No Small Matter: Quality Preschool Programs Produce Tangible Benefits for Children and Society

Sally Edsall
Australian Education Union, Tasmania

Background and context of the research
Within the hierarchy of education, preschool teachers have traditionally been undervalued and dismissed as glorified babysitters. The educational programs provided for children prior to school in Australia are extremely varied. In most Australian states and territories, education departments are responsible for public preschool education, but not in the two major states. NSW has a complex range of preschool services with the vast majority offered through the community sector. In Victoria, providers are all funded by the Department of Human Services under funding and service agreements. In addition the public and community sector in each state and territory competes with private providers. Publicly funded preschool programs typically serve children from all backgrounds. While private preschools, supported by parent fees, serve children from all wealthier backgrounds.

Not only is there program patchwork, competition and variance, but there is also confusion about the terms used to describe the pre-school year. In the ACT, NSW and Victoria the year prior to school entry is called preschool, yet in Tasmania, WA and NT it is called kindergarten. The starting age also varies across the Australian states.

Preschool and childcare programs are sometimes grouped together and called ‘early childhood care and education’, emphasising their overlapping goals and activities, but also blurring the distinction. However, a few definitions are in order. Childcare programs typically offer care on a full or part day basis to children from birth to school age. Such care may be provided either in a centre or in a caregiver’s home. Most childcare programs seek both to promote child development and to free parents from their childcare responsibilities so they can work. In contrast preschool programs offer an educational program, have been designed to promote child development and improve children’s readiness to succeed in school.

The development in Australia of a varied array of preschool programs raises a new set of issues about critical program components to ensure effectiveness; about the capacity of programs to produce desired benefits; and about the lack of coherence among programs that have different objectives but serve the same children. This patchwork of provision leads to some children missing out on the essential formative year of education. We do not even know how many children are missing out around the country, since there is no national data or policy. But we do know that around 30,000 children get no preschool education at all. The reasons are likely to include prohibitive costs, lack of knowledge and inaccessibility of programs in some areas. It is more likely to be children from low socio-economic rural and non-English speaking backgrounds. for preschool education.
AEU campaign and research
Just as there is a patchwork of services, diversity and confusion in preschool provision, so too is there a lack of clarity with policy makers about the short term impact and the long term benefits of preschool education. If there is going to be improvement in services it must be done coherently and achieved through the public education system – not through a range of private providers who have charge fees which some families cannot afford.

Concern about this overall situation led the AEU to commence a campaign for a national plan and strategy for integration of preschool education into public education.

The plan calls for the development of a partnership between the Commonwealth government and the states and territories to ensure the development of national goals and a policy framework for preschool education, including satisfactory funding, national standards and targets consistent with good educational practice.

To advance this plan the AEU has hosted for the past two years annual roundtable meetings of stakeholders to raise the profile of preschool education and issuing we face and also to develop agreement on key strategies.

Objectives of ‘No Small Matter’
Given the array of assertions and reservations about preschool education we felt it is important to examine what well designed research studies reveal about the long and short term effects of preschool education.

The objectives of our research – No Small Matter – Quality Preschool programs Produce Tangible Benefits for Children and Society were to:
• examine in detail, key research in the preschool area to determine the effects and outcomes of quality preschool education;
• identify the essential elements of high quality preschool programs; and
• assess the implications of the research for improving public preschool education policies in Australia.

Methodology
The authors reviewed a number of research studies, model demonstration projects, evaluations and large-scale public programs developed over the past three decades in Australia, Canada, the United States the United Kingdom and Europe in order to examine the effects of these programs on children from low to middle income families.

Hundreds of studies of varying quality describe the implementation and assess the effects of preschool programs. A relatively small, but important group of studies have focussed on long term outcomes and policy change aimed at improving the lives of children and families. Questions about the long term benefits of early childhood programs surfaced in 1969 in a study which questioned whether children who attended the United States publicly funded Head Start benefited in a lasting way. Later studies demonstrated benefits on a range of cognitive, educational, social and economic indicators of success in school and life for children who attended model early childhood programs.
Hence we are primarily concerned here with research conducted with children who are three, four and five years old – the ages which are the focus of most preschool and kindergarten programs. Thus programs and treatments with infants and toddlers are generally excluded from the analysis unless there are significant longitudinal overlaps with preschool.

Studies considered in depth include:

- McCain and Mustard 1999– Reversing the Real Brain Drain: Early Years Study Final Report, Ontario. McCain and Mustard advocate an integrated approach to early child development from pre-natal to 5-6 years, integrating parenting centres, child care and kindergarten (two years prior to school entry from age 4) – utilising existing public facilities, most notably schools.

- European Commission 1995 – Pre-School Education in the European Union: Current Thinking and Provision. The importance of preschool education is recognised by the relevant authorities in all the member states of the European union, and measures aimed at the development of this area of education are being undertaken by most of the,

- The High Scope Preschool Study which commenced in Ypsilanti, Michigan in 1962 and continues to track longitudinally the life outcomes of children from impoverished Afro American families who participated in preschool education.

- A range of other longitudinal studies of the benefits of preschool education were considered including the Carolina Abecedarian project, the United Kingdom Child Health Study and project STAR (Student Teacher Achievement Ratio) which tracked the effects of class size on young children’s cognitive and affective outcomes.

- The Australian studies examined were: Professor Susan Hill’s 1998 study – 100 Children go to School: Connections and Disconnections in Literacy Development in the Year Prior to School and the First Year of School; John Braithwaite’s 1983 Mount Druitt Early Childhood project, and Michaela Kronemann’s Report of the Beginning School Project conducted in Victoria in 1999.

Findings

The review of the literature was essentially the review of a success story. Quality preschool programs really do make a difference in children’s lives and these benefits can carry through to adulthood. The general theme of the research models is that good preschool experiences can set in motion a chain of events that pervades the child’s life through high school and beyond, increasing the quality of life experiences along the way.

The benefits of quality preschool education can be summarised as follows:

1. Preschool has a positive effect on intellectual and social skills independent of background when centres provide quality in terms of physical surroundings and adult/child interactions.

2. Preschool improves children’s ability to think and reason as they enter school, enabling them to learn more in the early grades. Even if the IQ advantage fades (this
was not conclusive), their learning accumulates and their success keeps them ‘on track’ toward high school completion.

Some researchers found that IQ and achievement differences between preschool participants and participants disappear by the middle primary years. However, other studies such as the Perry Preschool project and the Carolina Abecedarian project report that cognitive gains did persist beyond the primary years among disadvantaged populations with which they were concerned.

3. For children from very deprived backgrounds pre-school makes a difference in intellectual progress and the acquisition of positive attitudes and motivation to succeed at school.

The economic rationale for government programs for low-income families has been described as governmental investment in human capital for those families with fewer resources available to invest in their children. (Yoshikawa 1995)

4. Greater social and emotional maturity. Reduction in delinquent behaviours and drug abuse. Fewer anti-social actions and arrests. Those who attended preschool received higher teacher ratings on measures of social and emotional maturity.

It is in the non-cognitive realm that some researchers believe the greatest benefits of preschool experience occur. Longitudinal studies, some of which have followed preschool graduates all the way into adulthood, have identified many positive and significant relationships between preschool participation and task related, social and attitudinal outcomes.

5. More frequent high school completion and higher future aspirations.

6. Higher employment rates, better earnings, and correspondingly, a lower incidence of dependence on welfare.

7. No clear differences between educational models. The important thing is the conditions – ie physical environment, size of groups, stability of the teaching team and quality of interactions between the adults and children.

Most investigators have determined that the major preschool curriculum models can all confer cognitive and non-cognitive benefits if they provide inservice for teachers and aides, involve parents, keep to small class size and maintain program continuity.

8. High staffing ratios promote teaching and learning behaviour which has an effect on development. Must be accompanied by cooperation between the adults responsible for the educational action.

Teachers cannot help needy children unless the teacher/child ratio is low enough to permit frequent individualised interaction between children and adults, and close monitoring of social engagement in the classroom. In Sweden the ideal ratio is 15 children to 3 adults.

9. Group size is important. Several authors regard 20 children as the maximum.
Achilles found that students in small classes (average 15) outperform students in regular classes (average 25) and regular classes with an aide (average 25) on all cognitive measures and the treatment at least lasts until grade 8.

10. Stability of the educational team appears to be important. Efforts made to increase program continuity also increase program effectiveness. Careful sequencing of materials and activities, based on knowledge of early childhood development, is a key factor in program success.

11. Initial and inservice training of staff, and supervision is important.

While parents’ reactions to their children’s preschool experience is not a major feature of this report, it is well worth noting that some researchers have compared the attitudes of parents whose children attended quality preschool with those whose children did not. These researchers found that parents of preschool attendees:
1. Had better attitudes towards their children’s schooling;
2. Had high expectations for their children’s learning and greater satisfaction with their children’s achievements.
3. Contacted teachers more often, even though their children had fewer school problems than children who had not been to preschool.

Economic Benefits of Quality Preschool

6.1 Perry Preschool Program Cost Benefit Analysis

<table>
<thead>
<tr>
<th>Costs and Savings: Perry Preschool</th>
<th>US Dollars per child</th>
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<tbody>
<tr>
<td>Due to mother</td>
<td>Due to child</td>
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<tr>
<td>Program cost</td>
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<tr>
<td>Savings to government</td>
<td>-</td>
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<td>Reduction in education services</td>
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<td>Taxes from increased employment</td>
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<tr>
<td>Reduction in welfare cost</td>
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<td>Reduction in criminal justice cost</td>
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<tr>
<td>Net savings</td>
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Source: Karoly et al 1998
Notes: Savings due to the mother has not been measured. All amounts are in 1996 US dollars and are the net value of amounts over time.

The above table summarises costs and savings to government over the child’s life from preschool to age 27 years as a result of participation in the Perry preschool program.

The table shows how the savings to government are distributed among the four savings categories. Forty percent of the savings to government are from reductions in criminal justice system costs, because children who completed the Perry Preschool program commit less crime as they transit through adolescence to adulthood. Greater tax revenues as a result of greater employment and income over the lifetime of the child account for 26% of the savings. Lower use of education services - such as special education participation - accounts for another 25% of the savings. Reduction in the child’s lifetime usage of welfare accounts for the remaining 9% of the savings to government.

To the extent that the cost benefit analysis does not measure the savings to the child’s mother, the calculated net savings is an underestimate of the true savings to government that can be credited to this program.

**Australian spending**

Table 2 **Australian Investment in Preschool Education is Falling**

This table shows that Australian states and territories have been reducing funding towards preschool education. While the data for 1998/9 are estimates, based on calculating a growth factor as the average of each of the previous three years annual growth. Commonwealth Grants Commission estimates show a fall of about 10.1% in real terms in preschool funding per head of population.
Preschool education provision across Australia is inconsistent and under resourced. Australia ranked 22nd out of 28 OECD countries in terms of the participation of children aged 4 and under in early childhood education with a participation rate of 33.8% compared to an OECD average of 60%.

What are the implications of the research for policy development in Australia?

1.1 National Plan and Strategy
As Hill et al (1998) noted, early childhood programs overlap, compete, and leave important needs unaddressed. These researchers found that inconsistencies in programs have a number of costly educational consequences.

While the Commonwealth Government used to fund preschool education until 1985, it continues to fund all other sectors of education. The Commonwealth must take responsibility for funding preschool education and working with the state/territory governments to develop national goals, frameworks and strategies for preschool education.

1.2 Preschool to be Publicly Provided and Free
Attendance at preschool is expensive in some states. Research shows clearly that this is a deterrent to participation by poor families. Preschool should be free, accessible and available to all children.

1.3 Integrate Preschool into Public Education
Investigators have also noted improvements in student outcomes when preschool, kindergarten/prepatory and first grade teachers work together to insure program continuity from year to year. As Irvine et al (1980) state:

‘If there is a concerted effort to build on the preschool experience as the children progress through kindergarten and first grade, the positive effects of preschool can be maintained.’ (p. 7)

Preschool needs to be linked to the public education system in each state in order to ensure program continuity.

1.4. Reduce Class Size and Child/Staff Ratios
Most investigators who have examined the discrete effects of different program elements have identified small class size and small student teacher ratios. While different ratios are cited many researchers favoured a 10:1 ratio for 4 year olds. Kronemann (1999) recommends for four year olds that child staff ratios should be no more than 2:20 and group sizes should be a maximum of 20.

1.5 Employ Qualified Early Childhood Teachers and Ensure On-going Inservice Education
The general research on the effects of employing qualified early childhood teachers pays off in terms of improved student outcomes. Hill (1998); Berreuta- Cement et al (1985), Irvine (1980) and others have identified benefits when in service for early childhood
teachers focuses directly on early child development, ways to achieve program continuity, and ways to involve and work with parents.

1.6 Ensure Parent Participation in Preschool Education
Virtually all successful programs have parent education and parent involvement components, and nearly all investigators cite these as critical to program success. Cotton and Green’s 1988 research revealed the powerful effects of such involvement on children’s learning.

1.7 Unite Education with Health and Social Services
The importance of health and social services united with education in a holistic approach. Research by McCain and Mustard (1999), Bronson, et al (1985), the Consortium for Longitudinal Studies (1983), Gray et al (1982) and others have found that health and social services for disadvantaged children and their families are an essential component of successful preschool programs. They remind us that the deficits experienced by these children extend beyond those that can be remediated in the classroom, and that these physical and social needs must be met if educational services are to have significant impact.

Conclusion
Many nations have implemented far broader and more comprehensive preschool systems based on research and built on the strength of commonly held values about children and families. Australia needs a national vision and national plan for publicly funded free preschool education which is an integral part of the public schooling system.