# Young Learners – Learning and Literacy in the Early Years

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**Abstract:**

This paper addresses the theoretical and empirical understandings which underpin the Young Learners' Project which is being undertaken at the University of Melbourne during 2007-2011.  Quality learning experiences coupled with personalised, evidence-based adult support in the preschool years shape children's life-long attitudes and motivation for learning, and form the basis of strong outcomes in adulthood.  Of particular importance is the development of literacy.  Not all children, however, have such experiences and some need extra support from their families and teachers.  From this study knowledge will be gained that will assist teachers and parents to support children beginning school so that they are prepared for formal literacy learning.  This will lead to greater prospects of financial and social benefits in adulthood.

This collaborative four-year research project identifies effective personalised teaching strategies for early literacy used with children in preschool and the first year of schooling.  Employing quantitative and qualitative methods, we will establish child profiles to enable the teachers to plan personalised goals and implement strategies for early literacy.  For the teachers, we will use direct observations, self-reflections and interviews to identify effective teaching strategies specifically for early literacy.  Child progress will be measured through an early literacy instrument.  The project will inform teacher education and the preparation of teacher and parent resources for early literacy.

**Introduction:**

From a government's perspective, literacy underachievement has a high social and economic cost.  According to the Royal Australian College of Physicians (DEST 2005a: 27), an increasing number of parents are seeking help from health professionals throughout Australia for their children whose self-esteem and behaviour problems have arisen as a consequence of (or exacerbated by) learning difficulties and failure to acquire adequate literacy skills.  Paediatric physicians refer to this phenomenon as the *new morbidity* in education (Lyon 2003; Rowe & Rowe 2000) and child/adolescent health (Oberklaid 2004)

In reporting the National Inquiry into the Teaching of Reading, DEST (2005a:15) recognised the importance of the years before school in giving children the best start to their literacy development.  The Committee also acknowledged that there are many things that parents can do to assist in the development of their children's literacy.  In addition, DEST (2005b) published an associated guide for parents, suggesting they read to their children in the years before school, teach them rhymes and play word games.

In responding to COAG's National Reform Agenda (2006), the Victorian government adopted the 'lifecycle' approach (DPC 2007) to education and training reform that focused on the cumulative impact of outcomes across four key learning phases of a person's life:
- Early childhood development
- Literacy and numeracy
- Youth transitions, and
- Adult skills.

The Victorian government here recognised the substantial benefits that accrue to the individual, to families and the community from investments in early childhood. This 'lifecycle' approach acknowledges that early childhood development lays an important foundation for future literacy (and numeracy) achievement.

The subsequent discussion paper (DEECD 2008) once again underlines that children are the future and everything must be done to ensure that they thrive, learn, grow and develop in the knowledge that a child's experiences during the early years have a profound impact on their development and educational outcomes. In particular, this is so for children who may need additional support to help them achieve better literacy outcomes (van Kraayenoord et al 2001). Families, it is pointed out, have the first and most enduring impact upon children's health, development and well-being, as this has been shown in the UK EPPE study (Sylva et al 2004) where parent-child interactions through activities such as reading, teaching songs and nursery rhymes, painting, playing with numbers and letters were more strongly associated with children's intellectual and social development than either parental education or occupation.

With all this focus on the significance of the early years, *Belonging, Being and Becoming: The Early Years Framework for Australia* (DEEWR 2009) has passed into legislation, and is being implemented in all services across Australia for 0 – 5 year old children during 2010. This document has a specific emphasis on play-based learning and recognises the importance of communication and language (including literacy and numeracy) and social and emotional development. Again, it is stressed that children's earliest development and learning takes place through their relationships to family, community, culture and place, particularly within families who are children's first and most influential educators. Experience in early childhood settings, therefore, build on the range of experiences with language and literacy that children have with their families and communities.

Building on this major document, the Victorian government has drafted an Early Years Learning and Framework (DEECD 2009), which is based on the understanding that children's first and most enduring educators are families. Families provide the caring relationships, the models, the opportunities and the experiences that shape children's learning and development. This document also stresses that early childhood professionals should use child-centred approaches to explicitly teach particular knowledge and skills

The Young Learners' Project (2007-2011), therefore, is a research response to these Australian initiatives, following 450 (approx) 4 – 6 year old children into the early years of school. Data are being collected from homes and other early childhood settings with a focus on these young children's early literacy learning.

**Learning and Development:**

Some literature concerning early language and literacy development has distinguished between *acquisition* on the one hand, and *learning* on the other (eg. Lambrith in Goouch & Lambrith 2007; Gee 2001). This is an interesting distinction. It is assumed in this literature that acquisition of knowledge is a process of acquiring something subconsciously by exposure to models and a process of trial and error. This is claimed to happen in natural, familiar settings which are rich in purpose and with which the person wants to identify. Learning is juxtaposed with this means of increasing a person's knowledge and understandings. Learning is seen as a process that involves conscious knowledge gained through 'teaching' (but not

always by a 'qualified' teacher), dealing firstly with parts and through processes of analysis and synthesis, building towards the whole.

While this distinction between acquisition and learning is helpful, it is also troublesome. From alternative perspectives (Raban 2001; Rogoff 2003) children are *learning* from birth. Learning, therefore, is better considered as an over-arching construct which includes acquisition in addition to what could be referred to as intentional or deliberate 'teaching' (Siraj-Blatchford & Sylva 2004; Fleer & Raban in press, 2007, 2006a, 2006b; Epstein 2006). Some cultures value acquisition highly and include children in valued activities, enabling them to 'pick up' appropriate knowledge in a holistic fashion. Other cultures value direct teaching, breaking down the task into small pieces with explanations. Gee points out that both these processes have their positives and negatives:

> "…we are better at what we acquire, but we consciously know more about what we have learned." (2001:24)

What we see here is that powerful and substantial learning will include both sub-conscious acquisition *and* intentional direct action on the part of more knowledgeable others.

In Western societies, learning is clearly promoted by social and cultural norms that value the search for knowledge and understanding. Early learning is assisted by the supportive context of the family and the social environment, through the kinds of activities in which caregivers engage with children. These activities have the effect of providing infants, toddlers and young children with the structures and interpretations of the culture's norms and rules, and these processes occur long before children enter school. Through numerous interactions, caregivers help children make connections between familiar situations and new ones. Children's curiosity and persistence are supported by those who direct their attention, structure experiences, support learning attempts, and regulate the complexity and difficulty levels of information.

In an earlier paper, Raban (2001) described principles driving development. These principles rest on the assumption that development is an active process that derives essential information from experiences and, therefore, not all children will follow the same pathways because life experiences vary widely both between and within cultural groups (Hill 1999; Clay 1998). In this respect equity is not served by providing unequals with equal provision. What is required is a clear understanding of the principles for learning and how best to implement these effectively in a variety of settings for diverse populations of young children. These principles include first, respecting what the child already knows and using this knowledge as the basis for them to acquire new knowledge; second, taking account of the transformations which take place as a result of the interactions of accommodation and assimilation through learning and experience; and third, distinguishing between concepts essential to, for instance early literacy, and those contexts within which literacy is embedded, while clearly articulating the links between the two.

In these ways and others, children exhibit capacities that are shaped by their understandings, environmental experiences, and interactions with the individuals who care for them. Early learning, therefore, involves interactions between children's early competences and the environmental supports, strengthening relevant capacities and pruning the early abilities that are less relevant to the child's community. Learning is promoted and regulated by both the biology and the ecology of the child, and in this sense learning drives development rather than

the reverse. It is also worth noting here that economic levels alone do not determine school success.

**Roles of the Adults:**

What children, learn during their first four or five years is not learned in isolation, they learn through their natural curiosity and their persistence as self-motivated learners Their learning is complemented by relationships that encourage the gradual involvement of children in the skilled and valued activities of their family and the society in which they live. In addition to the research showing how caregivers arrange the environment to promote children's learning (Lynch et al 2006; Weigel et al 2006a, 2006b, 2005; Schaffer 1977: 73), a great deal of research has been conducted on how they guide children's understanding of how to act in new situations through their provision of emotional cues regarding the nature of the situation, non-verbal models of how to behave, verbal and non-verbal interpretations of events, and verbal labels to classify objects and events (Hill 2004; Rogoff 1990, 2003; Walden & Ogan 1988).

Successful caregivers make efforts to build on what children know and extend their competencies by providing supporting structures (or scaffolds) for children's performance (Wood 2003; Wood et al 1976). Scaffolding includes several activities and tasks:

- Supporting children to make sense of an activity by suggesting and talking about strategies that will help govern the number of steps required to solve the problem,
- Engaging children in learning by making it meaningful, and keeping their attention in this way through motivation and direction of the activity,
- Encouraging and providing support for problem-solving using scaffolding techniques that minimise frustration and risk by telling and revealing,
- Providing examples and sharing ideas to reinforce the processes of problem-solving and demonstrating the solution by revisiting the process as a whole.

Along with these aspects of cognitive growth, social opportunities influence learning. Feeling that one is contributing something to others appears to be especially motivating (Schwartz & Brandsford 1999). For example, young learners are highly motivated to tell and write stories of their own and draw pictures that they can share with others. Indeed, learners of all ages are more motivated when they can see the usefulness of what they are learning and when they can use that information to do something that has an impact on others (Pintrich & Schunk 1996). Yaden and colleagues (1999) indicate that effective mediation appears to require adults to match their strategies to the child's intentions, knowledge and understandings, and to phase in and out of more or less directive roles.

**Early Learning and Play:**

Christie (1995) emphasised the importance of play in young children's learning pointing out that first, it has positive affect, it is fun and enjoyable; second, it enables personal meanings to take precedence through 'make believe' activities; and third, the focus is on the activity itself, making the means more significant than the ends. Most children begin to pretend quite spontaneously, re-enacting (i.e. re-presenting) the significant routine activities of their everyday lives and they do so around the time that they utter their first words. Significantly, pretend play has been found to have structural and developmental associations with language that are both concurrent and predictive (Brown, Rickards & Bortoli, 2001; McCune, 1995). Pretence is also closely associated with narrative, since the elements of pretence are to do with

identities, settings, props, and scripts (Giffin 1984). The learning potential of play is further enhanced through peer interaction and by adult involvement that can take many forms. Through playing with peers, children learn to share, cooperate, compromise, and control aggression. With peers they can act as collaborators and tutors while helping each other to problem solve. Adult involvement enables children to engage in activities that they could not do on their own. However, there is a danger that when adults intervene to the extent that they take control of the play, children often lose interest in the activity and move to something different. Research into adult-child play interactions has shown that adults can support children's movement from the real to the imaginary, to express their understandings of the perspectives of others as they engage in role play, and to construct scripts (Brown, Rickards & Bortoli, 2001; Brown & Remine, 2004).

More specifically, Enz (1995) identified several roles that adults can take with respect to children's play activities. For instance, as an onlooker, the adult can appreciate and applaud children's literacy engagements and experiments, acknowledging efforts directed at sustaining these play activities, and appreciate when children are deeply involved in what they are doing. As stage-manager, the adult responds to requests for materials and resources, makes suggestions, and encourages children to reflect on and talk about their play. An adult becomes a co-player when they accept invitations to join in the children's play and they join in the children's drama, again encouraging children to engage in talk about what they are doing. When actively participating in children's play, the adult can purposely introduce new literacy ideas, doing this in deliberate, intentional and appropriate ways by making suggestions like "Let's make a list", "Let's write that down so we don't forget". Hall and Robinson (2000) suggest that play can be greatly enriched by adults' intentional participation, enabling children to further their awareness and understandings of literacy within alternative social processes.

Play offers a chance to provide experiences which replicate or approximate the ways literacy is genuinely used in everyday life, thereby offering children insights into what it feels like to be literate. This will be more potent for their developing awareness and understandings than feeding them fragmented and decontextualised literacy experiences that they may find bewildering and confusing in relationship to what they see adults around them doing. This is the danger of introducing a formal school curriculum during the early years, before children have developed a flexible *conceptual* framework within which they can embed such *item* knowledge.

Increasing expertise in a domain helps people develop sensitivity to patterns of meaningful information, patterns that are not available to a novice (see de Groot 1965 for an example from chess). However, seeing a pattern or relationship that has personal meaning cannot be explained or treated in terms of a 'trait' or an 'ability' (Olson 1999), but rather in terms of what the perceiver knows, believes, wants and tries; and these characteristics are framed by experience. The fact that experts' knowledge is organised around ideas and concepts that are important to them suggests that curriculum during the early years should be organised in ways that lead to conceptual understandings first and only later leading to detailed formal knowledge (Raban & Coates 2004).

Socio-cultural studies (Dyson 1992; Purcell-Gates 1995) provide an additional perspective for understanding the nature of early literacy. They show how interactions and strategies are tied, explicitly and implicitly, to culturally held definitions of literacy, power relationships and values. These studies raise a number of issues concerning societal values and definitions of

literacy, clashes of culture between home, other prior to school contexts and school itself, and the differential valuing of the experiences, knowledge and understandings that children bring with them to school.

Neuman and Roskos' study (1997) strongly suggests that long before formal instruction takes place, young children use reading and writing behaviours as an integral part of their everyday lives if encouraged to do so.  As a legitimate part of early literacy, participation in authentic writing and reading practices represents an important phase of early literacy learning.  These experiences engage children in practicing not only what written language is for, but also how it works.  Preschool children also need a variety of experiences and interactions that stimulate conceptual and factual knowledge about literacy.  Lesick (1997) gives a fuller review of this research literature.

Recent work reported from a major study in the UK (Siraj-Blatchford et al 2002) has shown that good outcomes for young children are linked to adult-child interactions that involve 'sustained and shared' talking time, involving open-ended questions to extend the child's thinking, and giving formative feedback during the activities in real time.  These interaction strategies were enhanced when early childhood professionals had good curriculum knowledge as well as knowledge and understanding of child development, seeing social and cognitive development as complementary.  In addition, good outcomes for children were achieved when early childhood professionals shared their educational aims with children's families. This implies that early literacy learning, and ways of working with families needs to be part of the training program for early childhood professionals.  This study also reported that untrained staff performed more appropriately when they were supervised and working alongside their trained colleagues.


**Roles of the Family:**

Children's literacy behaviours are the result of a social process embedded in the relationships, activities and settings of their everyday lives.  Children who are growing up in a world full of print and people using print, will see print as a normal part of their every day existence. Others, growing up in non-literate cultures will not.  As Hall and Robinson (2000) point out, children are not confused by this literate world if they have access to it, and in their own way are developing means of making sense of it.  This is made easier for children in such environments because all around them are people who demonstrate to them, who use literacy, when they use it, what they use it for, why they use it, and how it is used.  Adults and older siblings do this not by being teachers, but just by getting on with their daily lives.  As Gee (2004) points out, when reading forms part of one's day-to-day life, when those around you model reading and value the activity and it is meaningful, pleasurable and functional, reading behaviours are acquired, and any instruction thereafter acts as an alternative form of conceptualising the process.

Family members provide models, access to materials, and they read to and with their children. They take phone messages, read newspapers, open mail, read religious texts, sing songs, use email and the internet, make lists, pay bills and leave notes for themselves and others, among other things.  Reading and writing occur as aspects of activities that enable family members to organise their daily lives effectively.  The focus of the activity is not the literacy itself and the children come to understand the forms and functions of literacy before coming to understand its formal symbolic representation.  Families label the world for their children, they scaffold

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and respond contingently, they link present activities with past experiences, and in these ways engage children and provide guidance through joint activities which are not exotic, but occur everyday. Melhuish and colleagues (2008) identified the fact that children internalised aspects of parental values and expectations, reinforcing the idea that children acquire cognitive skills such as literacy through interactions with others who aid and encourage skill development.

Wood's research (2002) surveyed the parents of 61 four year olds in her longitudinal study, asking them to choose responses as well as provide open-ended responses. She found that literacy activities in these homes fell into four major groups; story-reading, letter-based activities, singing songs, and playing games with words. These parents fell into one of three groups – those who engaged in all these different kinds of activities (86.9 percent), those who engaged in singing alone (8.2 percent), and those who did not engage in any of these activities (4.9 percent). What she called the 'typical' group were represented by all social classes and engaged in daily or frequent book reading with and to their children, weekly letter-based activities like drawing or colouring letter shapes, and daily game playing with word lotto and dominoes. This varied profile of joint activities saw this group of children make greater progress with literacy in school. Those children who experienced singing exclusively tended to be from the lower socio-economic group and were found to have proficient letter and letter sound knowledge at school. The children from those experiencing none of these activities, again with families tending towards the lower socio-economic group, were found to be at greatest risk of difficulties when formally learning to read at school. This study pointed out that a varied set of literacy experiences during the prior to school years would benefit children the most and this wide variation was found across social groups.

In Project EASE (Early Access to Success in Education), Jordan and colleagues (2000) designed an intervention first to increase the frequency and quality of language interactions between children and their family members through book-centred activities, and second, to give parents information about and opportunities for engagement in their children's developing literacy abilities, in the belief that literacy success is an outcome of a constellation of activities and experiences (Snow 1991). 177 children were involved in this intervention program with a further 71 in a control group. Parents welcomed the invitations to participate in promoting their children's school success and they were happy to receive training to do this. This year-long intervention supported parents in drawing their children's attention to the uses and purposes of environmental print, helped them to share books actively with their children, and engaged them in developing a discourse style that was extended and included contingent responding by using verbal strategies to keep conversations going with their children. Findings from this study point to an increased amount of book-reading activities that was related to increases in language skills as measured by vocabulary, story comprehension and sequencing in story production. The greatest impact was found with the lowest scoring children.

**Literacy Curriculum in the Early Years Before School:**

Given our understanding that literacy is constructed by individuals and groups as part of everyday life (Luke 1993: 4), speaking, listening, reading, viewing, writing and drawing, for instance, are social practices that occur in a range of daily situations. Children learn what can be said or written, how it can be said or written, and to whom under what circumstances, through a myriad of experiences in a wide range of contexts. Long before formal lessons in reading and writing, for instance, children will be building up their own understandings of the

purposes and functions of these activities in the literate lives of others who surround them. Indeed, it will be from insights into these purposes and functions that curiosity will be aroused, awareness fostered, and concepts formed. This rich seed-bed has been shown to provide students during their first year in school with an accelerated trajectory on a number of measures of spoken and written language (Raban et al 1999; Raban 2000).

The Preschool Literacy Project – PLP (Raban & Coates 2004), conducted in 40 preschools across the State of Victoria, Australia, aimed to increase these preschool teachers' awareness and understandings of young children's early literacy development through the introduction of resources and activities designed to stimulate interest while giving these children, from the most disadvantaged areas of the state, literacy experiences that would promote their preparedness for more formal literacy experiences they would encounter in their first year of school. Typically, primary school children in these areas of the state failed to achieve acceptable levels of literacy to support their further learning at school. By working with these preschool teachers over a two year period, supporting them in their growing understanding concerning young children's early literacy development, providing them with resources, discussion and feedback, follow-up data revealed that children from these project centres achieved higher scores on measures of both spoken and written language after two years in their primary schools.

Across the first two years of schooling, these results showed another dimension of development through analysis of effect sizes (Cohen 1969). The calculated effect size for *Letter Identification*, *Dictation Task*, *Concepts About Print*, and *Writing Vocabulary* (Clay 2002) become smaller as ceiling effects took over and the non-PLP group of students gained in their conceptual development and knowledge concerning literacy. With respect to *Word Test* (Clay 2002), requiring students to read aloud and out of context, fifteen most frequently found words, there was a difference between the PLP and non-PLP groups, with the PLP students reading more of these words after one year in school, with a ceiling effect being revealed after two years in school. However, the PLP students were seen to achieve higher *Text Level* scores. This is after two years in school when both groups started school with an effect size close to zero. This was possibly due to the fact that no one set out to deliberately teach any of the children (PLP or non-PLP) to read or write texts during their preschool years. In addition, the *Record of Oral Language* (Clay et al 1983) results show a strong reciprocal relationship between written and spoken language. This result indicated that far from waiting for oral language to be in place before introducing literacy, rather there are reciprocal gains with literacy enhancing oral language development as well as the reverse. Any argument resting on a sequence of development placing oral language development before literacy development has been questioned as a result of the findings of this research.

In a study reported by Vukelich (1994), print was incorporated into children's preschool environment and experience, without disturbing the ecology of that context. This incorporation of print increased the children's contact with literacy materials and their engagements with literacy behaviours. In this study the adult interactional style was like that which is experienced in the world outside the preschool, a style where the print-meaning associations are woven naturally into activities and accompanying conversations. Children in this context were found to learn significantly more words in context than their peers who experienced a print-enriched environment without adult interactions. What is being indicated by this research and that of others (*eg*. Neuman & Roskos 1997; Raban et al 1999), is that a combination of exposure to environmental and other print, mediated through more knowledgeable others, are now known to result in young children making significant

meaning-making connections, associations known to be important precursors to conventional reading.

**Language and Literacy Development:**

In the Harvard Home-School study 74 young children from low income families were followed through their preschool years from age three to high school. In their report of the early years (Dickinson & Tabors 2001), they report;

> "We have found that the foundation of the children's school abilities can be found in their home and preschool classroom language and literacy environments. What the Home-School study tells us is that the preschool years are critical." (Snow et al 2001:6)

In synthesising this study, Dickinson and McCabe (2001) argue that preschool teachers who spent more time listening than talking supported children's superior language development. It was found that children acquired their language best when their mothers' listened to them and tailored their comments to the interests and needs of the child. Successful preschool teachers were those who tended to speak to children in ways that extended children's comments. Teacher-talk designed to focus the attention of the group, using children's names and brief comments calling for attention, were found to be strongly positively related to measures of emergent literacy and narrative production. Conversations around shared books that addressed issues such as the setting of the story, the attributes and motivations of the characters, the order of events and the like, also were found to be supportive of children's literacy development. The extent to which preschool teachers engaged children in intellectually challenging conversations around ideas and the meanings of new words was also strongly related to measures of emergent literacy.

Dickinson and McCabe (2001) identified aspects of preschool rooms that were found to be conducive to the literacy development of the young children in their study. These included a well-equipped writing area, teachers' strong support of spoken language as discussed above, and a curriculum with a strong and obvious content identified through themes. Aspects of teacher performance they identified included the amount of time planned for small group and for individual activities. They noted that the more highly educated teachers used more 'rare' words during free-play and engaged in more analytical conversations during book-reading. These teachers also had more interesting and inviting book corners.

In this study, the preschool teacher was identified as of paramount importance – how they viewed their role, how they conversed with children, and the supports they provided for the children using language and literacy in varied ways. Successful preschool teachers exhibited a deep understanding of what children needed, they were skilful in providing appropriate experiences for children throughout the day, and they illustrated a willingness to expend the energy needed to support children's development. This research group identify these characteristics as the qualities of intentional and deliberate teaching for the early years. However, the preschool teachers in this study revealed little understanding of the developmental nature of early literacy development, of the place of oral language in supporting literacy, or of the critical role they as teachers played in fostering children's long-term language and literacy growth. These research team reported (Tabors et al 2001) that preschool teacher language and curricular focus are critical to optimal effects.

It is interesting to note in this regard, Snow's subsequent comments about this piece of research:

> "At a time when literacy researchers were quite single-mindedly focused on phonological awareness and letter knowledge as predictors of literacy success and word reading as the major literacy outcome worthy of assessment, we felt it important to redress the balance by seeking evidence about the role of language skills and the predictors of reading comprehension." (Snow et al 2007:10)

**Literacy in the Preschool:**

In a study of UK preschool teachers, Hannon and James (1990) report that these teachers did not see literacy as a central concern of the preschool curriculum. They were aware of parents' interest in their children's literacy development but they were worried about parents using inappropriate 'methods' teaching their children to read, and about parents putting too much pressure on children. In an Australian study (van Moorst & Graham 1995) 82% of parents said they sent their children to preschool to get them 'ready' for primary school while only 57% of the preschool teachers saw this as an important reason. However twice as many primary school teachers as parents expressed anxiety concerning children's 'readiness' for school when asked this question directly in a study reported by Raban and Ure (1999). Clearly, preschool educators do not agree about preparing children for school, either as an overall aim or with respect to developing their awareness of literacy which surrounds their daily lives. Clay (1998: 42) points out that some are committed to having children learn their letters, while others leave children unaware of such things prior to entry into school. Personal experience of inviting 156 preschool centres to join a literacy project in Victoria, Australia resulted in 40 agreeing to take part (Ure & Raban 2001). Many of these centres saw literacy development as the domain of schooling and of no concern to them. These results were replicated by Lynch (2009) in Canada with similar results.

In a US study of 3 – 4 year olds and their access to literacy within prior to school contexts in Philadelphia, Neuman (1999) also reports centres who refused to participate in her book-flood program. Of the 100 rooms she included in her research and reported on, prior to the intervention, an inventory of the physical resources sketched a brief backdrop for the literacy experiences available for these children. 21 rooms had book corners, 25 had bookshelves, 84 rooms showed print in the form of signs, alphabet letters, numbers, colour names and the like, with some of these signs were at the children's eye-level but most were not. Only two rooms had writing centres. However, Neuman reports impressive transformations as a result of the book flood intervention. Interactions between the preschool teachers and the children increased; reading aloud increased in both amount and variety, to whole group, small groups and individual children. Lasting effects were reported in contrast to children in other centres. Neuman concluded that young children need rich and diverse reading materials shared with more knowledgeable others, to acquire the complex set of attitudes, skills and behaviours associated with early literacy development.

When there is a paucity of high quality children's books in economically disadvantaged communities in particular, then a dramatic impact was evidenced from interventions of this kind which place high-quality books into child care centres and preschools. The staff became engaged in using books frequently and interactively with young children. Changes were observed in both the physical and social environments. However, the physical placement of books in close proximity to the children was seen as critical for early literacy activity.

Nevertheless, we would argue that this is not sufficient in itself. Children need an excellent interactional environment as well. The physical proximity of books, especially high quality attractive books within the children's eye-line, seemed to have, in this study, a coercive effect in instigating these interactions.

In such print-enriched environments, however, young children were not merely passive recipients bombarded with stimuli. Rather, they appeared to be active agents in their own development; exploring, discovering, and using the physical environment as an important medium for transactions. Numerous observations often indicated that it was the children, even more than the adults, who generated the reading activity. Earlier studies also claim similar findings (Neuman & Roskos 1990; Vukelich 1990; Noble & Foster 1993). The inclusion of literacy-enriched play centres increased, often dramatically, the amount of literacy-related activities in which children engaged during play. When materials only, and materials coupled with adult scaffolding were compared (Pickett 1998), children engaged in significantly more literacy-related play when adults were present and involved.

**Literacy Environments:**

Fundamental to ecological and socio-cultural theories, Rogoff (1990 & 2003) points out, cognition is situated in both the social and physical context. Structured by the environment, everyday activities embed opportunities for children to learn and develop through observation and apprenticeship. Young children learn through observation of and participation in the purposes, styles of interaction, and activities around literacy that are crucial for this development. Learning is influenced by the social situation and the familiarity with the task materials and the cognitive operations associated with them. In this regard, Neuman and Celano (2001) in their study of four neighbourhoods asked the question – What is the magnitude of differences in access to literacy materials and resources across different income groups?

Neuman and Celano (ibid) chose to document the availability of print in urban environments, two low-income and two middle-income neighbourhoods. They ascertained the likelihood that children living in these areas would find books and other resources, see signs, labels, logos, places conducive to reading books in their preschools and public libraries. While they found three times the number of retail outlets selling books, magazines, comics etc. in the middle-income neighbourhoods, they found 44 times the number of different titles available to these children. In the schools there were twice the number of books available for children living in the middle-income neighbourhood, four times the number of computers and trained librarians, while there were no trained librarians working in the low-income neighbourhood. However, these researchers noted that resources alone are unlikely to improve achievement. Nevertheless, we would argue that literacy as a socio-cultural phenomenon, develops in settings that provide resources and opportunities for children to become involved with its cultural tools. Differences in these settings are likely to contribute to the considerable variations in patterns of early literacy development.

Descriptive studies of children's early experiences of literacy and literacy learning offer critical insights into the rich and complex processes of their making sense of their world as it is mediated by their experiences with print and other's attitudes towards it (Heath 1983; Purcell-Gates 1996). Nevertheless, even print-rich environments provide fewer opportunities for literacy growth if children do not know how to interact with the print artefacts around them. This is achieved by the modelling and demonstrations provided by surrounding adults.

From a different perspective, Heibert and colleagues (1998) from the Centre for the Improvement of Early Reading Achievement (CIERA) and other reviewers (*eg*. Adams 1990) indicate that powerful predictors of reading achievement are letter-name knowledge and phonemic awareness. However, in order to apply this knowledge in learning to read, children need to understand first the purposes and conventions of reading and writing. Merely teaching letter-name and sound knowledge will not of itself make the difference. Paris and colleagues (2005) make a powerful argument for including language and vocabulary skills, along with narrative reasoning skills from the beginning of any literacy learning program. They argue that constrained skills like letter name and letter sound knowledge may well be necessary precursors to expertise, but that does not make them sufficient enablers for later development. Reported correlations have been misinterpreted to indicate a causal relationship, thereby dictating instructional practices. Here we see a confusion between literacy processes and literacy outcomes. Paris (2005) shows how this conclusion is misplaced and misrepresentative of the true characteristics of early literacy development.

Indeed, predictors of this kind reduce the complexity of children's learning to misleading and meaningless prescriptions for teaching. As Clay observed;

> "children….do not learn about language on any one level of organisation before they manipulate units at a higher level….As children learn to read and write there is a rich intermingling of language learning across levels, which probably accounts in some ways for the fast progress which the best children can make. A simplification achieved by dealing firstly with letters, then words, and finally with groups of words, may be easy for teachers to understand, but children learn on all levels at once." (1975:19).

What children bring with them in learning to read is their skill as users of language. They already know that language makes sense and they have a powerful tacit understanding of the way in which language is structured. They know the syntactic probabilities of their language and giving them opportunities and support to use this knowledge will help them through the early stages towards fluency. Bishop and Adams (1990) argue that phonological proficiency is not the main determinant of reading development, rather it is a result of using these syntactic and semantic abilities which are responsible for the major part of the variation in reading ability. They are here pointing out the role of semantic and syntactic cuing systems which both support and focus the need for the use of grapho-phonemic cues as children learn to read both fluently and accurately.

The complexity of this intermingling of language levels that reinforce and support spoken and written language development, indicate that there will be more than one single route to successful reading achievement (Clay 1998; Konold et al 1999). This will be true for the early years of childhood before school and during the first years of formal schooling. For instance, with struggling readers, teachers may be tempted to postpone the advanced and independent aspects of comprehension skills until 'lower order' skills and strategies such as fluency and accuracy are fully in place. Nothing can be more damaging to the comprehension growth of struggling readers. Indeed, Gray's work (1999) demonstrated clearly that young children and older struggling readers benefit from explicit strategies which reveal the links across levels of language with the meanings embedded in text, benefits also accrue with this style of pedagogy towards increased fluency, accuracy and comprehension of what is being read. This work is empirically verified by the work of Scull (2008) and Paris and Paris (2007).

Much of the confusion in early literacy, particularly with respect to teaching early literacy has been due to the conflicting findings of two research traditions. On the one hand, researchers like Gough and colleagues (eg. Gough & Hillinger 1980) studied what good readers do and through this analysis based their advice for working with novice readers on teaching elements of this process. On the other hand, researchers like Clay (1967) and Raban (1984), for instance, who studied what novice readers do and used this evidence to inform their theory and practice with young children's early literacy development.

**Future Directions:**

Research in the future needs to acknowledge these layers of information and their interrelationships. As Crawford (1995) has pointed out, the clash of paradigms and methodologies with different messages for practice has been unhelpful in the literacy education of our youngest children. For instance, longitudinal research in New Zealand in the 1970s showed a strong relationship between writing in the first year in school and early reading progress (Robinson 1973), whereas in Britain (Raban 1988) and the United States (Juel 1988) longitudinal research showed little relationship between these two activities. Clay (1998: 90) interprets these reports to mean that there are different paths to achievement related to different educational practices in timing, emphasis, and expectations. In NZ, writing forms a significant part of the early reading program, where this has not been the case in the UK or USA. Clay reminds us all that the evidence of research is strengthened by replication studies, and those research communities that can sustain large research and development budgets and activities will provide many confirmations of *their* paths to successful literacy development, while communities with little opportunity for research and replication studies will have little voice in the discourse concerning evidence and whose evidence counts.

What is required is a more detailed understanding of the literacy experiences young children see modelled around them during their preschool years and the ways in which adults involve and include young children in every day literacy events and activities. This needs to be tracked in many different communities in order to target specific support for non-mainstream children and their families. Early childhood teachers need to be trained to understand the different forms that literacy takes in the life experiences of the children they work with, they need to have a clear understanding of the principles of early learning and provide resources appropriately, with interaction styles conducive to supporting young children's increasing interest in literate action for authentic purposes. They need to be given skills that will enable them to support families in their role with respect to their children's literacy development, and they need to recognise their role in relation to untrained colleagues. Also recognising the impact of deliberate and intentional interventions through the everyday flow of preschool experiences will significantly impact the early literacy development of young children as they build conceptual frameworks for understanding later literacy instruction.

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