



Review of Educational Practice in Kindergarten, Pre-primary and Year 1 Provision in Western Australia: Synthesis of Findings

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Foreword

Early Years teachers should be celebrated in any community. They work every day helping children to thrive as learners, to have fun, know how to get along and to belong in varied groups. Teaching young children well demands a rich set of skills that connect, encourage, guide, support, direct and facilitate children's learning. Early Years teachers, whether in kindergarten, pre-primary, early primary classes or child care settings, are critical agents in helping children to develop as individuals and have a positive place in local environments.

Parents have already observed the rapid progression of their children in the early years of life, and have a rich repository of family knowledge: they know the ways in which their children behave, respond, react, engage and participate in diverse settings and circumstances. Parents' knowledge of children's temperament, dispositions, interests and understandings is highly valuable as early childhood teachers come to know young children and further their learning and development. Both teachers and parents know how important it is for young children to feel connected and secure, so that they can play, explore, have fun and learn how to get along.

Children make rapid progress in their early years. The momentum quickens when teachers and parents work together to support young children's learning and development. For the adults surrounding young children, there can be nothing more important than affording them a positive start in life and creating opportunities for them to reach their full potential. The research evidence on human development and learning in the earliest years of life is persuasive: early childhood is a vital predictor of future health, wellbeing and achievement.

The 'craft' of teaching - how teachers plan and provide timely learning experiences and lessons - is what determines how well children learn in kindergartens, pre-primary and early primary classes. This review is about the 'craft' of teaching: the education process. It seeks to do two things:

- collate the evidence in an easily-accessible manner on the 'craft' of teaching to provide the best guidance possible to our early childhood teachers and school principals and the policy makers and professionals who support classrooms and schools, and
- make recommendations on what we can do to improve the work of early childhood teachers who are charged with advancing young children's learning and development.

This Review is dedicated to the largely unrecognised people who shape our future daily: the thousands of early childhood teachers and assistants who work in schools and child care centres throughout Western Australia.

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Executive summary

This document synthesises the findings of the Research Paper *International Best Practices in Pedagogy, Curriculum and Operational Procedures* and the consultations undertaken as part of the *Review of Educational Practice in Kindergarten, Pre-primary and Year 1*. It sets the frame for Kindergarten, Pre-primary and Year 1 reform in Western Australia. The review and synthesis activities have resulted in the identification of a series of local and system-level drivers that are required to deliver best practice curriculum, pedagogy and assessment across Early Years provision in Western Australia, and, ultimately, to improve educational outcomes for all children.

Curriculum, pedagogy and assessment reform

Approaches to curriculum, pedagogy and assessment determine what and how children learn in educational settings. Given their influence, it is essential that the curriculum, pedagogy and assessment used by educators reflect the best available evidence and deliver on the objectives of the system. Curriculum, pedagogy and assessment reform may mean a shift from a reliance on inference (think, feel, know and understand) toward the use of evidence about what children do, say, make, and write (Griffin et al., 2009). It is also essential that curriculum, pedagogy and assessment practices are connected and cohesive, to achieve a comprehensive learning program for each child.

Review findings: curriculum, pedagogy and assessment

Curriculum

- Clarity about expected Early Years curriculum outcomes is essential.
- Quality teaching in the Early Years is as important as the curriculum itself.
- The fidelity of curriculum implementation is critical for achieving the outcomes described in evidence-based Early Years curriculum materials.
- The content of early childhood curriculum (from birth) needs to be broad and have a holistic picture of children's learning.
- The development of Early Years curriculum into meaningful experiences for children is optimal when there is close collaboration with families and a common purpose to advance children's learning in and beyond the classroom.
- Extending language, highlighting the informational content of routines and play activity, reading and playing individualised games with each child are core elements of effective early childhood curriculum that should be practised daily by both teachers and parents.
- Continuity is important across the early childhood curriculum from birth and into the early years of school.

Pedagogy

- Intentional teaching, guided play activities and child-directed play and learning all have important roles in children's development and learning outcomes.
- Pedagogy should be responsive and sensitive to the child's view of the world.
- Early Years pedagogy should take account of the emotional, organisational and instructional domains of teaching and learning. Each domain contains proven, effective practices that can guide pedagogical decision making.
- Family-centred practice and regard for the local community is implicit in effective early childhood pedagogy. Ensuring family-centred practice and community regard should enable

children to develop connectedness: a positive identity and strong sense of community. Connectedness is a key attribute of ongoing learning motivation and school success.

- Shared, sustained thinking is important to children's development and learning outcomes across the curriculum.

Assessment

- Assessment must be 'fit for purpose'.
- *Assessment for learning* seeks evidence that helps teachers to diagnose children's capabilities and find gaps in understandings. This formative assessment assists teachers in designing focused learning experiences and interventions to positively improve children's knowledge, skills and attitudes to learning.
- *Assessment of learning* seeks evidence that demonstrates the outcomes of a teaching program, set of experiences or intervention.
- Local-level assessment evidence needs to drive classroom and individualised teaching and learning practices. Assessment evidence should assist a teacher's curriculum and pedagogical decision making about how to facilitate each child's progress.
- Aggregated local assessment data have much to offer to school and regional-level professional decision making and practice. For example, team or professional network initiatives and specific development projects, including bids for customised resources that respond to local needs, should have positive outcomes if they are sourced from rigorous assessment data.
- Local, regional and system-level assessment data are vital for the optimal deployment of resources to enhance local, regional, and system-level educational performance. Decisions about the deployment of resources to improve children's educational outcomes need to have regard for equity and acknowledge diversity. This includes having resources that support excellence, as well as resources that enable early interventions to improve outcomes.

The complexity of Western Australia's geography and demography means a 'one size fits all' approach to curriculum, pedagogy and assessment is not appropriate and will not deliver the gains in all children's educational outcomes to which the State aspires. Teachers need to be supported to develop intervention (teaching and learning) strategies that spring from having high expectations of each child's potential and take into account the personal circumstances of each child: their culture, language, family circumstances and home arrangements.

The development and implementation of curriculum, pedagogy and assessment reforms outlined above will be successful if they are supported by a series of local and system-level strategic drivers.

Strategic drivers for improving early educational practice

Driver 1: Focused curriculum and pedagogy

Curriculum, pedagogy and assessment determine what and how children learn what they learn. Focused curriculum, pedagogy and assessment therefore enable the system to achieve its goals for children and provide consistency, continuity and coherence for children and families.

1. Develop birth- eight curriculum that aligns the Early Years Learning Framework (EYLF) to National Curriculum.

A Western Australian education system that integrates the early phase of lifelong learning will ensure clarity of purpose across the community. A birth-age eight curriculum frame customises and brings together key national curriculum documents (EYLF and National Curriculum) and highlights the vision and purpose of the system. A birth-age eight approach to curriculum aligns the outcomes and pedagogy of the EYLF to the National Curriculum. This action will deliver best-practice curricula for children across the State and will provide continuity and consistency for all children's learning. This action can bring together the efforts of families, carers, educators and child health and wellbeing professionals in supporting early childhood development and learning.

2. Promote pedagogy that supports continuity for children from birth to eight years.

Promote best-practice pedagogy for children across the State that aligns the pedagogy of the National EYLF with the best available evidence of effective teaching and learning. This will support continuity for children's learning from birth to eight years. Examples of excellence, celebration of evidence-based improvements and the creation of opportunities to develop and showcase successful Early Years learning and teaching can energise local, regional and system-level groups and networks. Such promotions can build the momentum for wider reform.

Driver 2: Skilled professionals

The international evidence analysed in the Review identified clearly the importance of skilled professionals in delivering high-quality programs for children. Highly-skilled professionals play an essential role in translating curriculum and pedagogy that are mandated across the system into locally-responsive learning programs and interactions with children and families.

3. Work with universities to ensure new graduates are equipped to deliver the new curriculum, pedagogy and assessment process.

Universities are essential partners in creating skilled professionals. Not only do they produce new graduates, they also offer specialised development opportunities to existing professionals. It is important that the universities deliver pre- and in-service training that support and align with the curriculum, pedagogy and assessment approach advocated by the system. Universities are vital to the system because they supply new and ongoing empirical evidence of curriculum, pedagogy and assessment practices that improve educational outcomes. Forging ahead with new investigations into as yet uncommon practices and generating debate are university-led functions that are critical to ongoing system improvement.

4. Deliver substantial professional development opportunities to support the skill-building required for the new curriculum, pedagogy and assessment.

Teaching quality is as important as the curriculum itself. Professional development is an essential part of improving teaching quality, supporting teachers to implement new Early Years reforms and, ultimately, enhancing outcomes for children. The advent of a birth to eight years curriculum framework (including the National EYLF) and the clear need for attention to individualised learning have significant implications for Early Years teaching practice. These developments also have implications for the ways in which teachers and parents collaborate in support of children's learning and need to be the subject of appropriate professional development.

There is a rich evidence base from which to draw new strategies and practices to improve children's educational outcomes, particularly for those known to be at higher risk of poor

educational achievement: Indigenous children, children with complex needs, children from refugee and non-English speaking backgrounds and children with disabilities. Clear dissemination of known best practices to guide children's learning and development from birth sets a strong preventative model into place. The likelihood of system-wide educational improvement increases where teachers and parents focus on 'what works' to improve educational achievement, especially in the case of children facing the risk of poor educational outcomes. For example, engaging with young children to extend language, highlighting the informational content of routines and play activities, reading every day and playing individualised games are strategies that deliver improved educational outcomes. These strategies have been learned from early childhood programs targeting children at educational risk: these programs, which have been subjected to systematic longitudinal research, have demonstrated significant positive effects on children's long-term educational, social, health, wellbeing and workplace outcomes.

5. Establish local learning networks

Local professional learning networks are effective mechanisms for creating and disseminating energy for the reform across a group of peers. They can be face-to-face or virtual, and should include a broad range of professionals. Networks that bring together different disciplinary perspectives engender critical reflection and professional growth. Where possible, networks should include researchers and academics from the university sector to increase the evidence base and enhance knowledge translation and exchange.

The diverse Western Australian demography and geography require a range of initiatives within local learning networks. If the purpose of such networks is to enhance the positive effects of early education and care practices, then systematic local initiatives can be developed and put in place by the networks, and tracked for their impact on child outcomes and family participation. The concept of local learning networks may begin with education-focused professionals and school councils. However, where the concept extends to include broader community groups and agencies, and other disciplinary professions (for example, health, social welfare, housing and transport), the capacity of a network to bring an integrated local focus to its children's wellbeing, development and learning is likely to increase.

6. Build the capacity of local leaders to lead the implementation of the new Early Years curriculum, pedagogy and assessment.

Local leadership is essential in delivering locally-responsive solutions. Leaders are critical to the translation of the Statewide curriculum, pedagogy and assessment direction into locally-responsive, appropriate and meaningful learning plans for individual children and can lead the reform in their own settings and the networks of services.

7. Ensure the right professionals are in the right locations across the State, particularly in the context of non-urban disadvantage.

The availability of the right professionals in the right locations across the State is essential, especially in the context of lower-than-expected educational attainment in non-urban locations. Although this is a systemic matter relevant to the system-level drivers, it is something that also needs to be considered locally. At the local level, facilitating team approaches to improving educational outcomes can make the most of the differential interests and skill sets within a group of local professionals. Having champions for specific activities, e.g. assessment, language development and family support, can economise on the individual preparation of teachers and maximise talent. Where team skill sets are missing particular specialties or knowledge that are

essential for the advancement of local educational outcomes, plans can be set in place to augment the team, build individual skills or provide further professional development. Such approaches can optimise the use of new technologies, encourage diverse local solutions, build community connections and enhance respect for previously - untapped local knowledge and skills.

Training and supporting specialist Early Years teachers for work in regional and remote environments is a sensible action. Such teachers need the necessary cultural competencies to ensure child and family participation is maximised and they need the abilities to support children in learning English as a second or other language. These capabilities are fundamental to improving the educational outcomes of children in regional and remote locations. This is especially so in the case of Indigenous children and families, irrespective of their geographic locations.

Driver 3: Family engagement

Families are experts in having knowledge of their own children. Family knowledge of children can assist educators to tailor programs to meet the needs of particular children and particular groups. A conceptualisation of Early Years programs as core social points connecting families and schools facilitates higher regard for the knowledge and experience that families have and greater responsiveness by centres and schools. Family engagement is essential in alleviating disadvantage.

8. Involve families in development policies, to ensure they reflect family interests, capabilities and needs

Involving families in decisions about their children's education is essential to building family engagement. To be effective, education programs need to meet the needs of children, align family and professional expectations in regard to advancing children's learning and development, and ensure support provided by families. This means that early education services and family practices should be harmonious. Early Years policies and practices that reflect the families' education values, deepen understandings of the importance of early education, and build effective family support for children's learning deliver optimal child educational outcomes. Strong reciprocal relationships maintained over time enhance children's educational progress.

9. Train professionals to work in collaboration with families

Parents are the first and primary educators of children. Training early childhood professionals to work with families helps to build understanding and increase family engagement and participation in Early Years programs in centres and schools. The continuity of children's experiences across family and centre or school environments is enhanced when families and teachers collaborate and adopt consistent approaches to behaviour management, learning and development. It is important that professional training provides skills and awareness on issues of cultural competence and resources to enable negotiation and translation where necessary.

10. Educate families about the importance of early learning.

Educating families about the importance of early learning taking a 'stitch in time' approach is an important part of building their engagement. While some families understand the importance of this period, not all do. Problem prevention in regard to children's educational outcomes is best addressed when families and schools work together to ensure children have the support they need at the time they need it. By educating families using evidence from the science of early learning and development, the course of children's learning and development can be enhanced.

Parent and teacher use of positive and preventative behaviours to support children's growing competence will enhance their education. Educating families about early learning positions them to engage in valuable dialogue with educators about their children's education.

While local responsiveness is vital, system-level cohesion is also essential in delivering best-practice curriculum, pedagogy and assessment. A system-level approach enables all children, regardless of their circumstances, to experience curriculum, pedagogy and assessment that are built on the best available evidence. To this end, the development and implementation of the Early Years curriculum, pedagogy and assessment reform that is expressed above can be optimal when supported by a series of system-level strategic drivers. Section three describes the two system-level drivers and provides recommendations for their development and implementation.

Driver 4: Policy leadership

A clearly-articulated vision and purpose for the early childhood system that is championed by strong leadership at the highest level creates systemic cohesion. A clear vision provides purpose to early childhood provision across the State and enables individual officers, regions and services to work together to achieve a common goal. A clear vision for the early childhood system is most effective when it is accompanied by a strategy to devolve leadership and decision making to the most appropriate levels in the system.

11. Develop clear vision and purpose that guides the work of early childhood educators and articulates the State Government's direction for early childhood development.

The vision and purpose of the system sets the frame for reform. It creates cohesion and consistency by informing all policy and investment decisions. In this regard it is essential. All systems are complex in their operation, and in this case Kindergarten, Pre-primary and Year 1 provision traverses the early childhood education and care systems and the statutory school education system. Hence the path from policy through legislation and on to practice can be unclear. For optimal educational outcomes to be achieved, a broad view of 'system' is necessary. This can be achieved if vision and purpose are well articulated and clear both within government and across the Western Australian community. This matter is further addressed in the fifth of the strategic drivers: *Alignment*.

12. The State Government to establish clear leadership responsible for articulating and leading Early Childhood (birth to age eight) development and reform.

The shape and direction of a system is guided by its vision and purpose. For the vision and purpose to deliver system cohesion, they must be articulated at the highest level.

Curriculum, pedagogy and assessment reform in Kindergarten, Pre-primary and Year 1 is influenced by the wider birth-eight years early childhood agenda, expressed in the national Early Childhood Development Strategy that was adopted by the Council of Australian Governments (COAG) in 2009. For example, the National EYLF addresses curriculum, pedagogy and assessment matters from birth. The National Curriculum addresses the Early Years from Pre-primary and beyond. Hence, the vision and purpose of the Western Australian early childhood system, articulated by high-level leadership, bring clear direction to the layers of activity at systemic, regional and local levels.

13. Develop the leadership infrastructure and a strategy to build leadership capacity so that the system’s Early Childhood vision and purpose is communicated through every level.

The leadership infrastructure and strategy should maximise innovation throughout the system in order to achieve the Early Childhood vision and purpose in all parts of the State.

To support the translation of the vision and purpose through the early childhood system, leadership capacity needs to be developed. This may be achieved by a mix of relevant leadership experiences, opportunities and courses that are distributed over time to deepen leadership skills and enable relevant leadership practice. The development of leadership capacity is not only relevant to those in hierarchically-responsible positions, but also to newcomers, including new graduates, to the system. Further, current early childhood teachers, support professionals and school principals may have limited experience of innovative leadership strategies that achieve integrated action by families and centre/school programs in the cause of young children’s development and learning. The new Early Childhood reforms provide a context for developing new and distributed forms of leadership. Appropriate responsibilities need to be devolved to every level.

There is a variety of evidence-based models of leadership customised to teams who seek the advancement of children’s learning and development outcomes. In principle, any model that is selected needs to establish, collect and maintain evidence of the educational effectiveness of professional strategies that are adopted to help improve children’s educational achievement.

Driver 5: Alignment

Alignment between the systemic, policy and local levels ensures consistency, coherence and continuity for children and families. Alignment is important because it enables local program delivery to be based on the research that informs the policies at the system level. It also creates cohesion in service delivery to children and families. This means that wherever they are in Western Australia, children and families will receive cohesive education services, informed by sound research, about the best ways to improve educational outcomes.

Alignment occurs when the regulatory, administrative and program standards reflect the vision and purpose of a system and are evident at all levels from a central office through to the practice of individual educators.

14. The State Government to review the structure and roles of agencies to better align policy and programs.

The vision and purpose articulated by the system are implemented more effectively when they are reflected by the machinery of government. The impetus for transforming Kindergarten, Pre-primary and Year 1 educational provision would be advanced further if Western Australia re-considered its legislation pertaining to early childhood education and care (ECEC). This could be a strategic action following this review. Such an action would acknowledge the importance of alignment for the improvement of early educational outcomes. Should Western Australia decide to integrate early childhood and school education, it may be best served by the creation of a new, integrated early childhood and school education department. Legislative change is necessary if an integrated approach to ECEC, including cohesive Kindergarten, Pre-primary and Year 1 provision, is to be achieved.

15. Implement 'fit-for-purpose' assessment to provide data about local early childhood conditions and outcomes that can aggregate at the system level to inform policy and resource allocation.

Fit-for-purpose assessments, in addition to driving individualised learning plans and effective early childhood pedagogy at the local level, can deliver system-level data to guide resource allocation and inform policy to continue improving the educational attainments of Western Australian children.

Formative assessments of children's learning and development - *assessment for learning* - provide insightful information to teachers about individual children's progress. When collated and analysed at the systemic level, these assessments also provide a picture of children's learning progress across the State, and can identify specific pockets of need. This information can assist policy and investment decisions at the systemic level to be more locally responsive.

Assessment of learning after the implementation of particular programs can provide evidence of the value of these programs in promoting particular kinds of learning outcomes. There is a need for the Early Years system to have a coordinated 'fit-for-purpose' assessment system to inform local curriculum and pedagogical practice and provide evidence of the effectiveness of system-wide initiatives and specific program applications.

Note: The recommendations within each sub-section of the Paper are sequenced to reflect the relative size, scope and indicative cost of implementing the reform. It is intended that this structure will assist government departments and private school systems to prioritise reform areas and to identify some 'quick wins' while also forecasting and costing longer-term reforms.

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Introduction

The cumulative developmental toll experienced by children at risk of doing poorly during and beyond schooling can be prevented, or reduced significantly, by providing high-quality early childhood education and care in the years before school entry.

Early experience forms the foundation of an individual's lifelong learning capacities and social behaviours. For this reason, early childhood programs are a key focus point for building secure, capable individuals and productive, harmonious societies. Investments both in early years programs and family support to enhance children's early learning and development are justified by compelling and convergent evidence from developmental sciences and economics. Both sources demonstrate that the effects of early experiences influence adult life experiences and adult productivity.

The OECD review *Starting Strong II* (2006) provides a strong rationale for government investment in early childhood education and care:

1. Improving children's life chances through human and social capital formation

Human capital is defined by the OECD as the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic wellbeing. (OECD, 2007, 29)

The scientific evidence indicates clearly that the early years are the foundation of early learning and social adaptability. Judicious investment in the early experiences of children increases the probability that they will be fulfilled and productive citizens throughout their lives through greater educational achievement. The provision of experiences that foster social learning and social participation increases the probability that children will be included, responsible and proactive citizens.

2. Alleviating poverty and disadvantage

Children are important. They bring their own value and influence to the world, as well as being shaped by the world around them. Children give joy and purpose to the lives of many and help bring people together. Children are particularly vulnerable in the early years and need others to seek out or advocate for services or supports on their behalf. (COAG, 2009, 6)

A strong social and economic rationale exists for breaking the cycle of child poverty and disadvantage. The greatest potential for early childhood education and care programs is among children in disadvantaged and vulnerable circumstances. This is because children who live in disadvantaged circumstances have both less optimal home environments to support their development and less access to out-of-home education programs and support services, particularly where there are financial costs. The evidence from many countries demonstrates consistently that children who grow up in poverty and other forms of disadvantage are more vulnerable to poor health, learning and behaviour difficulties, under-achievement, low skills and aspirations, low-paid employment or unemployment, welfare dependency and (for girls), pregnancy at too early an age (UNICEF, 2007).

3. Improving the economy through increasing labour participation and productivity

The value of knowledge has continued to rise. It is fundamentally different from other forms of capital. As it becomes abundant, it may be further expanded more easily and cheaply, in turn creating especially lucrative returns. (Bloom, 2000, 30)

Investment in children generates short-, medium- and long-term societal gains. Ensuring future economic success by preparing the next generation is a societal responsibility. Community acceptance that the care and development of children is not the sole responsibility of parents alone is a foundation for children as citizens receiving community support as they grow and develop and, in the future, become self-sufficient as they take on roles in the economy and the prosperity of a country. Investment in children by government and society, here and now, attends to their health and safety, their material security, their education and socialisation, and their sense of being loved, valued, and included in the families and societies into which they are born (UNICEF, 2007).

While the Western Australian Kindergarten, Pre-primary and Year 1 Review is not directly concerned with increasing labour market participation, this rationale for investment in early childhood programs has cogency in related areas of government. When labour is in short supply in the economy and female participation is relatively low, the pressure to increase investment in early childhood education and care programs grows. Demographic change in developed economies focuses attention on the need to maximise participation in the workforce. In Australia, populations conceived immediately after 1945 ('baby boomers') are approaching retirement. An adult population reproducing at below replacement level sits beneath this. Early childhood education and care programs assist women to participate in the labour market during their reproductive years, add to the knowledge economy, increase GDP and boost the taxation revenue of governments. Concurrently, high-quality ECEG programs ensure the long-term growth of the intellectual and social capital of a society and economy.

Context of Synthesis Paper

There is now significant empirical evidence available demonstrating the effectiveness of high-quality curriculum and pedagogies to support learning and development in the early years. Evidence from developmental and educational sciences sets out effective practices for contemporary education settings, and international policy reviews emphasise the importance of strong systemic leadership and governance for optimal early years provision. Increased benefits to individuals and society can be gained through systemic change that improves educational opportunities for children who are faring poorly and increases educational achievement across the early years for all.

The Western Australian Review was conducted at a time of large-scale reform in early childhood education and care in Australia. Although it is clear from comparative evidence that children in Western Australia are progressing well by international standards, further improvements can be made.

A commitment to raise the level of educational performance of young Western Australian children, particularly in the years leading up to the first NAPLAN assessments of literacy and numeracy, was the impetus for this Review. Curriculum, pedagogy and assessment practices in Kindergarten, Pre-primary and Year 1 are the focus of the Review, the intended outcome being the introduction of systemic strategies for improving children's educational outcomes.

Much work exists, both nationally and internationally, regarding optimal educational provision for young children's learning and development. The COAG endorsement of a National Early

Childhood Development Strategy and the National EYLF necessarily impacts on early years provision in Western Australia. These developments compelled the condensed timeframe of the Review and the need for coordinated strategic action. While there is a degree of urgency, 'getting it right' counts. This includes achieving widespread community engagement in early childhood development and improving local education and care supports to the very young.

Future directions from this Review are couched within a system of universal provision, strongly endorsed by *Starting Strong II*. Almost all Western Australian children access Kindergarten and Pre-primary and all children enter the statutory (mandatory) education system at Year 1. As universal foundation programs, Kindergarten, Pre-primary and Year 1 programs in particular are bridges from free-flowing informal learning contexts to more formalised learning contexts in schools. The capacity of these programs to engage children successfully and support families in children's development and learning must be strong.

A universal approach to effective early education does not imply uniformity of program: one size does not fit all. Rather, there is a need to provide learning opportunities that are sensitive and responsive to diverse learning contexts and make a positive difference to individual educational attainments. Review outcomes and the delivery of educational services therefore recognise that rural, remote and urban settings are unique contexts in the universal provision of early education. Well-targeted local initiatives and regional innovations can help to raise educational achievements at source. Such initiatives are essential to raising levels of achievement across the system as a whole.

Background to the Synthesis Paper

In November 2009, a research paper was developed as part of the first phase of the Review. The paper was intended to inform future directions for Kindergarten, Pre-primary and Year 1 curriculum and pedagogy. Following the publication of the research paper, consultations were held with key representatives from stakeholder groups and Departmental officers to elicit their views on the need and opportunities for reform.

The Synthesis Paper brings together the findings of the research paper, feedback from the Advisory Group to the Review and broad consultations. It draws together evidence from the empirical research base underpinning early childhood teaching and learning and information about current Western Australian Early Years provisions. In so doing, the Paper provides a frame for Kindergarten, Pre-primary and Year 1 reform in this State. It does not offer a specific course of action; instead it provides key recommendations and guidance, based on the evidence about the kinds of policy and investment decisions that are likely to deliver improved educational outcomes for children. It argues that a series of local and system-level drivers are required to deliver best practice curriculum, pedagogy and assessment, and ultimately improve educational outcomes for all children.

The terms of reference of the Review include:

1. Review and report on current Kindergarten, Pre-primary and Year 1 educational practice (curriculum, pedagogy and operational practice) referenced against research evidence of effective practice in early childhood education.
2. Provide information on the EYLF implementation for WA (opportunities and issues) and recommend approaches and strategies for implementation.
3. Provide a set of findings and recommended actions to improve Kindergarten, Pre-primary and Year 1 student performance in WA schools that are aligned to key national and State initiatives and agreements.

Note: the terms of reference of the Review included an analysis of best practice Early Years curriculum and pedagogy; however, the necessity for quality, fit-for-purpose assessment to drive educational outcomes emerged from the analysis of international research and has therefore been included in the Synthesis Paper.

Conceptualisation

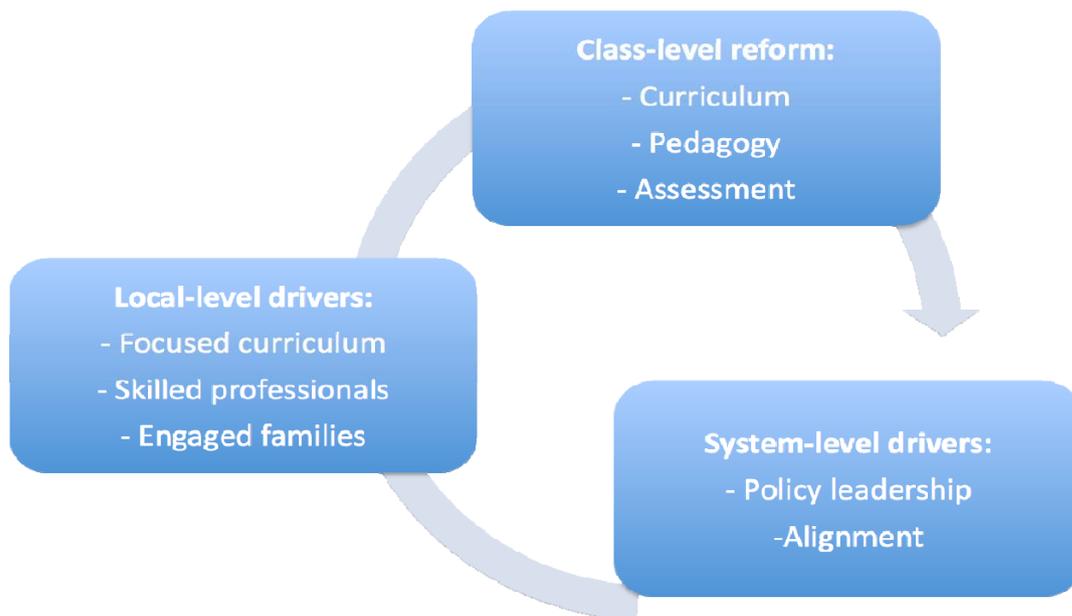
The discussion of the international, national and State context above and in Section 7 identifies clear policy challenges in Western Australia, highlighted further through the Kindergarten, Pre-primary and Year 1 Review.

Given its geographic and demographic diversity, the challenge in Western Australia is in striking a balance between delivering system cohesion and delivering locally-responsive educational programs.

On this basis, a successful early childhood system in Western Australia is one in which there is cohesion across the entire system and continuity for the children it serves, wherever they live. However, the diversity of the population means that the system needs to support local responsiveness. Local responsiveness was described in *Starting Strong II* as being vital in regard to early childhood provision because this is the point at which the institution of family necessarily connects closely with institutions of society, such as education, health and social welfare. This is achieved through a deliberate policy that devolves decision making to the most appropriate levels, supports local leadership and collates local data centrally to inform system-level policy decisions.

These are complex challenges that require new and innovative ways of thinking about children's learning, of working together and of providing locally-responsive programs to advance children's educational outcomes. Specifically, the actions required must be grounded in evidence, use technologies in innovative ways to deliver early childhood programs and services, take advantage of the Commonwealth's investment in early childhood and reflect new modes of thinking about children's learning.

A conceptual map of the Paper is shown below. It demonstrates that a combination of system drivers (including policy leadership and alignment) interact with local drivers (including focused curriculum, skilled professionals and engaged families) to deliver class-level reform. The systemic level informs local drivers in delivering cohesion and continuity across the system. The local drivers enable locally-responsive (but evidence-based) curriculum and pedagogy reform in classrooms across the State. Local assessment data about children's learning are collected and fed up through the system to inform subsequent system-level policy responses and investment decisions for the future.



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1 Best-practice curriculum, pedagogy and assessment in Kindergarten, Pre-primary and Year 1

The *Effective Provision of Preschool Education* (EPPE) study found that a child's background characteristics are weaker predictors of mathematics and reading attainment at age six or seven years than their intellectual attainment at age three or five years (Sylva et al., 2008). It can be concluded that pre-school and school influences may act together to reduce the power of background influences on attainment in subjects such as reading and mathematics. Given its importance, what then constitutes a 'high-quality' learning experience for children in Kindergarten, Pre-primary and Year 1? This section synthesises the international evidence from a number of methodologically-rigorous studies to answer this question.

International evidence of best-practice Kindergarten, Pre-primary and Year 1 curriculum, assessment and pedagogy

Curriculum, pedagogy and assessment approaches determine what and how children learn in educational settings. Given their influence, it is essential that the curriculum, pedagogy and assessment used by educators reflect the best evidence available and deliver on the objectives of the system.

Curriculum

The Review considered two curriculum-focused studies¹ to identify 'best practice'² in Kindergarten, Pre-primary and Year 1 curriculum. Five key findings were identified.

Be clear about the outcomes expected

Curriculum content can impact on children's achievement outcomes; however, not all curriculum content generates positive effects on social and academic achievement. The favourable influence of well-designed and clearly-targeted early childhood curricula on children's learning outcomes is well documented. The Preschool Curriculum Evaluation Research Consortium (PCERC) study (2008) found that three³ out of 14 curricula had positive impacts on children's learning in the desired areas of early literacy, phonological awareness, language skills and reading.

It also found that some curricula have negative effects on unexpected areas of children's learning. For example, Project Approach is intended to advance children's early literacy and cognitive function by encouraging their curiosity through enabling them to interact, question, connect, problem solve, communicate and reflect. The empirical investigation within the PCERC study found that, far from achieving its intention, Project Approach had no effects on children's early literacy skills and actually had negative impacts on children's behaviour, by comparison with the control group.

While there has been much speculation about why this was the case, the relevant finding for the Western Australian Review is the importance of systemic clarity in expected outcomes from any curriculum. The Review established that Kindergarten, Pre-primary and Year 1 teachers plan for children's learning by using a disparate and diverse array of curriculum documents and

¹ The Preschool Curriculum Evaluation Research Consortium (PCERC) study tested 14 curricula for their impact on preschool children's early reading skills, phonological awareness, language development, early mathematical knowledge and behaviour after a one-year program. The INCA/NFER Review was a thematic review of 20 countries' early childhood curricula, conducted by the Qualifications and Curriculum Authority in the UK.

² 'Best practices' are defined as those that correspond to improved educational and social outcomes for children.

³ A clear curriculum was found to be important, but it could have a positive, negative or neutral impact on the desired areas of children's learning. Only three of the 14 curricula studied had positive impacts on the children's learning. The DLM Early Childhood Express, supplemented with Open Court Reading, had positive impacts on children's early literacy and phonological awareness. The Early Literacy and Learning Model had positive effects on children's language skills, and Curiosity Corner had positive effects for reading.

guidelines. The proliferation of curriculum documents and the lack of clarity about the outcomes expected of early childhood education present a problem. This may stem from inconsistent systemic responses to changes to the age of entry for Kindergarten and Pre-primary in Western Australia during the 1990s. The present cohorts entering Kindergarten are not the same age as the cohorts of Kindergarten children before the introduction of full-time voluntary Pre-primary education. An age increase of six months in any cohort has implications for curriculum, yet it is unclear how the Western Australian curriculum as a whole adjusted to this reform.

The evidence of research on the impact of different forms of curriculum suggests that, in the least, Western Australia clarifies the vision and purpose for its universal Early Childhood Education programs and is taking steps to align Early Years curriculum, pedagogy and assessment practices. The new National EYLF sets out outcomes for children up to school (Pre-primary) age. The *Melbourne Declaration on Educational Goals for Young Australians* (2008) sets out broad goals for Australian education and the Australian Curriculum, Assessment and Reporting Authority gives direction to the content of core subjects. The development of a clear statement by Western Australia, emphasising the use of evidence-based pedagogy to implement these goals, and providing curriculum and pedagogy scope and sequence (birth to age eight) may bring coherence to this existing national activity and make clear the expected outcomes for Kindergarten, Pre-primary and Year 1 programs. The decision about expected outcomes is best informed by the vision and purpose of the system (see Section 5).

Quality teaching is as important as the curriculum

The importance of teaching quality has been recognised by governments across Australia through their commitment to the National Partnership Agreement on Improving Teacher Quality (COAG, 2009) and the recent COAG agreement to increase the qualification of educators working in early childhood settings. This trend is supported by the findings of the Preschool Curriculum Evaluation Research Consortium study (2008), which emphasised the importance of the teacher's role in facilitating children's achievement in the learning areas of the curriculum. Discussing the PCERC study, Bette Chambers of Johns Hopkins University notes that '[c]urriculum matters but it matters a heck of a lot more when teachers are trained to implement it' (NIEER, 2008, 2). For Western Australia, this means that skilled professionals⁴, supported by clear curriculum and pedagogy, are essential in driving and improving educational outcomes for children.

Fidelity of curriculum implementation is critical if intended gains of new curriculum are to be realised

Not only is the skill of the professionals an essential component in the quality of outcomes generated by the curriculum, but the fidelity of the curriculum implementation is also important. There are two components to consider here. The first is that the educators affected by the new curriculum need to be involved in developing effective applications of the curriculum, especially when the curriculum challenges the dominant philosophy of learning and teaching.

Experience in Victoria in developing and implementing the national Early Years Learning Framework (birth to five) and the Victorian Early Years Learning and Development Framework (birth to eight) demonstrates how important it is to involve those affected in genuine partnerships.

The support of the education community is one part of successfully implementing new curriculum. The other is the provision of adequate time and support for educators to embed the new curriculum in their daily interactions with children and families. The implementation of curriculum

⁴ Discussed in detail in Chapter 4.

needs to be seen and managed as a change process. This means recognising that educators will have varying levels of willingness to adopt the new curriculum.

Educators need time to familiarise themselves with the curriculum and to integrate it into their knowledge of children's learning. They also need a range of professional learning challenges and support materials implementation guides, professional reading and engagement activities, learning networks, mentoring to successfully embed the curriculum into their work. Although still at an early stage, this is the approach Victoria has taken in implementing the National Framework and its Victorian Framework, and is also the approach taken by many of the curricula systems applied within the PCERC study.

A rubric addressing the fidelity of early education intervention-focused programs was developed by Coleman et al., who noted:

Fidelity of implementation is the extent to which an intervention, or, approach is used as it was intended or designed. To consider whether a practice has been implemented with fidelity, the practice must be clearly defined. (Coleman et al., 2009, in press)

A general rubric or frame for implementing a new curriculum can assist both systemic and local-level activity. Coleman's rubric addresses five areas: (1), screening assessment and progress monitoring; (2), evidence-based practice and standard protocols; (3), collaborative problem solving; (4), parent and family partnerships; and (5), capacity building and infrastructure. Having information to hand on the level of implementation fidelity across a system is essential to an accurate interpretation of any progress and the evaluation of results of new curriculum and pedagogy policies.

Early childhood curriculum content needs to be broad and have a holistic picture of children's learning

The International Review of Curriculum and Assessment Frameworks (INCA) / National Foundation for Educational Research (NFER) study (Bertram & Pascal, 2002) found that most of the 20 countries examined had defined guidelines for curricula for children aged over three years. However, few placed a major emphasis on literacy and numeracy: Rather, these areas were embedded within class experiences. Most countries' curricula reflected children's and families' views of learning and provided holistic images of the children. In doing so, they used 'areas of learning' that addressed the following areas of experience:

- social and emotional
- cultural
- aesthetic and creative
- physical
- environmental
- language and literacy
- numeracy
- cultural traditions
- sustainable environment.

The idea of the holistic image of the child is demonstrated in the findings of the studies led by the US National Centre for Early Development and Learning. They found that not only did an understanding of numbers and ordinality on entry to school predict later mathematical ability, but also later reading outcomes in Year 5. This means that although educators may

compartmentalise what they think they are teaching children, children in fact take many things out of each learning experience.

It is important, therefore, that the curriculum encourage children to develop a broad range of skills, but that they also be intentionally taught specific concepts, such as rudimentary mathematics.

Continuity across the early childhood curriculum (both school and prior-to-school experiences) is important

Starting Strong II (OECD, 2006) reported that 'learning begets learning' and the learning at one stage of life forms the foundation for learning at the next. This is an important concept to build into effective early childhood curricula. The curriculum can play a role in providing for continuity between children's experiences relative to their experiences in prior and subsequent settings by making sure that the curriculum allows for their learning to be built upon at each stage.

Continuity was argued to be a key to effective learning across the curricula of the 20 countries examined by the INCA/NFER review (2002). However, separations between pre-school and primary raised problems of discontinuity in most of the countries. In addition, some faced discontinuities between care-focused and education-focused early childhood settings. The key to success was seen to be working with parents to support the continuity of children's learning. This requires training and the attention of staff to children's transitions, especially if staff are structurally separated in the childhood education and care and primary school systems.

Pedagogy

The Review presented four curriculum-focused studies⁵ to identify 'best practice'⁶ in K-P-1 curriculum. Five key findings are identified:

The importance of intentional teaching and child-directed play and learning

The NCEDL and State Wide Early Education Programs (SWEET) studies found that the quality of children's classroom experiences (defined as those with quality instructional interactions) predicted more growth in children's educational outcomes than did structural qualities, such as class size and class ratios.

The idea of intentional teaching may be confronting to traditional notions of early childhood pedagogy in which educators set up environments and simply let children learn through play and exploration. What is suggested by the NCEDL and SWEET studies is that children who experienced high levels of instructional interactions that were sensitive and responsive to them and encouraged communication and reasoning constructed an atmosphere of respect, encouragement and enthusiasm for learning. Children who were in these environments achieved better educational outcomes than their peers who were not.

Hand in glove with an emphasis on intentional interactions is an emphasis on responsive and sensitive interactions. The high-quality instructive, responsive environments identified in the NCEDL and SWEET studies have large degrees of spontaneity and unplanned learning.

The importance of shared sustained thinking

In the Effective Provision of Preschool Education (EPPE) study (2004), Iram Siraj-Blatchford developed the term 'shared sustained thinking' to describe these high-quality intentional interactions between educators and children. Shared sustained thinking involves adults

⁵ The National Centre for Early Development and Learning (NCEDL) & the Statewide Early Education Programs Study (SWEET); the Effective Provision of Preschool Education (EPPE); the Queensland Preparing for School study; and Teaching for Growth

⁶ 'Best practices' are defined as those that correspond to improved educational and social outcomes for children.

interacting with children and intentionally extending children's thinking; for example, by asking open-ended questions.

Recent EPPE research has demonstrated that interactions between children and staff that are based on sustained, shared thinking in play-based programs maximise children's learning outcomes. Siraj-Blatchford tells us that these environments have staff-child interactions that include teaching and play:

Effective pedagogy is both 'teaching' and the provision of instructive learning and play environments and routines. The most highly qualified staff provided the most direct teaching but also the kind of interactions which guide but do not dominate children's thinking. Adults and children in the 'excellent settings' were more likely to engage at times in 'sustained shared thinking' episodes in which two or more individuals 'worked together' in an intellectual way to solve a problem, clarify a concept, evaluate activities or extend narratives. During periods of sustained shared thinking, both parties contribute to the thinking and developed and extended the discourse. (EPPE, 2004, 18)

The importance of intentional teaching with shared sustained thinking is further validated by the findings of the Preparing for School study (Thorpe et al., 2007). It found that a play-based curriculum that sets out clear learning outcomes is more effective than a play-based curriculum that is accompanied by less direct teacher involvement.

The importance of responsive pedagogy and sensitivity towards the child's view of the world

Responsive pedagogy and sensitivity towards the child are defined as the delivery by educators of educational programs that respond to children's interests, views, abilities and culture. The results of these pedagogies are clear. The EPPE study found that children's views of primary school predicted their cognitive and social/ behavioural outcomes at age 10. Children's views about teachers' support for their learning were related positively to improved self-regulation and pro-social behaviour and reduced hyperactivity.

The importance of working in partnership with families and other professionals

In promoting continuity for children's learning, the INCA/NFER review identified the importance of early childhood professionals working in partnership together and with families to achieve common outcomes for children.

This means pedagogical approaches need to reflect family involvement in children's learning and acknowledgment of the values held by families. When this is done, children's experiences outside formal learning environments can be built on in school and vice versa, resulting in mutual reinforcement.

Similarly, pedagogical approaches that encourage early childhood educators to work in partnership with other professionals, such as early intervention and health specialists, also provide continuity. They allow a team approach among all professionals involved in supporting children's learning, again providing a mutually-reinforcing effect.

Assessment

Assessment must be fit for purpose

A trend toward assessing children's learning is emerging across OECD countries. Such assessments have two key applications: (1), **assessment for learning**, the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are

in their learning, where they need to go and how best to get there (Curriculum Corporation, 2002); and (2), **assessment of learning**, which is undertaken for system-level monitoring. It is important that assessments be designed and used for the purposes for which they are intended.

Assessments for learning are undertaken by educators to inform individual teaching and learning strategies. They assist in the development of learning programs that are responsive to children and to reflect on their practice. They enable educators to identify a child's learning and to reflect on what works and what strategies may be used in the future to support the child's learning progress. It is important that these assessments evaluate children's learning in the agreed learning areas and be accessible to educators 'on demand'. There is a growing trend toward linking these 'on-demand' assessments to validated pedagogical tools. This enables educators to determine where a child's learning is at and use a recommended pedagogical tool to take the child's learning to the next level.

Assessments of learning are undertaken at the class level, but are used to inform system-level responses. These assessments allow policy makers to determine which policy responses are effective in improving children's learning outcomes and to guide investment decisions. Once again, it is essential that these assessments evaluate the status of children's learning in the desired learning outcomes.

Analysis of WA curriculum, pedagogy and assessment in the international context and recommendations for reform

Western Australia has a number of K-P-1 curricula and pedagogical materials. The State has also agreed to implement the National EYLF for children from birth to five years (that is, up to the age children will need to reach by 30 June in the year in which they attend during full-time Pre-primary).

The pedagogy and learning outcomes identified in the National EYLF reflect international evidence and the key points identified above.

It is recommended that Western Australia build on the EYLF. This is something that Victoria has done and South Australia is considering.

Building on the existing work undertaken by Western Australia to develop and implement the EYLF has four distinct benefits:

- It will enable continuity for children's learning to be supported through the Early Years of school. Having a birth to eight curriculum that extends the existing birth to five curriculum and pedagogy into schools enables children's prior-to-school experiences to be better understood and built on in school.
- It will make practical sense and be easily understood by Early Childhood practitioners and parents.
- It will enable Western Australia to leverage off the Commonwealth investment in implementing the National Framework.
- It will deliver a cost saving to Western Australia by building on work that has already been undertaken.

It is also recommended that Western Australia develop, adapt or adopt validated assessment tools for both the individual class and the system level.

These assessments will support educators in reflecting on and informing their practice and will provide important information to policy makers in making policy and investment decisions.

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Further reading

A number of research papers were prepared to inform the development of the National EYLF (birth to five years) and the Victorian Early Years Learning and Development Frameworks (birth to eight years). These documents provide in-depth research into curriculum and pedagogical frameworks internationally, and will be helpful in informing the specific approach to Western Australian curriculum, pedagogy and assessment reform. They are described briefly below:

- Monash University was commissioned to prepare a discussion paper as an initial step to developing the National EYLF. It has a specific emphasis on principles of practice. See <http://www.vcaa.vic.edu.au/earlyyears/researchpaperdevelopearlylearnfw.pdf>.
- *An Analysis of Curriculum and Learning Frameworks*, prepared by RMIT University, provides an international review of learning frameworks, including their pedagogy and learning outcomes. See www.vcaa.vic.edu.au/earlyyears/analysiscurriclearnfwlitreview.pdf.
- *Victorian Early Years Learning and Development Framework and The Victorian Essential Learning Standards: A Discussion Paper*, prepared by the University of Melbourne, investigates how pedagogical and curriculum continuity can be achieved across the National EYLF and the Victorian school curriculum. See www.vcaa.vic.edu.au/earlyyears/veyldf_vels.pdf.
- *Television, Digital Media and Children's Learning*, prepared by Don and Patricia Edgar, discusses how children's learning can be enhanced by using new technologies. See www.vcaa.vic.edu.au/earlyyears/Edgar_Paper_20081223.pdf.
- *Supporting Children to Learn English as a Second Language in the Early Years*, which was prepared by Dr Priscilla Clarke, is an evidence-based paper on teaching English as a second language and maintaining children's home languages. See www.vcaa.vic.edu.au/earlyyears/supporting_children_learning_esl.pdf.

2 Local-level drivers to enable best practice curriculum, pedagogy and assessment in Kindergarten, Pre-primary and Year 1

The complexity of Western Australia's geography and demography means that a 'one size fits all' approach to curriculum, pedagogy and assessment is not appropriate and will not deliver the gains in all children's educational outcomes to which the State aspires.

The development and implementation of the curriculum, pedagogy and assessment recommendations identified in Section 3 will be successful if they are supported by a series of local and system-level strategic drivers. This section describes the three local level drivers and provides recommendations for their development and implementation.

Driver 1: Focused curriculum and pedagogy

The importance of focused curriculum and pedagogy

Curriculum and pedagogy determine what and how children learn what they learn. Focused curriculum and pedagogy therefore allow the system to achieve its goals for children and provide consistency, continuity and coherence for children and families. Focused curriculum is clear about the content, skills and dispositions being developed. The focus of Kindergarten, Pre-primary and Year 1 curriculum at this time can be guided by the five national outcomes described in the National EYLF and the curriculum findings described in the previous section.

Curriculum, pedagogy and assessment provide the links between the vision for children articulated by the system and the children themselves. They enable the vision and purpose to be implemented on the ground. The curriculum and pedagogy that are applied in any setting should illustrate an alignment of purpose between central policy and schools and ancillary early childhood services. It is therefore essential that curriculum, pedagogy and assessment reflect the system's purpose and vision for children.

Curriculum, pedagogy and assessment therefore need to clearly reinforce and reflect the agreed vision and purpose of the early childhood system. In countries that invest in early childhood as a social good, the early childhood curriculum will most likely provide a major focus for social and civic attitudes; countries that invest for the purpose of driving literacy and numeracy outcomes will probably have a strong focus on key learning areas. Yet one does not deny the other.

Focus for consistency, continuity and coherence

In determining what and how children learn, a focused curriculum, pedagogy and assessment approach also builds a sense of cohesion for children and families. It does this by ensuring that wherever children and families are located, the professionals engaged with them will be working toward the same educational outcomes, individualising learning programs to ensure optimal progress.

Curriculum and pedagogy in Western Australia

The curriculum, pedagogy and assessment space in Western Australia is complex, with Review participants reporting approaches and directions to be numerous, complex and confounding. There are multiple curricula and multiple pedagogical tools. In addition, the National EYLF (Department of Education, Employment and Workplace Relations) was released in July 2009 and the first stage Australian Curriculum documents setting out K-10 curriculum content in Mathematics, English, History and Science are set for implementation in 2011.

Given this context, there is a clear need for focused curriculum and pedagogy in Western Australia.

Recommendations for creating focused curriculum and pedagogy in Western Australia

Given the evidence of best-practice curriculum, pedagogy and assessment outlined in Section 3, it is recommended that Western Australia:

Develop birth-eight curriculum that aligns the EYLF to the National Curriculum

Build on the National EYLF to focus curriculum for children from birth to eight years. Articulate the vision and purpose of the system (see Section 3) and align the outcomes and pedagogy of the National EYLF to the Australian Curriculum. This action will deliver best-practice curricula for children across the State and will provide continuity and consistency for all children's learning, while addressing the scope and sequence of curriculum.

Promote pedagogy that supports continuity for children from birth to eight years

Promote best-practice pedagogy for children across the State that aligns the pedagogy of the National EYLF to the best available evidence. This will support continuity for children's learning from birth to eight years.

A shared language, understandings and approach to supporting children's learning outcomes throughout the birth to eight years period will drive educational outcomes for children by limiting the stops or regressions in their developmental and educational progress.

In most jurisdictions the early childhood curriculum and pedagogy are integrated into one learning framework. This approach could be applied in Western Australia and these actions progressed as one. The advantage with this approach is that there is continuity in the language and expectations between the curriculum content (the outcomes) and the pedagogy.

Driver 2: Skilled professionals

The importance of skilled professionals

The international evidence analysed in the Review identified clearly the importance of skilled professionals in delivering high-quality programs for children. These professionals play an essential role in translating the curriculum and pedagogy that is mandated across the system into locally-responsive learning programs and interactions with children and families.

Skilled professionals also have a role in creating continuity for children's learning and development within and across educational settings. They do this through building on children's interests, abilities and prior learning experiences and by translating experiences into higher and more refined forms of learning across the early childhood period. Professional teamwork is a necessary condition.

To drive educational achievement through the implementation of the K-P-1 curriculum, pedagogy and assessment, the evidence identified through the research paper and consultations as part of the Review suggests that professionals require:

- strong pedagogical understanding and knowledge;
- local leadership capacity;
- skills in developing collaborative partnerships with children and families, including cultural competence; and
- skills in working in multidisciplinary teams and in partnership with other professionals.

In addition to the generic skills of all professionals, two distinct clinical models of teaching are emerging across OECD countries. The *pedagogue* model, present in countries such as Denmark and Finland, has a broad understanding of children in the context of their families. It takes a markedly social-democratic approach to education, viewing early childhood settings not as junior schools, but as 'site[s] for human relationships and for learning that springs from social interaction' (*Starting Strong II*, 2006). In Sweden, however, the *new teacher* or *early childhood specialist model*, under which teachers undergo 18 months of common early childhood pedagogical and child development training and then specialise in a specific area, is favoured.

The United Kingdom is investigating adopting one of these models to drive the integration of early childhood education and care; however, there is little evidence of the relative impact of either model on children's learning. *Starting Strong II* (2006) suggests that instead of an 'either/or' choice, educators of varying specialisations be assigned to groups of children based on their needs and circumstances.

Description of professional composition in Western Australia

Western Australia has a strong early childhood workforce, but, to deliver on the reform agenda, early childhood professionals need to build their leadership capacity, change their professional identity and modify the way they work with children, families and the system. This represents substantial cultural change activity and requires a comprehensive workforce strategy, supported by adequate time and resources.

One of the real strengths of the Western Australian system, unlike some other jurisdictions, is that all public Kindergarten, Pre-primary and Year 1 teachers are employed centrally and work together on the same (or nearby) sites. This has enormous benefits, including:

- It is relatively easy to reach all centrally employed staff.
- Although there may be some professional barriers, Kindergarten, Pre-primary, and Year 1 teachers generally work on the same school sites, creating windows of opportunity to integrate language and understandings of children's learning.

Recommendations for creating skilled professionals

Work with universities to ensure new graduates are equipped to deliver the new curriculum, pedagogy and assessment process

Universities are essential partners in creating skilled professionals. Not only do they produce new graduates, they also offer professional development to existing practitioners, and forge ahead with research investigations to refine or develop systems further. It is important that the universities deliver pre- and in-service training that advances, supports and aligns the curriculum, pedagogy and assessment approach advocated by the system. This reduces the demand for government-provided training and new graduates and recipients can also act as local leaders for the reforms.

Deliver substantial professional development opportunities to support the skill-building required for the new curriculum, pedagogy and assessment

Teaching quality is as important as the curriculum itself. Professional development is an essential part of improving teaching quality, supporting teachers in implementing the new reforms and, ultimately, in enhancing outcomes for children. Professional development needs to be offered as an ongoing opportunity and as part of a culture of continuous improvement and reflective practice.

Flexible professional development opportunities, such as on-line networking and training and videoconferencing, are not only cost effective in a geographically-diverse region like Western Australia, but they also reflect a contemporary workforce that uses leading-edge technologies to advance its own learning and improve the opportunities and mechanisms surrounding children's learning in a contemporary modern society.

Establish local learning networks

Local learning networks are effective mechanisms for creating and disbursing energy for the reform across a group of peers. Effective networks focus on professional learning and on collaborating around local issues.

Learning networks can be face-to-face or virtual, and can include a range of other early childhood professionals (including maternal and child health nurses, early intervention professionals, school nurses, long day care educators, etc.), depending on the local circumstances. As local learning networks evolve, the incorporation of university partners, disciplinary experts from allied fields and other locally-based agencies can add richness to the thinking, planning and practice.

Build the capacity of local leaders to lead the implementation of the new Early Years curriculum, pedagogy and assessment

Local leadership is essential in delivering locally-responsive solutions. Leaders can translate the Statewide curriculum, pedagogy and assessment into locally-responsive, appropriate and meaningful learning programs for individual children. They can also lead reform across their own service and networks of services. Building the capacity of local leaders is a long-term strategy, but is a proven and effective way of advancing educational outcomes for children.

Ensure the right professionals are in the right locations across the State, particularly in the context of non-urban disadvantage

The availability of the right professionals in the right locations is essential, but presents a considerable challenge in Western Australia, which is experiencing significant workforce pressures. However, the quality of teaching, including the capacity to connect with local children and families and lead learning forward, is well established as central to driving up educational outcomes. This is especially so in the context of lower-than-expected educational attainment in non-urban locations. There is logic in Western Australia preparing specialist Early Years teachers who have the necessary cultural competencies to work in regional and remote environments. These teachers can ensure child and family participation is maximised. They need to demonstrate skill in supporting children in learning English as a second or other language. Such an initiative would help to improve the educational outcomes of children in regional and remote locations. This is especially so in the case of Indigenous children and families, who experience the highest levels of disadvantage in contemporary Australia.

Driver 3: Family engagement

The importance of family engagement

The importance of family engagement in making curriculum, pedagogy and assessment decisions is well articulated in the *Starting Strong* reports (OECD, 2001, 2006). These reports note that parents are the first and primary educators of children, and, despite some decline in both nuclear and extended family forms, their formative influence on young children remains central. Supporting young children's development and learning requires professionals to form partnerships with parents. These partnerships are two-way processes, with knowledge and

information flowing freely in both directions. After children themselves, parents are the first experts on their children. Parents can assist staff to tailor programs to the interests and needs of their children.

This is especially important for children who face additional risk in relation to their success in the education system: Indigenous children; children from refugee families; children with disabilities; and children with complex needs, including those experiencing out-of-home care. Parent engagement seeks to (a), build on parents' unique knowledge about their children, fostering continuity with learning in the home; (b), promote positive attitudes and behaviours toward children's learning; (c), provide parents with information and referrals to other services; and (d) support parent and community connectedness.

Family engagement in Western Australia

Given the diversity of the Western Australian population, partnerships with families and family engagement are essential in delivering locally-responsive curricula and pedagogy, and in driving up children's educational outcomes.

According to the Review consultation data, professionals in Western Australia have varying degrees of skills in engaging with families. There is potential to support professionals to work more collaboratively with families so that children's educational outcomes are improved.

Recommendations to improve family engagement

Involve families in development policies, to ensure they reflect family interests, capabilities and needs

Involving families in decisions about their children's education is essential in building family engagement. To be effective, education programs need to capture and capitalise on the interests of children, maximise the use of social, cultural and intellectual capital held by the range of families in any community and meet the needs of individual families and their children. For example, this means that early education services need to be available at times of the day that suit families' employment needs and reflect the families' educational values. By engaging families in decisions about education, the system can respond better to family interests and needs, boost family engagement and ensure families are true partners in their children's formal as well as informal education.

Train professionals to work in collaboration with families

Most early childhood professionals are well skilled to work collaboratively with families; however, some are faced with challenging situations. Training them to work with families helps to build family engagement. It is important that this training provide skills and awareness on issues of cultural competence and that resources be provided to enable translators to be engaged where necessary.

Educate families about the importance of early learning

Educating families about the importance of early learning is an important part of building their engagement. While some families understand the importance of this period, not all do. By educating them (whether through local initiatives or large-scale public promotions) families will be better positioned to engage in valuable dialogue with educators about their children's education.

3 System-level drivers to enable best-practice curriculum, pedagogy and assessment in Kindergarten, Pre-primary and Year 1

While local responsiveness is vital, system-level cohesion is also essential in delivering best-practice curriculum, pedagogy and assessment. A system-level approach enables all children, regardless of their circumstances, to experience curriculum, pedagogy and assessment processes that are based on the best available evidence.

The geography and demography of Western Australia are complex. There are clear challenges in providing services of high quality through a universal Early Years system (including early care, child health, learning and development) to a population characterised by extreme diversity and distributed over a vast area. Not only do these populations have very different service requirements, they also have very different attitudes and values toward the provision of education services and the role of the State in supporting young children and their families. The challenge will be in striking a balance between delivering both system cohesion and locally-responsive educational programs.

To this end, the development and implementation of the curriculum, pedagogy and assessment recommendations that were identified in Section 2 will be successful if they are supported by a series of system-level strategic drivers, as outlined below. This section describes two system drivers and provides recommendations for their development and implementation.

Driver 4: Policy leadership

The importance of policy leadership

A clearly-articulated vision and purpose for the early childhood system that is championed by strong leadership at the highest level is essential for creating system cohesion. A clear vision provides purpose to early childhood provision across the State and enables individual officers, regions and services to work together to achieve a common goal.

For the vision and purpose to be articulated clearly across government and the public education system, leadership must be developed at every level. In the formal sense, this means devolving leadership and responsibility to the most appropriate points: the central office and the regional and local levels. The devolution of leadership must be supported by adequate resources (time, money and support) if it is to work effectively.

Attention must also be paid to developing the capacity of leaders who can lead change within local services and who can provide that element of local responsiveness that is necessary in translating system quality into locally-responsive programs delivered to children and families.

Informal leadership must also be supported. Informal leaders are early childhood professionals and other educators within local services who reflect on their practice and strive for continuous improvement in their work. These are the people who can lead change within individual services from the bottom up. They communicate the message to the community and drive the agenda forward.

Recommendations to strengthen policy leadership

Develop clear vision and purpose that guide the work of early childhood educators and articulates the State Government's direction for early childhood development

The vision and purpose of the system sets the frame for reform. It creates cohesion and consistency by informing all policy and investment decisions. In this regard, a clearly-articulated vision and purpose focus system-wide effort. For Western Australia to advance early childhood educational outcomes and create cohesion across the State, it will be necessary to determine the rationale for reform and investment and the vision for the system, before any decision about a customised Western Australian approach to curriculum, pedagogy and assessment can be made.

All systems are complex in their operation, and Kindergarten, Pre-primary and Year 1 provisions traverse the early childhood education and care systems and the statutory school education system. Hence the path from policy through legislation and on to practice can be unclear. For optimal early educational outcomes to be achieved, a broad view of 'system' is necessary. This can be achieved if vision and purpose are well articulated and clear, both within government and across the Western Australian community. This matter is further addressed in relation to the fifth of the strategic drivers: *Alignment*.

The Government to establish clear leadership responsibility for articulating and leading early childhood (birth to age eight) development and reform

This is central to establishing strong leadership at the highest level that can lead reform, both across government and within the early childhood system. An important element is ensuring that the scope of the leadership is defined and aligns with the overall vision and purpose of the system.

The shape and direction of a system is guided by its vision and purpose. If they are to enhance the early childhood system's cohesion, they must be articulated at the highest level.

Develop the leadership infrastructure and a strategy to build leadership capacity so that the system's Early Childhood vision and purpose are communicated through every level

To promote the vision and purpose throughout the early childhood system, leadership capacity needs to be developed and appropriate levels of responsibility devolved at every level.

Driver 5: Alignment

The importance of alignment

Alignment between the system, policy, and actions at the local level ensures consistency, coherence and continuity for children and families. Alignment is important because it enables programs that are developed locally to be based on the research that informs the policies at the system level. It also creates a sense of cohesion across the services available to children and families. This means that wherever they are in Western Australia, children and families should receive cohesive education services, informed by sound research about the best ways to improve early childhood educational outcomes.

Alignment occurs when the regulatory, administrative and program standards reflect the vision and purpose of the system and are evident at all levels, from the central office through to the practice of individual educators

The impetus for reviewing Kindergarten Pre-primary and Year 1 educational provision would be strengthened if, at this time, Western Australia reconsidered its legislation pertaining to ECEC.

This could be a strategic action following this review. Such an action would acknowledge the importance of alignment for the improvement of early educational outcomes. Legislative change is necessary if an integrated approach to ECEC—including cohesive Kindergarten, Pre-primary and Year 1 provision—is to be achieved. Both at Commonwealth and State levels there are efforts to streamline ECEC legislation and re-align its intent to better suit the current rationale for investing in this area and building intellectual and social capital from birth. For example, a necessary condition or educational advancement is participation. Curriculum and pedagogy research reported in *International best-practices in pedagogy, curriculum and operational procedures: Research evidence pertinent to the conduct of kindergarten, pre-primary and the early primary years in Western Australia* (Tayler, 2009) confirms the significance of well-targeted programs in advancing the outcomes of children, especially those at educational risk. Non-attendance or non-participation in well-designed programs are actions that are antithetic to enhanced educational achievement.

To ensure that system-level policies are appropriate for local contexts, local data need to be collected and used to inform policy responses. Many such sets are available to the government, including demographic, NAPLAN and Australian Early Development Index data, and provide useful insights into specific local issues.

Further, there is also value in collecting data that can report on changes to children's outcomes throughout the period of new policy implementation. In the context of early childhood reform in Western Australia, this may require new measures and new data collections that reflect children's learning of the agreed educational outcomes. These collections and analyses can serve as evaluations of the success or otherwise of new policies, and can inform the policy review cycle. Such use of these data will ensure that subsequent policy decisions are based on robust local evidence.

Alignment activity should also ensure that teachers pay attention to the connection of curriculum (what and why), pedagogy (how) and assessment (who, when and where) practices within classrooms. These practices are interrelated and need to be planned in ways that enhance the logic of learning experiences and the power of programs to improve child achievements.

Recommendations to improve alignment

The State Government to review the structure and roles of agencies to better align policy and programs

The vision and purpose articulated by the system will be implemented more effectively when they are reflected by the machinery of government. Should Western Australia decide to integrate early childhood and school education, it will be best done through the integration of early childhood and the early years of schooling.

Implement 'fit for purpose' assessments to provide data about local early childhood conditions and outcomes that can be aggregated at the systemic level to inform policy and resource allocation

Formative assessments of children's learning and development can provide insightful information to teachers about individuals' progress. Formative assessments can illuminate whether the children's learning is progressing as expected, whether there are particular challenges and whether the learning program needs to be adjusted and perhaps made more challenging. These assessments, when collected at the systemic level, can also provide clear pictures of children's learning across the State, and can identify specific pockets of need. They can also assist in making policy and investment decisions taken at the systemic level more locally responsive.

When designed and administered effectively, quality assessments of children's learning can drive quality practice and help to advance outcomes for them. However, they can easily be misused. It is therefore essential that assessments be 'fit for purpose'; that is, that they are used for the purposes for which they have been designed and that they are designed with a clear scope and purpose in mind.

4 Principles of action

Emerging from the Review were a number of principles that underpin best practice curriculum, pedagogy and assessment. These principles should be considered in the development of any policy and investment decisions as a result of the Review.

Evidence-driven policy and practice

'Evidence-driven policy' has become almost a cliché in recent years. However, there are some unique characteristics of the early childhood reform landscape that make it particularly well suited to the use of evidence-based approaches. Central to this are the advances in the medical, developmental and educational and economic sciences, in conjunction with an increase in the availability of large-scale longitudinal studies that provide sound and readily-available research evidence to guide investment, policy and practice decisions.

Evidence-driven practice

By developing curriculum, pedagogy and assessment that is based on the best available evidence, benefits accrue to children and families. An evidence-based approach means that wherever they are in the system, children and families can have access to high-quality programs that reflect current research and knowledge about children's learning.

Evidence-driven policy

The corollary to using system-level evidence to inform local programs is using local data to inform system-level policy responses: that is, to develop locally-responsive programs, system-level policy also needs to be informed by local data. Local data, fed up through the system, enables responsive and appropriate system-level policy to be developed. It is therefore important that governments collect 'fit for purpose' local data to inform their policy responses.

The use of evidence-informed policy and practice also means that educational outcomes can be improved in ways that represents the best investment decisions for government.

Evidence to change opinions

In addition to informing effective policy responses, evidence provides those who will be affected with enough information to encourage them to embrace change. Gary Banks, the chair of the Productivity Commission, refers to this in terms of 'conditioning the political environment'. He notes that policy is not made in a vacuum and cannot be made on the basis of pure and technical grounds alone. Rather, it is made in a broader political context, which includes budgets, vested interests and lobbying. In this context, Banks suggests that evidence and analysis that is robust and publicly available can serve as an important counterweight to the influence of sectional interests (Banks, 2009).

An evidence-based approach to policy making ensures that decisions are effective, appropriate and are embraced by those who are affected. The complexity of the policy issues facing the provision of early childhood services in Australia cannot be addressed with intuition alone. There are valuable opportunities available to draw on the strength of the local and international evidence to determine the best course of action in Western Australia.

New ways of thinking about children's learning

There are opportunities to use the increasing amounts of information and insights into how children learn and how children's learning can best be supported to inform new policy directions.

Pianta and colleagues (2009) identify a suite of pedagogies that make a positive difference to young children's learning outcomes in all domains of learning. The CLASS dimensions provide specific confirmation of the quality of the interactions between teachers and children. Evidence of a high-level application of these dimensions in early childhood settings correlates positively with quality programs and improvements in children's literacy and numeracy outcomes. The CLASS scales categorise interactions into three constructs: the emotional climate, the instructional climate and the organisational climate.

We also know that human brains develop more in the first eight years of life than at any other time and that they develop most rapidly between the age of birth and two years. From a policy perspective, this means that to increase literacy and numeracy outcomes, for example, it is vital to provide children with high-quality interactions and opportunities in the first years of life and for these quality interactions to continue through the early childhood period.

This view is supported by economic research that indicates that the return on investment in the early childhood period is more substantial than at any other time in life (Carneiro & Heckman, 2003). In brief, early interventions are more effective at improving children's later learning outcomes and therefore more cost effective for government.

Using new technologies to deliver effective K-P-1 programs

Western Australia has strength in its education system and, on the whole, its children are faring well by international standards. However, if it is to achieve improvements in educational outcomes for all of its children, new ways of thinking about early childhood learning and the delivery of services and supports to teachers and schools are required.

With its geographical diversity, Western Australia has substantial pockets of remote and isolated communities. These pose particular challenges in delivering effective programs in a cohesive and responsive way. An ideal solution is through the creative use of new technologies.

There are opportunities to use these technologies to communicate vision, purpose and professional support services. Videoconferencing, Web-based networking and on-line professional development are all becoming more accessible, and can be cost effective in rural and remote areas.

There is also the prospect of collecting data at the local level and providing it back to the system level. Many countries are now using on-line assessment and pedagogical tools, such as English and Maths on Line, which provide instant feedback to individual teachers about children's learning progress and can also be collected at the system level to inform locally-responsive systemic policy.

Leveraging off Commonwealth investment

The Commonwealth Government is investing in early childhood services across Australia. through the National Partnership Agreement on Early Childhood Education (COAG, 2008), it is intending to:

- provide 15 hours of kindergarten for all four year olds from 2013, based on the clear evidence that dosage counts: that is, children's educational outcomes improve when they are provided with more access to quality educational programs before attending school;

- deliver a new quality system for early childhood services that responds to the evidence that high-quality experiences are essential to improving outcomes for children. In this context, the new quality system emphasises the importance of high-quality interactions between educators and children, a position that is supported by the research;
- implement the new National EYLF to guide educational programs in all early childhood settings across Australia. This responds to the early childhood system quality indicator of a clearly articulated curriculum at the national level;
- launch a new curriculum for four core subjects, with further subjects being developed in 2011 for the statutory education system, which includes Pre-primary and Year 1 provision; and,
- deliver a new quality rating system for early childhood services, which will provide information to families about the quality of their services.

The Commonwealth investment in these areas provides the foundation for substantial early childhood system reform at the State level. Western Australia will receive \$98.4 million in Commonwealth funding for Early Childhood Education over the next five years.

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5 Policy context of curriculum, pedagogy and assessment reform

Australia

Service integration

Australia is moving toward more integrated policy and provision. Different paradigms currently account for child care clusters, kindergarten and preschool clusters, early school education and a varied array of projects addressing parenting. The OECD's early childhood education and care thematic review outcomes from *Starting Strong I* and *Starting Strong II* (OECD, 2001, 2006) placed child wellbeing, early development and learning at the core of all early childhood education and care programs, while respecting the child's agency and natural learning strategies. Although multi-disciplinary design basics were not dominant when Australian child care program policies and standards were established, more recent policy developments herald a change in favour of integrated early childhood education and care provision (COAG, 2006-2009).

Transparency agenda

There is increasing pressure on governments around Australia to provide greater transparency to families and the community. A transparency agenda is driven by theory of choice, which suggests that providing consumers with greater choice through information in a competitive market places pressure on services to improve quality.

The two most high-profile examples of this in the national context are the Commonwealth's *MySchool* Website, which provides information about individual school performance based on NAPLAN and other data, and the forthcoming early childhood quality rating system, under which services are rated and their ratings displayed so that families can make informed choices about the services they use.

Quality agenda

The transparency agenda is part of the broader quality agenda. The quality agenda is driven by the overwhelming evidence that the quality of a child's educational experience has real and lasting social, economic and health benefits into the future. From the research, it is clear that the higher the quality of early childhood provision the greater the gradient of success over time, in terms of educational achievement, social development, health, wellbeing and employment.

Governments around Australia are investing in a range of strategies to boost teaching quality in particular. This is on the basis of clear evidence that teachers and the quality of their teaching are the biggest in-class predictors of children's educational attainment. Teaching quality is identified as a lynchpin for driving educational reform in Australia.

Rationale for investment

Over the past few decades there has been a shift in the policy rationale for investing in early childhood. Previous Australian policy debates have centred on providing welfare, safeguarding children and policing minimum standards. The dominant policy orientation is toward early childhood education and care as a key part of the education agenda. Children have a basic right to optimal learning and development support. ECEC services are funded within a human capital development framework. Investment is for reasons such as (but not exclusive to) school readiness and short- and long-term national productivity.

Based on the evidence, Australia has chosen a way through this debate. While human capital conceptualisations are welcomed by Treasuries, locating early childhood provisions within a

social purpose and a human rights agenda has measurable benefits in terms of improving outcomes for children. The importance of broad social support for developing a cohesive society is highlighted in social policy areas of contemporary governments' policies. Jurisdictions that attract substantial investment in early childhood and are improving outcomes for children traverse both debates.

In Australia both social and academic dimensions are foundational in early years curriculum frameworks. The National EYLF strikes a balance between providing children with broad learning opportunities that are responsive to their interests, abilities and cultures and preparing them for school. Contemporary curricula encourage learning in the traditional domains of literacy and numeracy, but also stress the importance of creativity, problem solving and logic. This emphasis on a holistic view of children's learning is supported in the evidence of successful systems, as measured by cross-national assessments.

Western Australia needs to determine where to place its primary emphasis, as this sets the frame for early childhood provision within the system. It also sets the frame for the kinds of attention given to licensing and regulation, overall funding, balance between state and market provision, curriculum and pedagogy and operations at large.

International

The breadth of early childhood education and care provision⁷

International growth in ECEC programs links to the scientific evidence highlighting the importance of the early years to life opportunities and outcomes. This growth also relates to awareness of problems faced by children who live in disadvantaged circumstances due to cultural, social or economic conditions, low family education levels and/or poor family functioning. There is a broad base of literature indicating that early childhood education and care programs assure the wellbeing of all children, address disadvantage and support equal opportunity and equity for mothers in contemporary societies.

Like the programs, the research in this field arises from a variety of disciplines. Findings reflect the dominant disciplinary bases of particular research teams: medical, psychological, sociological, educational, economic. Therefore, the public investment in ECEC programs is justified internationally on numerous grounds, including:

- education (for improved social, behavioural and cognitive abilities; lower grade retention; reduction of early drop-out or non-completion of secondary schooling; less need for special education provisions);
- children's rights and child agency (to support children as citizens; public commitment to childhood; enabling children's voices; making social space for children in society) both now and to assure the future;
- social welfare and social cohesion (to reduce costs associated with unemployment; to alleviate family dysfunction; to lower abuse and neglect; to reduce crime and delinquency; to build community, tolerance and solidarity);
- health and wellbeing (for immunisation and nutrition; to improve primary health; to build resilience and, reduce anxiety and depression; to lower the incidence of teenage births; to bring down rates of smoking, alcohol and drug abuse; to lessen child abuse),

⁷ This summary draws from prior work reported in 2007 by Tayler, C., Cloney, D., Thorpe K, & Wilson. C. *Investing in early childhood intervention programs and services in Australia: benefits, costs and some directions for Australian cost-benefit research*, a report commissioned by MCEETYA. The specific material used in this document was written by Tayler.

- human capital development (to improve knowledge and skills; to support later personal employment; to increase later life earnings; to enhance later contributions to society, including taxation); and
- labour participation and workforce support (to increase the labour force and strengthen female participation; to assure gender equality; to provide long-term social insurance for women; to promote gender equity and work/family life balance).

Universal and targeted programs

Universal provision is acknowledged as an entitlement of all children to a good start in life. Using a wide social interpretation of returns, a better realisation of social capital is achieved through higher investment in universal human capital and therefore in universal early childhood education and care programs. In universal programs, all children have opportunities to optimise learning and to function as members of pluralistic modern democracies in which respect for diversity and social responsibility can be developed. Targeted programs recognise the case for providing special (additional) resources and support for sub-groups of the population, especially those who are known to face additional risks of poor educational achievement. Investing extra resources in well-targeted learning and development programs for children known to be at greater risk of poor outcomes is clearly prudent. Early additional investment minimises later necessary remedial investments. There are clear curricular and pedagogical strategies known to advance the learning and development of children facing additional educational risks. These strategies are most successful in narrowing gaps in educational achievement when they are applied by both parents and teachers.

High quality interactions and responsive pedagogies⁸

According to the international literature, it is high-quality programs (with clear strategies, positive strong relationships and responsive learning environments) that demonstrate long-term (40+ years) positive outcomes. Positive research results are particularly marked for children thought to be at high risk, and more recent evidence demonstrates the value of pre-school education for all children. Within universal programs that ensure high-quality interactions, all children benefit and disadvantaged children benefit more. This is so in terms of both the process and the outcomes. In relation to process, a full mix of children broadens interactions, enriches relationships and deepens learning experiences. In relation to outcomes, focused interactive pedagogies have been shown to accelerate the progress of all, and accelerate disadvantaged children at a greater rate, thereby helping to close gaps in achievement.

The value of key program design factors, including early childhood specialist curriculum and high-quality interactive pedagogies, is unclear in some of the studies undertaken because the drivers of learning and development are complex and multi-layered. High-quality interactions do not take place in all early childhood education and care programs, because program design factors may be poor and/or investment (both funding and program focus) may be low. Where quality design elements are built into programs, the evidence of positive benefits is clear.

The benefits of high-quality programs are demonstrated through studies that traverse educational, social, health and economic perspectives. They result in positive changes in child trajectories, summarised by McCain, Mustard & Shanker (2007) as the 'long reach of early childhood', affecting socio-economic, health, behaviour and learning outcomes of children as they grow.

⁸ This summary draws from prior work reported in 2007 by Tayler, C., Cloney, D., Thorpe K, & Wilson. C. *Investing in early childhood intervention programs and services in Australia: benefits, costs and some directions for Australian cost-benefit research*, a report commissioned by MCEETYA.

In summary, international evidence of early childhood program characteristics indicates a divergence on two dimensions – universal or targeted programs, and high or low-level investment and both dimensions affect program quality and outcomes. The first dimension speaks to population, where there is evidence that diversity can add to the richness of learning experiences; there are improved outcomes for all; and greatest improvements are seen among for children at risk. However, negative stigmatising effects can result from some targeted programs. The second dimension relates directly to investment, in terms of funding and human capital. The level of investment sets the program design features that drive quality. High-quality programs demand high initial investments in resources to ensure that skilled professionals have clear purpose and vision: these investments are returned through gains to individuals and society over time.

An integrated approach

Internationally, there is strong evidence for integrating ECEC provision from birth. Integrated provision has been growing in scale for more than a decade. Such provision addresses family wellbeing, parenting, parent support, child care, pre-school and entry to primary education: clearly a much wider scope than that of the current review. Systems models for the education and care of young children take into account the need to link early learning and care programs as well as the compulsory education system. The weight of evidence argues that any restructuring of programs for kindergarten-age children must occur within the context of improvements to the entire system (Colley, 2006, 17).

A further dimension of an integrated systems approach is program design, where attention is given to each and every theory base—educational, health, social and economic—if a cohesive approach is to be achieved. A systematic and integrated approach to early childhood education and care is articulated in detail in *Starting Strong* (OECD, 2001) and *Starting Strong II* (OECD, 2006):

The correlation between human capital and social capital is very close, not definitionally or tautologically, but empirically. Individuals and communities with high levels of human capital (education and training), are typically also characterized by high levels of social capital in its various forms. Correlation does not always prove causation, but there is reasonably good evidence in this case that causation flows in both directions, that is, that social capital fosters the acquisition of human capital and that in turn education fosters the accumulation of social capital. For that reason, anyone interested in one side of this equation should also be interested in the other. (Putnam, 2004, 3)

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Glossary

Children: refers to babies, toddlers and people in kindergarten, pre-primary and Year 1.

Communities: social or cultural groups or networks that share a common purpose, heritage, rights and responsibilities and/or other bonds. 'Communities' is used variously to refer, for example, to the community within early childhood settings, extended kinships, the local geographic community and broader Australian society.

Curriculum: in the early childhood setting, curriculum means 'all the interactions, experiences, activities, routines and events, planned and unplanned, that occur in an environment designed to foster children's learning and development'. [Adapted from Te Whariki, New Zealand, 1996].

Educators: early childhood practitioners who work directly with children in early childhood settings and in schools.

Intentional teaching: involves educators being deliberate, purposeful and thoughtful in their decisions and actions. Intentional teaching is the opposite of teaching by rote or continuing with traditions simply because things have 'always' been done in a particular way.

Learning: a natural process of exploration that children engage in from birth as they expand their intellectual, physical, social, emotional and creative capacities. Early learning is linked closely to early development.

Learning framework: a guide that provides general goals or outcomes for children's learning and how they might be attained. It also provides a scaffold to assist early childhood settings to develop their own, more detailed curriculum.

Learning outcome: a skill, knowledge or disposition that educators can promote actively in early childhood settings, in collaboration with children and families.

Literacy: in the early years, 'literacy' includes a range of modes of communication, such as music, movement, dance, story telling, visual arts, media and drama, as well as talking, reading and writing.

Numeracy: broadly includes understandings about numbers, patterns, measurement, spatial awareness and data, as well as mathematical thinking, reasoning and counting.

Pedagogies: specific practices that are intended to promote children's learning.

Pedagogy: early childhood educators' professional practice; the 'how' of caring and teaching. especially those aspects that involve building and nurturing relationships, curriculum decision making, teaching and learning.

Play-based learning: a context for learning through which children organise and make sense of their social worlds, as they engage actively with people, objects and representations.

Technologies: include much more than computers and digital technologies used for information, communication and entertainment. 'Technologies' are the diverse range of products that make up the designed world. These products extend beyond artefacts designed and developed by people and include processes, systems, services and environments.

Targeted programs: a targeted program is provided specifically for children and families who meet certain specified criteria. Programs that are targeted to selected families may be provided within the context of universally-available services (such as in schools or pre-school classes) or may be supplied separately only to designated children and families (such as the provision of Indigenous pre-kindergarten services). Selection of participants for targeted services may be on the basis of income, socioeconomic status, regional or remote location, presence of organic disability, cultural and linguistic diversity, Indigenous status or other characteristic deemed to justify specific or additional support.

Universal programs: a universal service is one that is available to all children, often as a statutory education provision (for example, public school education), irrespective of the background or income status of the family. Universal programs are not always compulsory and (normally) are taxpayer funded or supported. As is the case with public schooling, a small portion of the cost may be paid directly by families.