment balance (the QUALITY ISSUE)



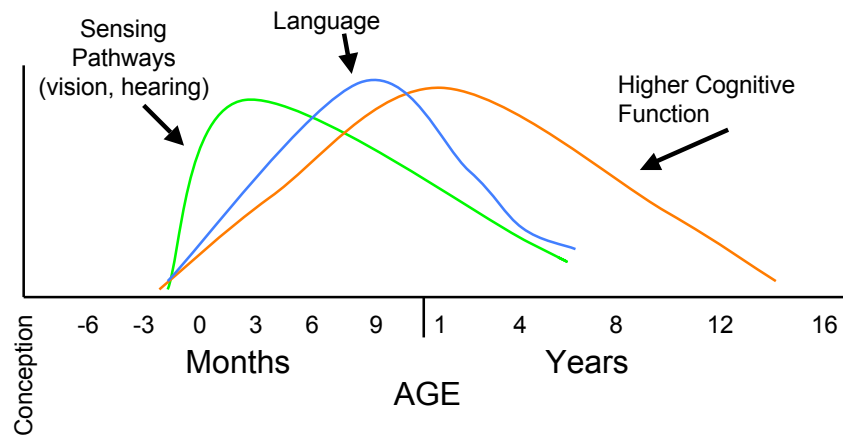
**the scientific evidence...  
quality of environment & experiences  
(relationships & interactions) are key**

The scientific evidence confirms that high-quality environment and experiences in early childhood:

- 1 Are a key force in building emotional security, resilience & mental health
- 2 Directly impact brain development & human potential
- 3 The ECEC environment is dynamic - children create as well as receive 'environment'...
- 4 Early positive experience is likely to lead to more positive experience
- 5 The well-being & experiences of adults (caregivers and professionals) who interact with young children is central to the **quality** of experience of the child
- 6 Learning occurs most effectively when there is active "teaching" (see the Queensland Study FIT (focused interactive teaching), and the EPPE longitudinal study from the UK (Shared Sustained Thinking). The UK study is now in its 10<sup>th</sup> year and the evidence for specialist ECEC pedagogy is becoming more powerful as the trajectories of the ~3,000 children are tracked.



## Human Brain Development Synapse Formation



C. Nelson, *From Neurons to Neighbourhoods*, 2000.

Consider these growth trajectories in early childhood – they verify the strong case for ensuring the provision of high-quality program and experiences (both in and beyond the home) at this phase of life.



## **ECEC - a critical period?**

### **...not critical, but sensitive**

Children who have adverse early experience should not be written-off as without hope. But early adversity may limit optimal achievement and remediation is typically costly.

This is particularly evident in research on anti-social behaviour and aggression. Richard Tremblay's longitudinal studies in Canada document the origins of aggression in early childhood and indicate that the success of later interventions may be limited.

The Romanian adoptees studies (led by Sir Michael Rutter indicate that intensive assistance has improved adoptee attainments but late-adopted children do not approach norms and the children are characterised by autistic behaviours and marked cognitive deficits.



## **OECD... Australian ECEC context**

Source: Starting Strong II (2006):

Australia is a relatively wealthy country. GDP per capita: US\$28 100

Children < 6 years: ~1.5 million

We are relatively conservative, e.g. the low labour participation of women with children <5yrs : 16.2% in full-time employment and 35.5% in part-time – 51.7% employment. Many comparable countries have rates of 70-75% participation.

Statutory maternity & parental leave – unpaid up to 52 weeks . 30.6% employees in main job can access this leave. At the birth of a child 38.8% of leave taken by women is unpaid

- 32.2% is leave paid by employers

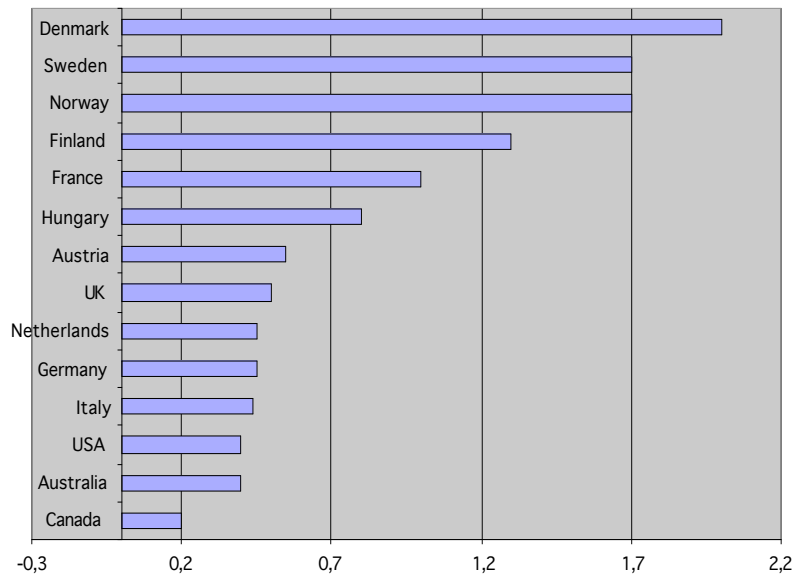
- 5.9% of fathers take unpaid leave; 18.7% take paid leave

- National data on the duration of these leaves are not available

Child poverty rate: 14.7% (OECD average - 11.2 %)



## **FUNDING** of ECEC services (birth - 6 year olds) in selected countries (%GDP)



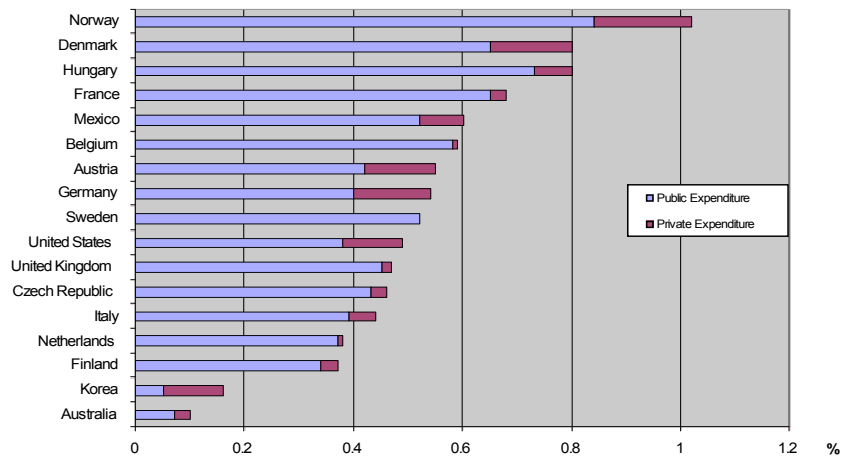
The levels of funding shape the overall system and define the structural quality parameters of ECEC programs and services.

The data above capture both child care (eg child care benefit) and kindergarten/preschool services expenditure. If the ISCED Level 0 definition of and educational service is applied to ECEC, Australia's investment drops to 0.1% GDP (70% public, 30% private). ISCED Level 0 (0.1%) does not include Australian primary school students who are aged 5 years – they are counted under primary education ISCED Level 1. The pre-primary expenditure is 1.7% of the Education budget for 2.9% of the education enrolments.

In the UK there is a surge of funding into this area which will reflect more in the coming years – there is commitment to build ECEC integrated services and raise investment over time from ~0.6 GDP to 1.6. (See the long-term strategy papers).



## Public and private expenditure on preschool education (3-6 yrs) in selected countries (%GDP)



Note that in South Korea investment has more than doubled since the OECD report for that country. Australian investment, relative to our growing GDP has stagnated. In 2007, using Productivity Commission Expenditure in ECEC and current Australian GDP evidence we are going backwards.



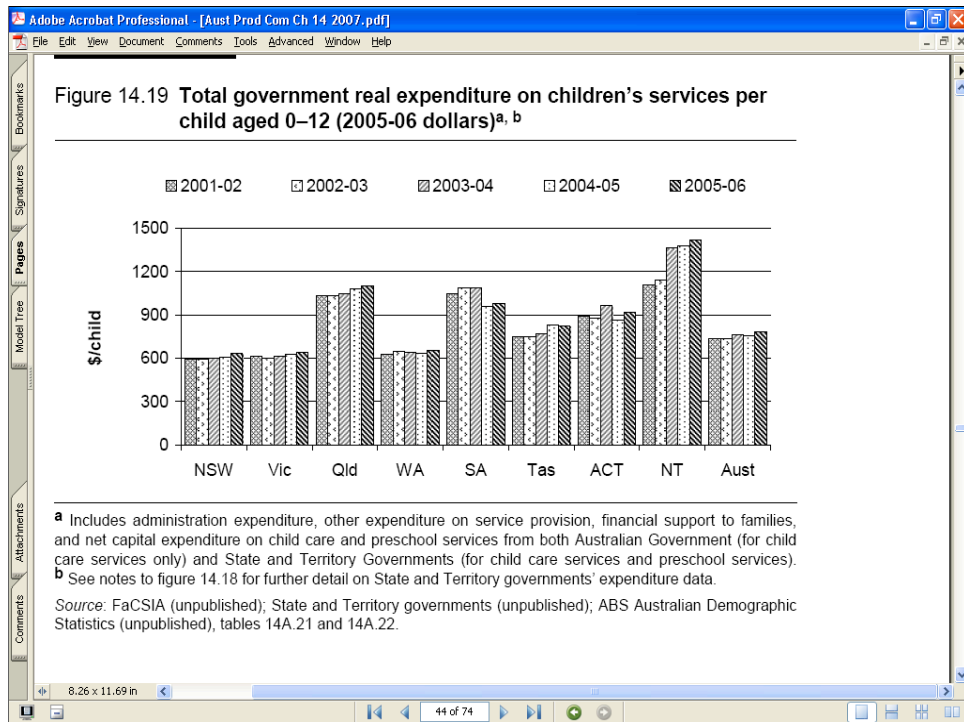
## How much should countries invest?

Estimates/child for High quality ECEC program

	Half day school	Full day school	Full-day/year
<b>DENMARK</b>			US\$19,500 (13,650 pub) 30% parental
<b>FINLAND</b>			EUR 10,250 (not incl. parental contribution)
<b>NORWAY</b>			EUR 12,520 (not incl. parental contribution)
<b>SWEDEN</b>			US\$ 12,100 (not incl. parental contribution)
<b>USA</b> (Abecedarian, 2002 costs)		\$ 13,000	
<b>US Com. ECON Dev.</b>	\$ 5,100	\$ 8,800	
<b>US HEAD START</b>	\$ 8,625		
Kagan & Rigby	\$ 4, 000 - 6,000	\$8,000 -12,000	

Note that the research literature, especially evidence from longitudinal studies stresses the importance of high-quality programs for the large positive returns to be assured. (Quality is a relative concept that is outlined in detail elsewhere. This address offers insufficient time to unpack dimensions other than key structural (qualifications, staff-child ratios, group size) and pedagogical (play-based focused- interactive teaching....shared sustained thinking).

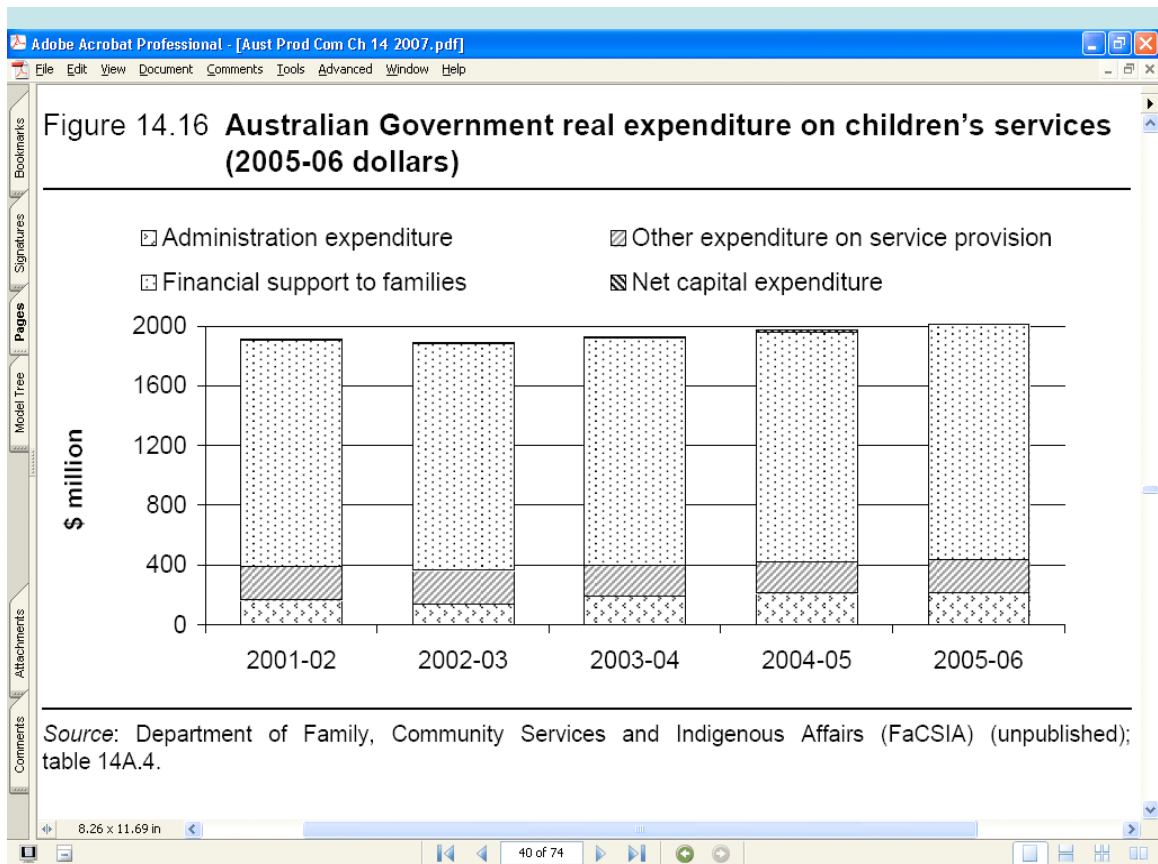
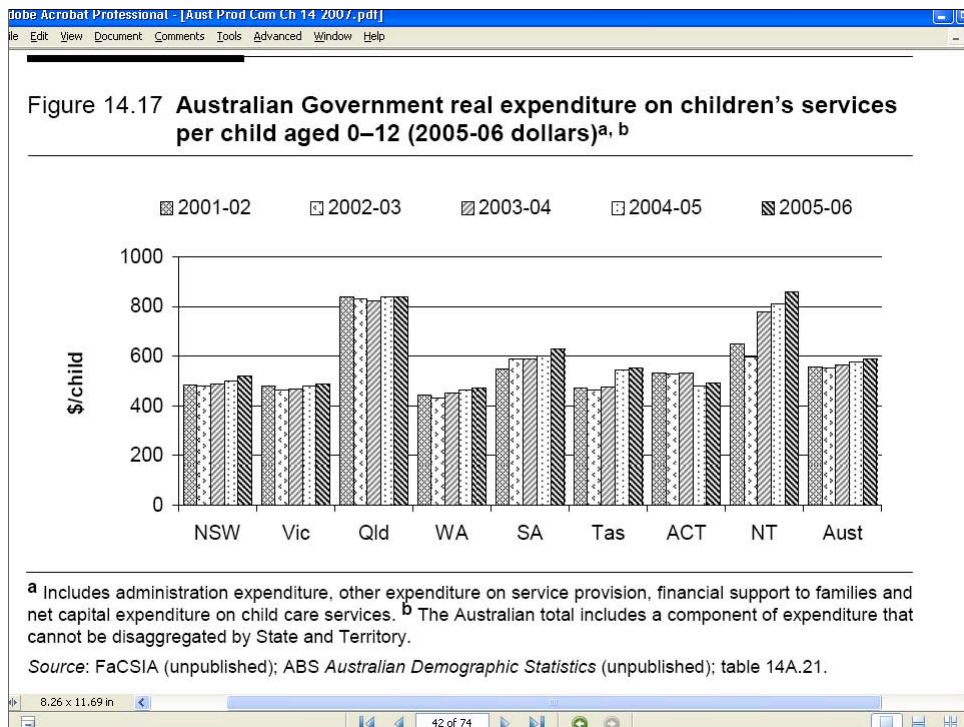




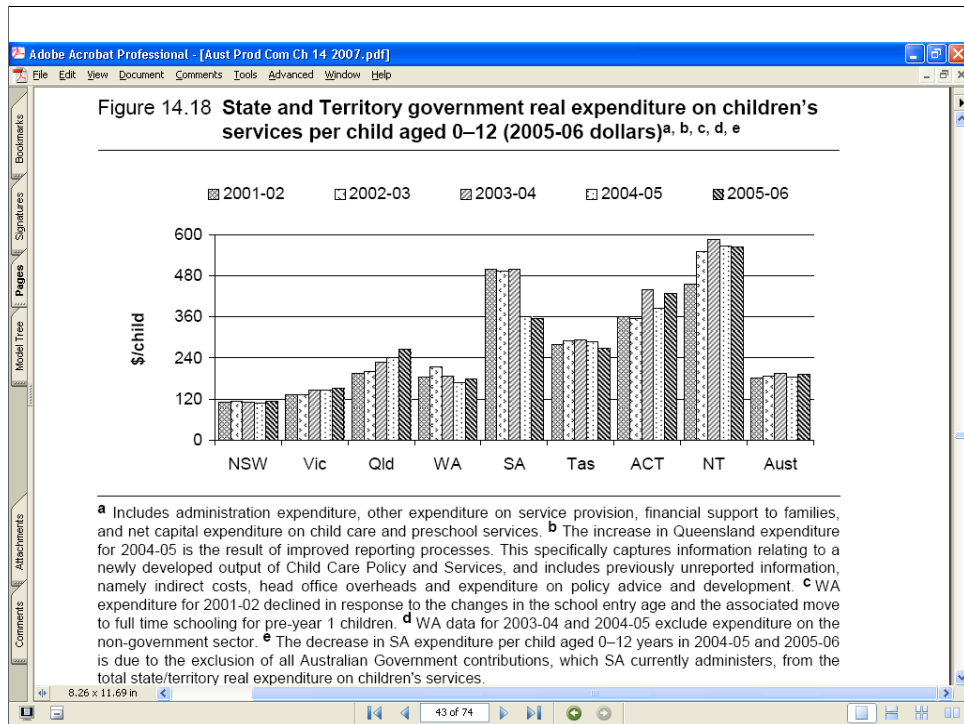
It is not possible to obtain directly comparable Australian expenditure figures although the Productivity Commission (PC) evidence is the best available source. These Figures are direct extracts from the Review of Government Services (2007). See: [www.pc.gov.au](http://www.pc.gov.au)

The PC data collates preschool and child care (various forms), including out of school hours care. Therefore the data are averages of per-child expenditure (approx A\$750/child) for children aged 0-12 years in such services.











## **ACCESS to ECEC programs ...**

### **legal entitlement 'free' program @ 5-6yrs**

<b>1-2yrs</b>	<b>26.3%</b>
<b>2-3yrs</b>	<b>40.0%</b>
<b>3-4yrs</b>	<b>61.5%</b>
<b>4-5yrs</b>	<b>80.9%</b>

On OECD comparisons Australia is very low on this measure of system health.

Low investment = low access

Outmoded social policy leaves this area mainly to mothers at home and conservative community attitudes regarding ECEC as 'mother's work' contributes to the low pay, conditions and status of staff in this field.

This situation shuns the scientific evidence and on-going enquiry into this phase in life-long learning.

ECEC access for children is heavily dependent on the means of their parents to pay for program – and to see the worth of such program to their children.

Note the rate of ACCESS to regulated services (child care and preschool) for 4-5 year olds 80.9% is actually lower (~ 68%) if the narrower definition of Level 0, ISCED is used.

Access to out-of-school-hours care programs (OSHC) for children 6-12 years is 14.2%.



## **ECEC contact staff...**

<b>Family day care</b>	<b>26%</b> qualified
<b>Long day care</b>	<b>55%</b> qualified
<b>Preschool</b>	<b>57%</b> qualified

**overall 51.3% do not hold the required base qualification**

In 2004 from the OECD an update survey asked about the qualifications of ECEC contact staff (all those whose primary role it is to be with children in the daily program).

These data indicate the low level of qualification in Australian ECEC services, and directly link to the level of public investment in this field.

The preschool figure is derived and does not include Tasmania. Preschool regulatory environments vary even more widely than in child care. Some follow public kindergarten (registration, reviews, curriculum, staff development), others follow some of the child care regulation (licensing, annual health/safety check) but do not take part in the NCAC quality assurance scheme.

### ***Child-staff ratios***

Family day care: 4-5:1 for children not in school, 7-8:1 for school-aged

Long day care 0-2 years 5 or 4:1; 2-3 years: 12 or 10:1; 3-5 years: 10-15:1;

Community pre-school/kindergarten 3-5 years vary from 20 to 26:1

Out-of-school provision for children 6-12 years: 11-15:1....some States do not have regulations.

***Maximum group size:*** A number of jurisdictions do not set maximum group sizes. Regulated family day care: 6; pre-school and kindergarten class sizes up to 30 children; OSP up to 35 children (depending on jurisdiction).



## the QUALITY issue...

Quality is the key challenge for ECEC.

There is a rise of neuroscience evidence and a lag of policy action  
(birth-3, 3-5)

The longitudinal study evidence of return on investment is strong. In Australia this has produced strong policy RHETORIC thus-far (see COAG)...but no increased investment.

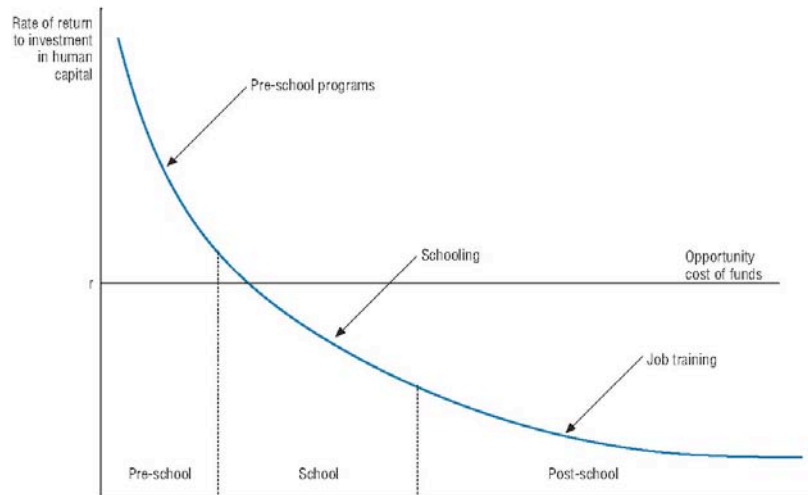
The Australian system base is one of private (family) responsibility and a very strong separation of 'childcare' & 'preschool', despite evidence of OECD raising the need to avoid such a division as far back as 1974.

The Australian low public investment stance base is to be considered in relation to the standards in this field. The structural quality 'iron triangle' – level of staff qualification, group size and staff-child ratio inputs depend on the level of investment available.



## INVESTMENT in life-cycle skill formation

Figure 1.9. Rates of return to human capital investment initially setting investment to be equal across all ages



Cunha et al (2005), Interpreting the evidence on life cycle skill formation

Cunha and Heckman's interpretation of the evidence on life-cycle skill formation verify the wisdom of early investment for greatest return.



## **CHALLENGE.....**

**raise the QUALITY of the ECEC phase**

**investment  
access (quantity)  
professionals**

### **Deal with investment**

This comes down to a need to focus on professional ECEC specialists.

Invest in staff development / training (set PD requirements, qualifications compliance; make savings from multi-curriculum development investment?) (Claxton & May, 2004) so that professionals can monitor child development/outcome standards in childcare/kinder/preschool services (research child outcomes in different services) (Kagan, 2004).

Evaluate programs and grow those that perform. Any service receiving government subsidy should be accessible for independent research that addresses child outcomes.



# CHALLENGE

## poor access > social inequality

family capacity dictates child participation

costs....

children  
parents (mothers)  
economy

### Deal with access

Higher SES groups in Europe use centre-based services when available. eg Norway 41% uni women – centre; 21% secondary women – centre...similar in France. Preference for home care is often cultural, but is strongly influenced by COST.

The cost to children who miss out is high. See for example the effects of prior experiences/programs in the Queensland Preparing for School study. The myth that a learning and teaching focus in ECEC is bad, held by many staff and by parents, holds back this area. The corresponding myth that intervention is only for children in crisis leaves a system in reactionary rather than proactive mode.

The cost to parents is high (especially to mothers through loss of/limit to paid employment, lack of or very limited participation in superannuation, the burden of primary caring work and employment in a social/family/work policy system that is out of balance for contemporary family life)

If we moved to a policy of UNIVERSAL CORE ECEC SERVICES, Australia would: Ensure the foundation of effective learning & development for all (Lynch, 2004; Heckman, 2005)

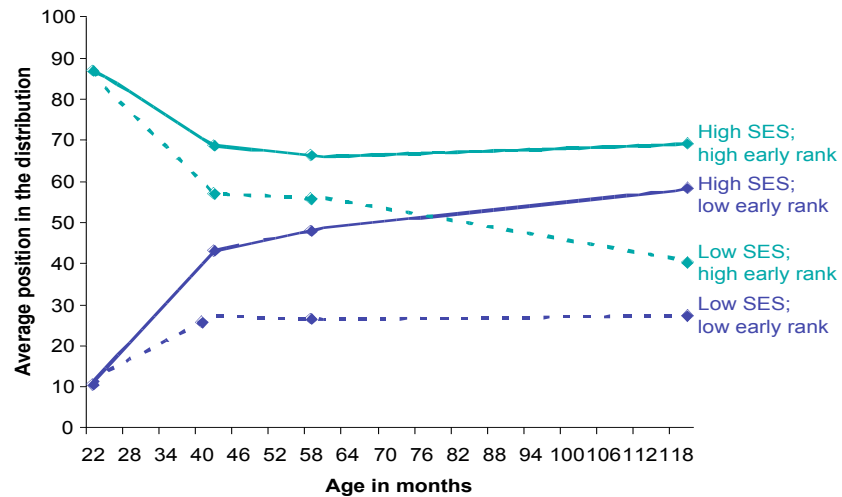
Have early intervention services that built on *prevention* approaches – full access & equity (Brookes-Gunn, 2004)

For early brain development take far more *care* about birth-3 programs (Ita, 2005)

For the labour market allow full adult participation for productivity increases, necessary to sustain the economy and an aging population (Ambler & Hawksworth, 2003)



## Start engagement early.....



The cost of not providing universal access early is born most by children from low-SES households.

Feinstein's analysis of the Bristol Longitudinal Study data and the more recent EPPE longitudinal evidence (see Siraj-Blatchford, Sylva, Melhuish et al), as well as the Queensland Preparing for School trial evidence of 4-6 year olds, indicate the capacity of high-quality ECEC programs to change trajectories.



# CHALLENGE....

## community views & EC policy

play & learning  
maternalism  
responsibility (private)  
the kind of EC professional

### Deal with outmoded views of ECEC

Ideas that ECEC programs might destroy children's natural play and learning or intrude on 'childhood' may be born out only if parents and staff are uninformed of contemporary science on ECEC pedagogy.

Maternalism – assuming that the best course of action is for mothers to be at home with their children from birth through primary school is a costly social policy base – to children, parents (particularly mothers), the labour market, and to society in the longer term. This base is also out-of step with contemporary families and family life.

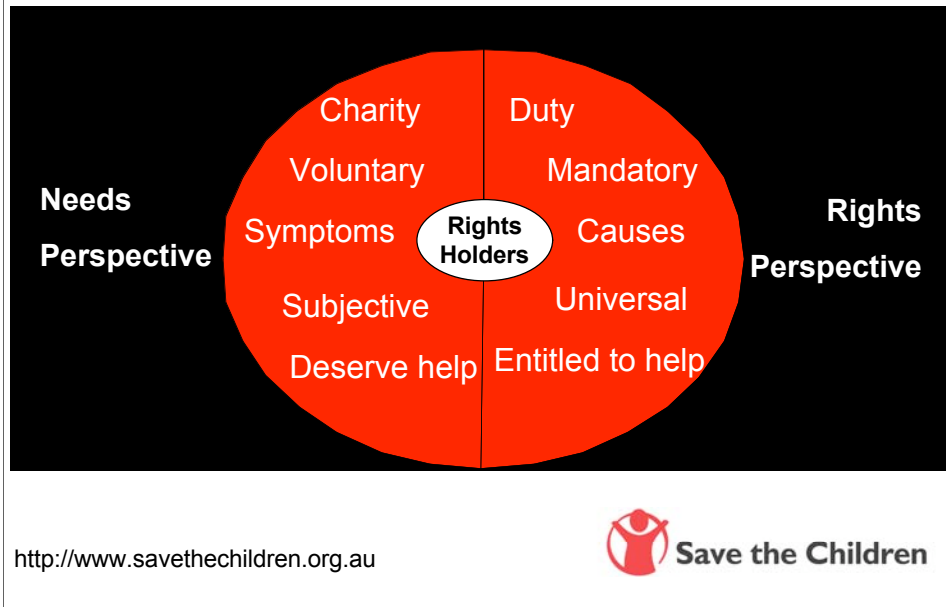
Private (family) responsibility for this area brings a high price – for the quality of programs that can be available, for all those children who cannot access program until they enter the public compulsory school system

The kind of ECEC professional being prepared is critical to the provision of high-quality, contemporary ECEC programs. ECEC contact staff (professionals) need to know the contemporary scientific base to this field, they need the pedagogical knowledge and expertise to support child learning in play-based environments and they need key skills for the role of family support specialist.

Public commitment to children, their care, upbringing, learning & development has to be more than rhetoric



## A rights-based approach



The challenge for ECEC contributing towards the building of a knowledgeable and creative society requires policy change. Without a bolder vision for encouraging all young children we lose a great deal of capacity.

The long reach of early childhood makes it an extra challenge for those engaged in this work – it is less easy to have the community realise the significance of investment seriously in this area and it is very difficult to achieve policy change when, in government, short-term rules.

Save the Children Australia captures a contemporary focus that starkly illustrates the conceptual difference between viewing children's programs and services as fundamental to human rights rather than seeing them as merely optional for children and families after they are in crisis.