A Research Paper to inform the development of An Early Years Learning Framework for Australia June 2008



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1 August 2008

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1. What is this Research Paper about?

This Research Paper will inform the work being undertaken on the development of the Early Years Learning Framework.

It includes:

- · A discussion about how the Early Years Learning Framework can be a distinctively Australian document
- · A summary of research about the importance of the early years
- · The identification of possible core components of an effective Early Years Learning Framework
- · A discussion of how professionals, families, children and communities could approach practice using the Early Years Learning Framework
- Examples of some practices in action
- · A discussion on recent research on the learning outcomes and content knowledge in early years education and care
- Information about how an Early Years Learning Framework could support children's and families' transitions within early childhood services and to school
- · Identification of additional matters to be considered in the development of the Early Years Learning Framework

The Research Paper has been framed within the conceptual base of cultural-historical activity theory¹. The paper examines the idea of using Practice-Principles as the core components of an Early Years Learning Framework. Practice-Principles result when the practices of children, families and professionals are brought together with research to support learning and development. The Paper also examines how the Practice-Principles could be used in an early childhood education and care setting.

Vygotsky, L.S. (1987). Thinking and speech. (In L.S. Vygotsky, The collected works of L.S. Vygotsky, Vol. 1, Problems of general psychology (pp. 39-285). R.W. Rieber & A.S. Carton (Eds.); N. Minick (Trans.); New York: Plenum Press) Hedegaard, M. (2005). Learning and Child Development. A Cultural-Historical Approach. Aarhus University Press, Denmark

2. How can the Early Years Learning Framework be a distinctively Australian document?

A major feature that distinguishes Australia from all other countries in the world is the ancestral relatedness of Indigenous people. This relatedness forms the world's oldest living culture of some 140,000 years that continues to make it unique. This creates the opportunity for an Early Years Learning Framework to outline a unique vision for Australia's young children. In many ways, this vision and philosophy is shared by other countries throughout the world, however acknowledgement of Indigenous ancestral relatedness, its values, and how these are realised is distinctly Australian.

Values are qualities and characteristics that unite us as people, communities and a nation. Values are equally about the extent to which people, and in this case young children, are seen as valuable and how children feel valued as members of communities and the nation. These are the hallmarks of a democratic and civil society and whilst our values are universally agreed, they are not universally experienced by all Australians. Another way to consider this is in terms of social inclusion and then social cohesion. Those who are already valued take this for granted, but those who are not valued do not. The challenge is to ask why this is so, and then how can it be changed? Or, instead of asking, 'who is here', the challenge is to ask, 'who is not here?'

Contemporary Australian society is characterised by a diverse multicultural nature due to waves of migration across the past two hundred years and Australia being a place of refuge for people fleeing from persecution of varying forms. Recognition and celebration of Australia's multiculturalism is critical as it contributes to our social and economic well-being as well as our cultural heritage. In particular, the valuing of all young Australian children is an area where the Australian government is modelling change. These challenges and changes are core to this Research Paper but so too is the reality that childhood is experienced in multiple ways, in differing circumstances and many remain unheard, unseen, devalued or unvalued. All children live with varying degrees of physical and intellectual abilities; they learn to communicate within a range of linguistic and literacy experiences that might include English as a dialect or language. Some live with limited economic resources, and experience a range of challenging and sometimes dangerous social realities. Their sense of belonging is to locations that vary in population, and are geographically diverse, and they are continuously immersed in settings and experiences that reinforce their cultural identities.

The Early Years Learning Framework can provide an opportunity to move beyond the 'shopping list' of labels and stereotypes about children (e.g. 'disabled', 'refugee', 'poor') and make valued learning available to all children. To ensure these young children feel valued necessitates that these abilities, experiences and realities of their lives are not erased but understood, respected and expanded. This requires focused thinking to ensure these young Australians are heard, seen and valued.

3. What does research tell us about the importance of the early years?

Recent research means we now know much more about the impact of early childhood education on children's school success and life chances. We also know more about what we have to do in early childhood education to create these long-term outcomes. This research is summarised in this section under five headings. Each summary is then linked to a key principle that could underpin the Early Years Learning Framework.

Research area one: recognition of the significance of the early childhood period

Brain research shows us that, from birth to five years, children already have most of the physical brain capacity they need. We now know that significant learning and brain growth occurs during infancy². For very young children, relationships and strong attachments to caregivers provide the context for all learning. Research shows that the experiences infants have with their caregivers influence their ability to regulate their emotions³ and that a high level of wellbeing provides a strong base for early learning⁴. This means increased attention and effort must be placed on creating the best possible early learning environments for young children: brain research shows us that the first three years of life are the most critical.

Principle one: Significance of early learning and the importance of building strong early relationships

Research area two: improving life chances

Two landmark studies, one in the United States⁵ 6 and one in the United Kingdom⁷, have shown that learning outcomes are maximized when adults have an active role in children's learning. In the past, professionals in early childhood programs were encouraged to focus on setting up learning environments, then observe and facilitate individual children's learning. This was because children were thought to learn through discovery and by playing in open ended experiences. We now know that important long-term

² Catherwood, D. (1999). New views on the young brain: offerings from development psychology to early childhood

³ Laevers, F. (2005). Deep-level-learning and experiential approach in early childhood and primary education. Research Centre for Early Childhood and Primary Educatio Katholeike Universiteit: Leuven

Perry, B.D. (2006). Attachment: The First Core Strength. Early Childhood Today. Scholastic: Accessed: April 2006. Available: http://teacher.scholastic.com/professional/bruceperry/index.htm

Sims, M. (2007). Emotional wellbeing: the role of early childhood education professionals Edith Cowan University: Western Australia

Vimpani, G. (2001). Early Attachment relationships as predictors of preschool children's emotional regulation with a distressed sibling Early Education and Development, 12 (2):185-195

Winter, P. (2003). Curriculum for babies and toddlers: a critical evaluation of the first phase (birth to age three) of the South Australian Curriculum, Standards and Accountability Framework in selected childcare centres in South Australia, unpusblished PhD dissertation, University of South Australia, Magill.

Edwards, A. (2001), Qualitative designs and analysis. In. G MacNaughton., S Rolfe., & I. Siraj-Blatchford., (Eds.), Doing early childhood research: international perspectives on theory and practice (pp. 117 - 136). Allen & Unwin, CrowsNest.

⁵ Currie, J. & Thomas, D. (2000). Does Head Start make a difference? American Economic Review, 85(3), 341-364.

⁶ Schweinhart, L. J., & Weikart, D. P. (1999). The advantages of High/Scope: helping children lead successful lives. Educational Leadership, 57(1), 76-78.

Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. (2005). Lifetime effects: The High/ Scope Perry Preschool study through age 40. (Monographs of the High/Scope Educational Research Foundation, 14). Ypsilanti, MI: High/Scope Press.

Schwienhart, L. (2004). The High/Scope Perry pre-school study through Age 40: Summary, conclusion and frequently asked questions. High/Scope, Ypsilanti Michigan, www.highscope.org/Research/PerryProject/perrymain.htm

EPPE. (1997-2007). The Effective Provision of Pre-school Education (EPPE) Project. Retrieved 14 May, 2008, from http://k1.ioe.ac.uk/schools/ecpe/eppe/eppe/eppeintro.htm

outcomes result when adults take a more active role in children's learning⁸. US studies have shown a clear link between quality early learning and children's later life chances, such as owning a home, having a second car and graduating from college⁹.

Principle two: A more active role for adults in children's learning during play

Research area three: quality early childhood education impacting upon later school success.

Early childhood programs focusing on domains of development and universal ages and stages as a way of understanding development and planning for learning have traditionally paid less attention to literacy and numeracy. The focus was on learning through play. Recent research has shown us that, when children experience early childhood education focusing on important concepts, those children do better at school, particularly in literacy and numeracy¹⁰. This research also shows that high quality experiences occur when staff know about concepts and look for opportunities to foster concept formation during children's play¹¹.

Principle three: A greater focus on concept formation within early learning contexts

Schwienhart, L. (2004). The High/Scope Perry pre-school study through Age 40: Summary, conclusion and frequently asked questions. High/Scope, Ypsilantim Michigan. www.highscope.org/Research/PerryProject/perrymain.htm Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. (2005). Lifetime effects: The High/Scope Perry Preschool study through age 40. (Monographs of the High/Scope Educational Research Foundation, 14). Ypsilanti, MI: High/Scope Press.

Tayler, C., K. Thorpe, et al. (2006). Early education and care experiences as predictors of social and learning attainments in the first term of school. *International Society for the Study of Behavioural Development*. Melbourne, Australia:

Fleer, M. (1991). Early Childhood Science Education: The teaching-learning process as scaffolding conceptual change, The University of Queensland.

Siraj-Blatchford, I. (2004). Quality teaching in the early years. *Early Childhood Education, Society and Culture*. A. Anning, J. Cullen and M. Fleer. London, SAGE Publications: 137-148.

⁹ Barnett, W. S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. *The Future of Children*, 5(3), 25-50.Bowman, B. T., S. Donovan, et al. (2001). *Eager to Learn: Educating our preschoolers*. Washington, DC.

¹⁰ Anderson, L., Shinn, C., Fullilove, M., Scrimshaw, S., Fielding, J., Normand, J., Carande-Kulis, V. & the Task Force on Community Preventive Services. (2003). The effectiveness of early childhood development programs: A systematic review. *American Journal of Preventive Medicine*, 24 (3), 32-46.

Fish, E. (2003). The benefits of early intervention. *Journal of the Home Economics Institute of Australia*, 10(3), 31–34 McCain, M. & Mustard, F. (1 April, 1999). *Reversing the real brain drain: Early years study final report*. Retrieved 14 May, 2008, from http://www.founders.net/fn/papers.nsf/0176625ce34a8895852566360044448b/d224c54aa1fc2bc88 5256f3a004db715/\$FILE/early_years_study.pdf

EPPE. (1997-2007). *The Effective Provision of Pre-school Education (EPPE) Project*. Retrieved 14 May, 2008, from http://k1.ioe.ac.uk/schools/ecpe/eppe/eppe/eppeintro.htm

Espinosa, L. M. (2002). *High quality preschool: Why we need it and what it looks like*. New Jersey, USA, National Institute for Early Education Research.

Raban, B. (2000). Just the beginning. T. a. Y. A. Department of Education, Macmillan Press, Canberra.

¹¹ Cullen, J. (2007). Literacy debate in the early years: The New Zealand context. In R. Openshaw & J. Soler (Eds.), Reading across international boundaries: History, policy and contexts (pp. 111-128). Charlotte, NC: Information Age Publishing, Inc.

Research area four: better outcomes for children when learning contexts are engaging, responsive and stimulating.

Recent research has shown that interactions between children and staff that are based on sustained, shared thinking within play-based programs maximise children's learning outcomes 12. Extensive research by Iram 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". 13

Principle four: The importance of engaging, responsive and reciprocal learning relationships with children.

Research area five: better outcomes for children when learning contexts are mutually constituted through families and professionals working together.

Australia is an extremely diverse nation. Research has shown that the most effective learning programs build on this richness and diversity¹⁴. This research has also shown that maximum learning occurs when professionals and families work together to find out what matters within communities 15. When professionals work with families and respect the many interactional patterns families use, the teaching and learning goals they develop are suitable for our culturally diverse communities 16.

Principle five: The diverse cultural contexts of learners

Kagan, S. L. & Neumann, M. J. (1996). The Relationship Between Staff Education and Training and Quality in Child Care Programs. Child Care Information Exchange 107(Jan-Feb): 65-70.

EPPE. (1997-2007). The Effective Provision of Pre-school Education (EPPE) Project. Retrieved 14 May, 2008, from http://k1.ioe.ac.uk/schools/ecpe/eppe/eppe/eppeintro.htm

Smith, A. B., Grima, B., Gaffney, M., Powell, K., Masse, L., & Barnett, S. (2000). Strategic research initiative literature review: Early childhood education. Wellington, New Zealand: Ministry of Education. Scarr, S., E. M., et al. (1994). Measurement of quality in child care centres. Early Childhood Research Quarterly 9: 131-151.

- ¹³ Siraj-Blatchford, I. (2004). Quality teaching in the early years. In Anning, A., Cullen, J., Fleer, M. *Early Childhood Education*, Society and Culture. Sage Publications, London, UK
- ¹⁴ Farquhar, S. E. (2003). *Quality Teaching: Early Foundations Best Evidence Synthesis*. New Zealand: Ministry Of Education. Fleer, M. and Williams-Kennedy, D., (2002). Building Bridges: Researching literacy development for young indigenous children. ACT, Australia, Australian Early Childhood Association.
- ¹⁵ Farquhar, S. E. (2003). *Quality Teaching: Early Foundations Best Evidence Synthesis*. New Zealand: Ministry Of Education. Fleer, M. and Williams-Kennedy, D., (2002). Building Bridges: Researching literacy development for young indigenous children. ACT, Australia, Australian Early Childhood Association.
 - Rogoff, B. (1990). Apprenticeship in thinking: Cognitive development in social context. New York: Random House. Rogoff, B. (1998). Cognition as a collaborative process, In Damon, W., (Chief Editor), Kuhn, D., & Siegler, R.S., (volume eds.) Cognition, perceptions and language. 5th Edition, Handbook of Child Psychology, NY: John Wiley & Sons, Inc. pp. 679-744. Rogoff, B. (2003). The cultural nature of human development. Oxford: Oxford University Press.
- ¹⁶ Fleer, M. and Williams-Kennedy, D., (2002). Building Bridges: Researching literacy development for young indigenous children. ACT, Australia, Australian Early Childhood Association.
 - Rogoff, B. (1990). Apprenticeship in thinking: Cognitive development in social context. New York: Random House.
- Rogoff, B. (1998). Cognition as a collaborative process, In Damon, W., (Chief Editor), Kuhn, D., & Siegler, R.S., (volume eds.) Cognition, perceptions and language. 5th Edition, Handbook of Child Psychology, NY: John Wiley & Sons, Inc. pp. 679-744.
- Rogoff, B. (2003). The cultural nature of human development. Oxford: Oxford University Press.

¹² Fleer, M., (in press a) Understanding the dialectical relations between everyday concepts and scientific concepts within play-based programs, Research in Science Education

Fleer, M., (in press b) Supporting conceptual consciousness or learning in a roundabout way, International Journal of Science

A research base for the provision of effective early learning and care

The research presented above challenges many long-standing beliefs, understandings and practices about children's learning and development in early childhood programs. Table One summarises how this research has challenged traditional theories and practices in early childhood education¹⁷. This table suggests principles derived from the research that can be used as a base to provide effective early learning and care within Australian early childhood programs.

Table One: Principles for providing effective early learning and care derived from recent research

Traditional theories and practices in early childhood education	Problems generated by traditional theories and practices	Recent research outcomes challenging the problems Principles derived from recent research outcomes		
Brain development was thought to build incrementally and therefore older learners were deemed more important.	Early childhood period was not valued outside of the profession.	Recognition of the significance of the early childhood period, particularly for building relationships with infants.	Significance of early learning and the importance of building strong early relationships.	
Early learning was valued 'in its own right' and long term outcomes were not measured.	Only US longitudinal study research available.	Improving life chances and social and emotional competence	A more active role for adults in children's learning during play.	
Early learning focused on domains and used universal ages and stages, with less attention on literacy or numeracy.	Limited research evidence in the past for early childhood education.	Quality early childhood education impacting upon later school success.	A greater focus on concept formation within early learning contexts	
Constructivist learning theories de-emphasized the role of adults in children's learning.	Individual learners responsible for discovering their own knowledge	Better outcomes for children when learning contexts are engaging, responsive and stimulating.	The importance of engaged, responsive and reciprocal learning relationships with children.	
Universal ages and stages were based .upon research undertaken with Western heritage children only Culturally diverse communities were no being catered for – le theories and pedago, based on European heritage research.		Better outcomes for children when learning contexts are mutually constituted through families and professionals working together.	Professionals and families working together to build programs for the diverse cultural contexts of learners	

¹⁷ Fleer, M (2008) Problems arising from traditional theories and practices in early childhood education in relation to current research findings, Symposium paper presented at the Research Node for Furthering Early Childhood Learning, Monash University, Australia. 26 May, 2008

Suggested core components of an effective Early Years Learning Framework can be drawn from the five principles of early childhood education and care identified in section three of this document. Drawing the core components from the principles means that the Early Years Learning Framework could provide an evidence-based approach to practice because the principles have been derived from current research.

The core components described in this document are called Practice-Principles¹⁸ ¹⁹. This term signals the importance of basing our work in early childhood education and care on the PRACTICES of children, families and professionals in relation to the PRINCIPLES derived from research. Table Two outlines the principles derived from research, and describes the five Practice-Principles that represent the core components of an effective Early Years Learning Framework.

Table Two: The Practice-Principles representing the core components of an effective Early Years Learning Framework derived from the Principles of early education and care

	Principles derived from research	Five Practice-Principles
1.	Significance of early learning and the importance of building strong early relationships.	Relationships
2.	A more active role for adults in children's learning during play.	Participating
3.	A greater focus on concept formation within early learning contexts	Equipped
4.	The importance of engaged, responsive and reciprocal learning relationships with children.	Engaged in learning and thinking
5.	Professionals and families working together to build programs for the diverse cultural contexts of learners	Connected

Using the Practice-Principles as the core components of an effective Early Years Learning Framework means two important ideas must be considered:

- The idea that Practice refers to the activities of children, families, communities and professionals. This
 means understanding and respecting how children and families engage in everyday practices which
 contribute to the relatedness children experience within their communities. Practice also refers to
 the professional activity of early childhood professionals as they work to support, acknowledge and
 build on the practices children bring from their homes, families and communities into early learning
 contexts; and
- The idea that **Principles** refer to core ideas that current research suggests contribute to the best outcomes for young children by providing access to high quality and culturally appropriate and sensitive learning experiences.

Together the five Practice-Principles suggest ways for the Early Years Learning Framework to bring together the activity of children, families, communities and professionals with current research to support learning and development.

¹⁸ Delors, J.(1996). *Learning: The Treasure within: Report to UNESCO of the International Commission on Education for the Twenty-First Century.* Paris: UNESCO Publishing

¹⁹ Edwards, S. (in press). *Thinking through Learning*. Sydney, Australia: Pademelon Press.

For the five Practice-Principles to be effective, they must be understood in relation to each other. Like the strands within a rope, each Practice-Principle supports the others, giving and receiving meaning with the other strands of the rope. For strong learning to occur, the Practice-Principles must be used together, not just as individual strands. A rope has purpose when used within a social context. That is when it becomes valuable and useful. As the rope is used with meaning, it becomes a tool for human action. The Early Years Learning Framework will be realised in action when the five Practice-Principles are combined to give meaning to the practices of families and professionals.

The Practice-Principles combine the everyday and community practices of diverse children and families with findings from current research. This provides a powerful base for planning effective early learning and care for young children²⁰ Instead of working from 'universal' definitions of growth, conceptual change, identity, and belonging, outcomes for children's learning and development will be created together by professionals, families, and communities²¹. Progress towards potential learning outcomes can be understood as 'establishing' in the early stages and as 'expansive' as children become increasingly competent²². Table Three describes the potential learning areas and outcomes for each of the five Practice-Principles.

Table Three: Potential learning areas and outcomes for five Practice-Principles

	Practice-Principle	Potential learning areas	Potential learning outcomes	
1	Relationships	Early childhood education develops responsive and reciprocal relationships between children (particularly infants) and families.	Strategic learners Effective communicators Futures oriented	
2	Participating	Creating conditions which support learning how to live together with harmony, respect, peacefulness, a sense of others, with a vision for positive and sustainable future(s).	 Socially competent Languages and literacies competent Strong sense of agency Innovative Creative Problem solving Thinking and acting analytically Interdependent social understanding of self, community and others 	
3	Equipped	Creating conditions between everyday understandings of the world and developing these into more formal understandings that can be used to further develop their ideas and thinking.		
4	Engaged in learning and thinking	Sharing, interpreting, creating, innovating and extending and reflecting on learning for real purposes; developing a sense of personal initiative, and the ability to take action in the world.		
5	Connected	Honouring and drawing on the diversity of cultural contexts of learners, their families and communities. Developing a sense of initiative, social responsibility and concern for others.	Critical thinking Interdependent conceptual understanding of self, natural and built environments	

²⁰ Fleer, M., (in press a) Understanding the dialectical relations between everyday concepts and scientific concepts within play-based programs, *Research in Science Education*.

²¹ Fleer, M., (in press b) Supporting conceptual consciousness or learning in a roundabout way, *International Journal of Science Education*

Winter, P. (2008). Foundational and expansive learning for infants and older children. Personal communication: 11th June, 2008.

5. How could the Practice-Principles be used?

In the past, early childhood professionals divided learning up into different areas, such as language development, social-emotional development and physical development (e.g., fine and gross motor skills)²³. However, recent thinking suggests that learning involves the mind and body at the same time. This can be described as **concepts in action**²⁴. When this content and action occurs across the minds and bodies of a group of learners it has been called a community of learners^{25,26} The idea of a community of learners means that the process and content of learning is not located in an individual child's head but seen as existing amongst people. For example, children may discuss a complex idea together, with each child contributing to understanding the problem. Later on, the individual children find it hard to explain the whole idea without the input of the others.

From the lone learner to a community of learners

Concepts were once thought to exist within materials waiting for children to 'discover' them through their play. Recent research and theory tell us that concepts actually get their meaning by being used in social practices. Concepts and social actions are like two sides of the same coin. Think back to the example of a rope, used earlier in this paper to explain the five Practice-Principles. To understand this example, you need to have seen a rope being used, since the concept of a 'rope' can only be fully known by seeing it in action. Only once you have the concept of a rope can you understand the metaphor used to explain the five Practice-Principles. This example shows how concepts and social actions cannot be separated from each other. Moving from a fixed understanding of concepts to understanding concepts-in-action is important for early childhood education and care because it helps professionals understand the distinctive concepts children bring from their own cultural experiences. This also helps children focus on the social nature of concepts in action, instead of simply trying to 'discover' knowledge for themselves.

From discovering concepts to concepts in action

This perspective also means that concepts are given meaning by the social contexts in which they are located. For example, the concept of 'time' is used to explain social practices important to a community, such as thinking about the past, the present and the future. This same community might also invent tools to measure time, such as clocks, watches and calendars. However this is not all: concepts are also emotionally charged. This is evident in some cultural communities when we hear phrases such as 'stop wasting time'. Other communities might have different thinking and values attached to the concept of 'time'. For example, time might be understood and acted upon with respect to seasons, plant growth, and animal movement within an environment, and therefore represent the harvesting of favourite food.

²³ Edwards, S., & Hammer, M. (2006). The foundations of early childhood education: historically situated practice. Chapter in M. Fleer., S. Edwards., M. Hammer., A. Kennedy., A. Ridgway., J. Robbins., & L. Surman. Early childhood learning communities. Sociocultural research in practice. Pearson: Frenchs Forest, NSW.

²⁴ Leonteiv, A,N. (2005). Lecture 13, Language and consciousness. Journal of Russian and East European Psychology, 43 (5), 5-13. Fleer, M., (in press a) Understanding the dialectical relations between everyday concepts and scientific concepts within play-based programs, Research in Science Education.

²⁵ Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.

²⁶ Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. New York: Random House. Rogoff, B. (1998). Cognition as a collaborative process, In Damon, W., (Chief Editor), Kuhn, D., & Siegler, R.S., (volume eds.) Cognition, perceptions and language. 5th Edition, Handbook of Child Psychology, NY: John Wiley & Sons, Inc. pp. 679-744.

Rogoff, B. (2003). The cultural nature of human development. Oxford: Oxford University Press.

Creating pedagogical pathways by connecting with cultural communities and learners

Research shows that strong connections between early childhood services and children's cultural communities help children learn²⁷. In the past, the different values and knowledges found across cultural communities were not universally embraced and used in early childhood education. Instead, a 'one size fits all model' was used as the base for planning learning experiences. This idea is shown in Figure 1. Here, the early childhood professional wants the culturally and linguistically diverse child at A to achieve the learning outcome at C. But first, the professional attempts to shift A to the same set of understandings as B, who is typically a child from an advantaged background. Research by Willis²⁸ has shown that professionals often recognise only one pathway to promote learning. In Figure 1 this is shown by the path from B to C. Children who start at A are expected to take the longest path: they have to get to B before they can reach the understandings at C.

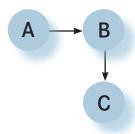
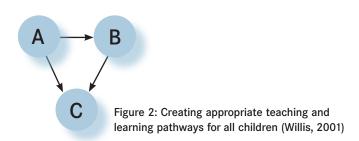


Figure 1: Expecting all children to follow a universal teaching and learning pathway (Willis, 2001)

New research shows us that all children can follow a direct path from A to C, provided that professionals know how to create different teaching and learning pathways for different children. When professionals connect with the cultural communities of learners to identify preferred practices and learning outcomes, both A and B can reach C in the most direct way (Figure 2).



²⁷ Fleer, M (2008) Problems arising from traditional theories and practices in early childhood education in relation to current research findings, Symposium paper presented at the Research Node for Furthering Early Childhood Learning, Monash University, Australia. 26 May, 2008

Fleer, M., and Raban, B., (2006) "It's the thought that counts": A sociocultural framework for supporting early literacy and numeracy. Journal of Australian Research in Early Childhood Education,. 13(1), 35-54.

Fleer, M..., & Raban, B. (2007). Early childhood literacy and numeracy: Building good practice. Canberra: Department of Education, Science and Training.

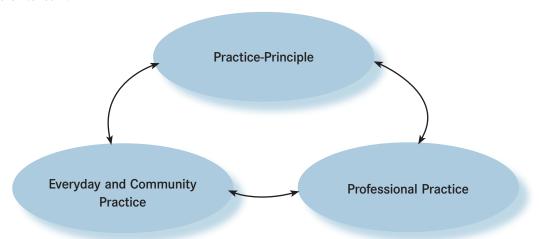
Fleer, M., & Richardson, C. (2004). Observing & planning in early childhood settings: Using a sociocultural approach: Watson, A.C.T.: Early Childhood Australia.

Fleer, M. & Williams-Kennedy, D., (2002). Building Bridges: Researching literacy development for young indigenous children. ACT, Australia, Australian Early Childhood Association.

²⁸ Willis, S., (2001) Becoming Numerate: Who's at risk and why? Early Years Numeracy Conference, Melbourne, 31 May 2001, Monash University, Victoria.

New ways of thinking and acting

This idea informs a powerful new approach to early childhood practice portrayed in Figure 3²⁹. This approach to implementing the Practice-Principles highlights the importance of working with community and family understandings of concepts and social practices. This means the connections between cultural communities and learners will be stronger than in the past³⁰. Early childhood professionals may be able to use the Practice-Principles as a base for discussions with families about what is important for young children to learn.



Realised Practice-Principle in Practice

Figure 3: Model demonstrating how staff and communities can discuss what the principles mean for them in practice (see Fleer & Raban, 2007)

The Practice-Principle at the top of the triangle may guide professional practice. Early childhood professionals could put the Practice-Principle into action by connecting their knowledge and practices about learning with the everyday concepts children bring from their communities and families. In the next section of this paper we show some examples of the model in action. Each of the five Practice-Principles are illustrated.

²⁹ Fleer, M., (in press a) Understanding the dialectical relations between everyday concepts and scientific concepts within play-based programs, Research in Science Education

Fleer, M., (in press b) Supporting conceptual consciousness or learning in a roundabout way, International Journal of

Fleer, M., & Raban, B. (2007). Early childhood literacy and numeracy: Building good practice. Canberra: Department of Education, Science and Training.

 $^{^{30}}$ Hedegaard, M, (2007) The development if children's conceptual relations to the world with focus on concept formation in preschool children's activity. In Daniels, H., Cole, M., Wertsch, J.V. The Cambridge Companion to Vygotsky. Cambridge University Press. New York: USA.

Hedegaard, M. (2005). Learning and Child Development. A Cultural-Historical Approach. Aarhus University Press,

Hedegaard, M. (2002). Learning and child development: A cultural-historical approach. Aarhus: Aarhus University Press. Hedegaard, M., & Chaiklin, S. (2005). Radical-local teaching and learning: A cultural-historical approach. Aarhus: Aarhus

6. What could the Practice-Principles look like in action?

In this section there are some examples of the Practice-Principles in action. These are real examples but they come from specific contexts, so they show just one way of seeing each Practice-Principle in action. Children, families, communities, and professionals will develop their own interpretations. While children and families may want the same learning outcomes for their children (e.g. literacy), there will be many different pathways to achieve the same outcome. This means that each community (at a local or service level) will develop their own Practice-Principle 'strands', and weave these together into distinctive 'ropes' to represent the Early Years Learning Framework in action for those particular people.

Practice-Principle 1: Relationships

An example: Mandy, a childcare educator, is sitting on the floor when Lauren toddles up holding out a plastic tube. The two play an interactive game of peek-a-boo, taking turns to spy at each other through the tube. They chatter happily and giggle about what they are doing. Bryce, 18 months, who is quite new at the centre, solemnly approaches with a book in hand, one he has brought from home and carries constantly. It is a small family photo album. Mandy is Bryce's primary carer and he seeks her out frequently, rarely moving far away, constantly checking her whereabouts. He plonks himself on her lap and Mandy says to Lauren, 'I think Bryce would like us to look at his book with him'. Mandy has learnt the names of Bryce's extended family and a little about them from his mum. The three of them look and talk together, with Mandy naming his family members and chatting about the special family events recorded in the photos.

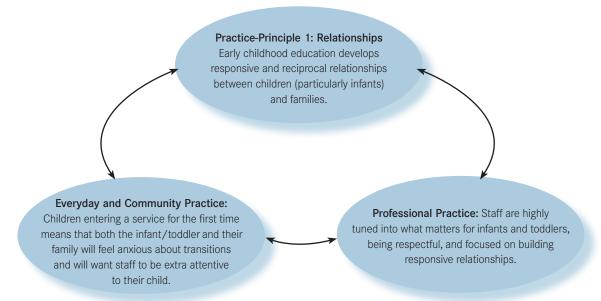


Figure 4: Practice-Principle 1 RELATIONSHIPS realised in action.

Connecting Professionals and Families: Encouraging families to bring into the centre transition objects which carry meaning, such as a family photo album, means the child's home experiences accompany them and relationships are more easily established.

Practice-Principle 2: Participating

An example: Freya and her family were born in Denmark. Freya is 3 years old and attends preschool, family day care, and one day a week she stays with her grandparents. Freya's family values being a part of, and contributing to, her community. Her family values and supports interdependence, rather than independence, and deliberately gives her more rather than less experiences across care and education settings.

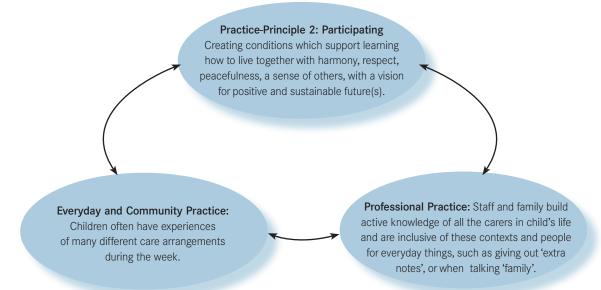


Figure 5: Practice-Principle 2 PARTICIPATING realised in action.

Connecting Professionals and Families: Children are given a digital camera and invited to photograph things they do when in each of the settings, with the view to staff and family referring to children's expansive communities.

Practice-Principle 3: Equipped

An example: Zac, a toddler, was playing with plastic dinosaurs and asked his caregiver if they were monsters. The caregiver told him they were dinosaurs, a form of reptile that lived many years ago. The caregiver found some books on dinosaurs from her local library to read with Zac. The next time Zac was playing with the plastic dinosaurs, his caregiver heard him say, 'You are not monsters, you are dinosaurs. Dinosaurs are extinct, they all died. Here are some stones for you to eat'.

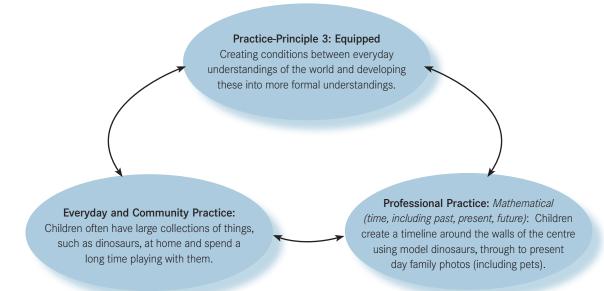


Figure 6: Practice-Principle 3 EQUIPPED realised in action.

Connecting Professionals and families: Professionals actively invite the children to bring their 'treasures from home' to put into their 'treasure chest'. Professionals use these objects for linking home and centre practices.

Practice-Principle 4: Engaged in learning and thinking

An example: Five-year-old Morgan is in his first year of primary school. One afternoon Morgan was picked up by his grandmother. As they walked home Morgan asked his Grandmother if she was able to 'talk in her head'. Morgan's Grandmother said she knew all about talking in her head, and believed it was called thinking. Morgan replied that he was able to think with his voice, inside his head, or by reading different signs. Morgan and his Grandmother discussed the different ways he was able to read, talk and think. They decided that being able to read road signs was very important if you wanted to go somewhere.

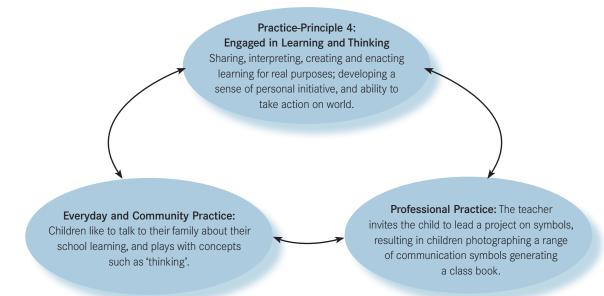


Figure 7: Practice-Principle 4 ENGAGED IN LEARNING AND THINKING realised in action.

Connecting Professionals and families: The teacher does not 'call the roll' but rather, the children and their families spend time connecting with each other as a learning community, exploring conversations, and resources.

Practice-Principle 5: Connected

An example: Mikal was employed in a regional long day care centre as the qualified preschool teacher. Mikal was aware that the children attending his centre came from families who valued a high level of non-verbal competence through multiple literacies of reading the land, seasons and spiritual connections between country and social community. Mikal developed an approach to programming and planning that allowed the children plenty of opportunities to share their ideas through talking about country and community. Mikal found he was able to build on children's non-verbal fluency to promote their literacy learning in other areas, including reading and writing.

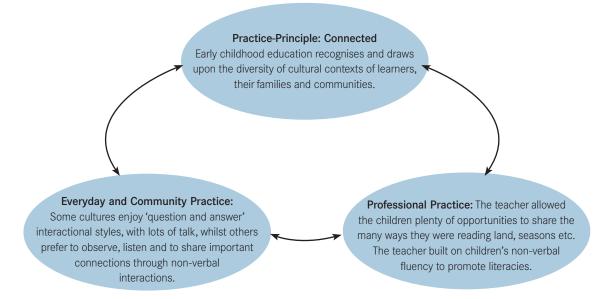


Figure 8: Practice-Principle 5 CONNECTED realised in action.

Connecting professionals and families: Families took photographs of everyday practices at home that were important to them, and these photos were used as a discussion between staff, children and their family in the community hall.

7. Recent research on the learning outcomes and content knowledge for the early years

Many early childhood professionals are concerned that discussions about 'content' in early childhood education and care will result in a 'push-down' from the primary curriculum. These professionals are also concerned about avoiding the deficit thinking about young children that can occur when skills and content knowledge are presented as 'learning outcomes' in early childhood education and care. Current research into children's learning challenges this concern and focuses on the skills and knowledges children bring from their homes. This research is sometimes described as having a 'credit-based' approach to understanding young children's knowledge and learning³¹.

The role of content in early childhood curriculum was investigated in 2001 by a comprehensive research review, Eager to learn: Educating our preschoolers³². This US report drew on a range of research areas across cognitive psychology, curriculum, and sociocultural research to suggest that effective early childhood education should focus on both the process and content of learning. Research showing that children's knowledge develops in coherent domains, rather than as discrete pieces of knowledge, 33 has supported the move toward content being included in early years learning.

Research demonstrating strong connections between children's home experiences and centre based learning has also suggested that early childhood curriculum should view children's establishing knowledge as the base for later conceptual learning. This idea is illustrated by the term funds of knowledge³⁴, which is used to describe the specialised knowledge children learn across different communities such as farming, fishing, cultural, or religious settings. Understanding the many funds of knowledge children bring to early childhood education and care is helpful for identifying their current ways of relating to the world and other people as they move through learning. Working with children's funds of knowledge means that professionals need to be knowledgeable about the knowledges within children's communities as well as the 'disciplinary' knowledge that guides more formal learning in educational settings.

Several strategies can be used to support children's knowledge in ways that lead to better conceptual understanding. For example, taking the opportunity to revisit learning during children's play can help them deepen conceptual understandings of different content. This means professionals facilitate learning through extended interactions with children, instead of children simply participating in repetitive play choices that may not promote learning³⁵. Another key approach is co-construction, which involves collaborative learning around common goals and shared meanings between children and professionals. Co-construction allows professionals to link children's current understandings with positive learning experiences that promote concept formation. Early learning occurs when relationships create opportunities for children to participate in joint attention and extended conversations. These opportunities help children sustain their thinking and learning.

³¹ Carr, M., (1998) Assessing children's learning in early childhood settings: A series of three video tapes. Auckland: VideoCampus and Wellington: NZCER, New Zealand.

Carr, M., (2001) Assessment in early childhood settings. Learning stories. Paul Chapman Publishing: London, UK. ³² Bowman, B.T., Donovan, M., & Burns, M.S. (Eds). (2001) Eager to learn: Educating our preschoolers. Report to the National Research Council [US] Committee on Early Childhood Pedagogy, Commission on Behavioral and Social Sciences and Education.

³³ Wellman, H.M., & Gelman, S.A. (1998). Knowledge acquisition in foundational domains. In D. Kuhn & R.S. Siegler (Eds.), Handbook of child psychology: Vol. 2. Cognition, perception and language (5th ed., pp. 523-573). New York: John

³⁴Gonzales, N., Moll, L. C., & Amanti, C. (Eds.) (2005) Funds of knowledge: Theorising practices in households, communities and classrooms. Mahwah, New Jersey: Lawrence Erlbaum Associates.

³⁵ Haworth P., Cullen, J., Simmons, H., Schimanski, L., McGarva, P. & Woodhead, E. (2006a) *The Flight of our Kite: The* Wycliffe Nga Tamariki Kindergarten story. Centre of Innovation. Final Research Report to Ministry of Education. Napier: Napier Kindergarten Association. Retrieved: www.educationcounts.govt.nz/publications/series/22251/22571

Research which has focussed specifically on learning outcomes has shown that effective teachers employ strategies which compare beliefs about what children learn through play with the ideas of the children themselves. Teachers participating in this research noted that "a more active role by the teacher during conceptual development during play appears to be more satisfying for the teacher and valued by the child"36.

Although children should not be viewed as 'in deficit', some children do experience particular constraints³⁷ on their learning and development. This challenges professionals to consider different ways of achieving a goal that children may face as they participate in particular learning experiences. Also, learning and practising a new skill may be in itself an enjoyable goal for a child, and professionals should be alert for opportunities to strengthen emergent skills through positive learning experiences.

³⁶ Bruce, J., Davie, T., Notman, L., Kilpatrick, H., Stewart, C., Luxford, K., Hunt, J., Antoni, T., Battista, M., Wilson, K., Fames, J., Middleton, K., & Keppick-Arnold, B. (2008). Do children know they are learning? Poster presentation at the City of Casey Teacher Expo. Melbourne: Australia.

³⁷ Williamson, D., Cullen, J., & Lepper, C. (2006). From checklists to narratives in special education. *Australian Journal of*

8. How the Early Years Learning Framework can support children's and families' transitions within early childhood services and from early childhood services to school

Continuity of early experiences for children across settings from birth to age eight is a key factor in effective early learning. When children experience continuity of expectations and approaches to learning between school and earlier centre-based experiences, they are more likely to succeed in the long term³⁸. Research shows that continuity of experiences leads to smooth transitions and have a significant positive effect on the social and emotional well being of young children³⁹.

Transition between educational settings is more effective when professionals pay attention to the different approaches to teaching, learning, and routine ways of operating that occur within different contexts. The more similarity children experience between settings, the more likely it is that children will move confidently from one setting to another. This also increases the chance that knowledge, skills and understandings learned in one setting can be applied to the new setting. Continuity of experience is created when early childhood professionals think about their beliefs and practices around transition. This promotes strong relationships across services, knowledge and expectations of children's attainments, and knowledge and understanding of curriculum connections between settings.

Recent research suggests that current approaches to establishing continuity between early childhood education and care settings in Australia is, at best, haphazard and inconsistent. Many early childhood practitioners hold different ideas about what constitutes continuity⁴⁰. The perceived difference between early childhood 'education', early childhood 'care', and primary schooling is one reason why children can experience discontinuity across services.

Using the Practice-Principles to guide early years education and care could help professionals across different settings develop common understandings of learning and development. This relationship can help to address traditional problems that have resulted in children experiencing discontinuity across learning contexts.

³⁸ Bertram, T., & Pascal, C. (2002). *Early years education: An international perspective*. London: Qualifications and Curriculum Authority.

³⁹ Maloney, C., Barblett, L., & Barratt-Pugh, C. (2007). Continuity of young children's experiences from long day care to kindergarten. Report to Edith Cowan University.

⁴⁰ Maloney, C., Barblett, L., & Barratt-Pugh, C. (2007). Continuity of young children's experiences from long day care to kindergarten. Report to Edith Cowan University.

9. What else should be considered in the development of the Early Years Learning Framework?

1. The Early Years Learning Framework must be consistent with the aims of the early childhood sector as well as with government policy

For the Framework to be embraced by the early childhood sector and by the wider community, it must reflect the values and aspirations that families, communities, and early childhood professionals hold for Australia's children. The Australian government sees the Early Years Learning Framework as a key part of the development of high quality early childhood education and care. The Framework will be linked to the National Quality Standards for Child Care and Preschool⁴¹.

2. The Early Years Learning Framework must be described in clear and accessible language

In order to be an effective tool for a range of early childhood professionals, the Early Years Learning Framework must be expressed clearly. It should provide examples of practice from a range of service types in early years education, including preschools, kindergarten classes, family day care homes, child care centres, language immersion centres, and early intervention programs. In addition to guidance about valued learning, (particularly in literacy, numeracy, and social development⁴²) the Early Years Learning Framework should provide guidance about how early childhood professionals can develop effective learning programs.

3. The Early Years Learning Framework must be based on the most up-to-date research and theory about effective teaching and learning in the early years

This paper describes some of the most recent research and theory into effective teaching and learning in early childhood education. For the Early Years Learning Framework to be helpful to families and professionals, and for it to be respected internationally, it will need to be based on high-quality research. Although early childhood professionals will continue to draw on a range of research and theories to inform their practice, the Early Years Learning Framework itself will need to present a consistent and coherent theoretical base, rather than a 'smorgasbord' of theories that potentially contradict one another. The model presented in this paper draws on research and theory from cultural-historical theory, which stems from the work of L. S. Vygotsky and his collaborators⁴³ ⁴⁴.

4. The Early Years Learning Framework must promote effective relationships between children, families, and early childhood professionals

Children, families, and early childhood professionals develop early childhood programs together. Children are active in their own development⁴⁵ and, in turn, children's active participation shapes how professionals plan and organize learning. Relationships between families and professionals feature strongly in the existing early learning frameworks around Australia and internationally⁴⁶. The importance of these relationships means that a learning framework for the early years must go beyond a traditional focus on "knowledge, skills and values" to one that is "wide enough to include the provision of learning environments for play and exploration"47.

⁴¹ http://www.oececc.gov.au/education/default.htm

⁴² http://www.oececc.gov.au/education/default.htm

⁴³ Vygotsky, L. (1966). Play and its role in the mental development of the child. *Voprosy psikhologii, 12*(6), 62-76 Vygotsky, L.S. (1987). Thinking and speech. (In L.S. Vygotsky, The collected works of L.S. Vygotsky, Vol. 1, Problems of general psychology (pp. 39-285). R.W. Rieber & A.S. Carton (Eds.); N. Minick (Trans.); New York: Plenum Press)

⁴⁴ Davydov, V.V. (1990). Soviet studies in mathematics education. Volume 2. Types of generalization in instruction: Logical and psychological problems in the structuring of school curricula. Reston, Virginia: National Council of Teachers of Mathematics.

⁴⁵ Soto, Lourdes Diaz., & Swadener, Beth Blue. (Eds.). (2005). *Power & voice in research with children*. New York:

⁴⁶Wilks, A., Nyland, B., Chancellor, B., & Elliott, S. (2008). *Analysis of curriculum/learning frameworks for the early years* (Birth to age 8). Unpublished paper, RMIT University: Melbourne.

⁴⁷ Siraj-Blatchford, I., Sylva, K., Muttock, S., Gilden, R., & Bell, D. (2002). Researching effective pedagogy in the early years. Department for Education and Skills, United Kingdom, Research report RR356.

5. The Early Years Learning Framework must be a practical tool to assist early childhood professionals to create locally valid content and practices

The Framework must support early childhood professionals to work with families in culturally relevant ways, so that they can explore together what is meant by a "principle" in the community in which they live. The Practice-Principles may reflect families' practices and beliefs as well as professionals' knowledge of learning and development in the early years. Early childhood professionals will continue to closely interpret children's learning⁴⁸ and combine "intended learning outcomes and the possible outcomes that emerge from children's interests, engagement and participation"⁴⁹.

6. The Early Years Learning Framework must provide early childhood professionals with a focus for ongoing professional learning

Effective professional development occurs when professionals set learning goals for themselves. 50 The Framework must be a tool to help early childhood professionals to identify their professional goals and learn to work in new ways. Professionals need to not only think about how learning is organized in early childhood services and in homes, but also how learning is supported in schools⁵¹. To use the Early Years Learning Framework effectively, early childhood professionals must link home practices with early childhood practices to inform and change learning programs. As professionals learn more about children's home and community cultural beliefs and practices, new ways of thinking about play will be generated and greater insights will develop into sensitive and respectful interactions with infants⁵².

7. The Early Years Learning Framework must not be simply a list of pre-determined goals or content, but a framework upon which professionals can build early childhood programs in collaboration with children and families

Many early childhood professionals worry that early learning frameworks will 'push down' from the curriculum documents used in schools, where specific content or learning outcomes may be prescribed for the teacher. Shirley Grundy uses the metaphor of a football match to describe this problem 53. A 'syllabus' approach to learning frameworks treats program content as the 'ball'. In early childhood, however, the program provided for children is the whole 'game', involving a whole 'team' of children, parents, families. The relationships between children, families, and professionals is not just a source of learning, but is often the learning itself. For this reason, the Early Years Learning Framework must not be a 'list of content' or a 'recipe for practice' but a scaffold upon which professionals, families, and communities can build new practices.

⁴⁸ Nuttall, J. & Edwards, S. (2004). Theory, context and practice. Exploring the curriculum decision-making of early childhood teachers. Early Childhood Folio. A collection of recent research, 8, 14-18.

⁴⁹ Wood, E. (2004). Developing a pedagogy of play. In A. Anning, J. Cullen, & M. Fleer (Eds.). *Early childhood education:* Society and culture (pp. 19 - 31). London: SAGE Publications.

⁵⁰ Mitchell, L., & Cubey, P. (2003). *Characteristics of professional development linked to enhanced pedagogy and* children's learning in early childhood settings: Best evidence synthesis. Wellington, New Zealand: Ministry of Education.

⁵¹ Brooker, L. (2002). Starting school: young children learning cultures. Buckingham: Open University Press. Dockett, S., & Perry, B. (2001). Beginning school together: sharing strengths. Watson, ACT: Australian Early Childhood Association.

Dockett, S., & Perry, B. (2006). Starting school: a handbook for early childhood educators. Baulkham Hills, N.S.W.:

⁵² Winter, P. (2003) Curriculum for babies and toddlers: A critical evaluation of the first phase (birth to age three) of the South Australia Curriculum, Standards and Accountability Framework in three selected childcare centres in South Australia. Unpublished PhD dissertation, University of South Australia, Magill.

⁵³ Grundy, S. (1987). *Curriculum: Product or Praxis?* London: Falmer Press.

8. The Early Years Learning Framework must support transitions within and across early years settings

An effective framework will support both horizontal transitions across learning contexts (e.g. home to centre transitions) and vertical transitions (e.g. centre to school). Many children also attend a variety of education and care arrangements in a typical week. These are horizontal transitions - for example, when a child goes to preschool, childcare, and grandparents all in the same week - that must also be informed and supported by the Framework.

9. The Early Years Learning Framework must strengthen the status of early childhood professionals

Anne Meade has argued that "early childhood teachers' status suffers because the general public and politicians perceives the teachers' role to be simply arranging the environment and watching children play!"54. The Early Years Learning Framework must assist professionals to explain their work to themselves, their colleagues, and to the community. In particular, the Framework must underline the importance of play in early learning. We know that engaging in play does not automatically ensure that children will engage with curriculum content and outcomes⁵⁵. Instead, effective learning relies on sophisticated practices of adult and child involvement, cognitive engagement, and using specific techniques (such as modelling, demonstration, explanation, and questioning) within learning episodes (including those based on play)⁵⁶. By working in these ways, professionals will become highly regarded for their expertise, and families will gain greater insights into the professional knowledge available to them. As a result, work in early childhood settings will be more highly valued, and the status of early childhood professionals will be strengthened in the community and across the education profession.

10. The Early Years Learning Framework must be a stimulus for research and be future focussed

When professionals engage with contemporary research, their work changes⁵⁷. The Early Years Learning Framework will act as stimulus for research by early childhood professionals and for broader research into learning in early childhood settings across Australia. The examples of Practice-Principles created in early childhood services, and active links built between families and professionals (both in schools and early childhood services), may have the potential to provide new understandings about play, cultural values, teaching, and the core content that is valued in communities. Professionals will be researchers-in-practice, applying high level analytical skills and drawing upon current professional knowledge⁵⁸. Research into curriculum implementation in early childhood suggests that when opportunities to discuss and reflect on practice, as well as practical strategies for examining the arrangements they make for children's learning, teachers readily learn to explore these arrangements in a systematic way⁵⁹.

- ⁵⁴ Meade, A (2000). If you say it three times, is it true? Critical use of research in early childhood education. *International Journal* of Early Years Education, 8(1), 15-26.
- ⁵⁵ Brooker, L. (2002). Starting school: young children learning cultures. Buckingham: Open University Press. Wood, E., & Bennett, N. (1998). Teachers' theories of play: Constructivist or social constructivist? Early Child Development and Care. 140, 17 - 30.
- ⁵⁶ Siraj-Blatchford, I., Sylva, K., Muttock, S., Gilden, R., & Bell, D. (2002). Researching effective pedagogy in the early years. Department for Education and Skills, United Kingdom, Research report RR356.
- ⁵⁷ Nuttall, J., Coxon, L., & Read, S. (forthcoming). Structure, agency, and artefacts: Mediating professional learning in early childhood education. In S. Edwards and J. Nuttall (Eds). Professional learning in early childhood settings. Rotterdam, The Netherlands: Sense Publishers
- ⁵⁸ Edwards, S. (2007). From developmental-constructivism to sociocultural theory and practice: an expansive analysis of teachers' professional learning and development in early childhood education. Journal of Early Childhood Research, 5(1), 89-112. Fleer, M., and Raban, B., (2006) "It's the thought that counts": A sociocultural framework for supporting early literacy and numeracy. Journal of Australian Research in Early Childhood Education,. 13(1), 35-54.
 - Fleer, M., & Raban, B. (2007). Early childhood literacy and numeracy: Building good practice. Canberra: Department of Education, Science and Training.
- ⁵⁹ Smith, A. B., Grima, B., Gaffney, M., Powell, K., Masse, L., & Barnett, S. (2000). Strategic research initiative literature review: Early childhood education. Wellington, New Zealand: Ministry of Education.
- Siraj-Blatchford, I., Sylva, K., Muttock, S., Gilden, R., & Bell, D. (2002). Researching effective pedagogy in the early years. Department for Education and Skills, United Kingdom, Research report RR356.
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