A Competent Learner

CHAPTER 5
A Competent Learner

A Competent Learner, one of the aspects of the Framework Birth to Three Matters, is concerned with babies’ and young children’s ability to make connections (for example, through the senses) and develop the ability to compare, categorise and classify; to be imaginative and creative; and to be able to use symbols to represent thoughts and language. Babies only a few hours old gaze at patterns which resemble the human face in preference to random patterns. This shows that they are able to distinguish between things, and that they appear to come into the world ‘programmed’ to have preferences for human faces and human beings and movements. They search out patterns. In this way young children learn to discriminate and make connections between different objects and experiences. As connections are made, the child makes increasing sense of the world. As babies explore the world through touch, sight, sound, taste, smell and movement, their sensory and physical explorations affect the patterns that are laid down in the brain. Through repeated experience of people, objects and materials, young children begin to form mental images which lead them to imitate, explore and re-enact as they become imaginative and creative. Creativity, imagination and representation through mark making allow children to share their thoughts, feelings, understandings and identities with others, using drawings, words, movement, music, dance and imaginative play.

Making Connections
During the last two decades, a growing body of evidence about early perceptual ability has forced a change in scientists’ assumptions and understandings about babies. Now, even newborns are thought to have an objective awareness of their surroundings (Bremner 1998).

As we have already stated, when babies first enter the world the things that attract them most are the human voices, faces - the pattern of two eyes, stripes, edges and movement. In particular, between the ages of three and six months, babies show a growing interest in the world around them as they play and above all they are interested in other people. Their eyesight has become more coordinated, so the baby is able to focus on people and objects that are nearer or further away than the earlier short distance which oriented them to being in focus when looking into the face of an adult carrying them. Now a baby will be seen to scan the surroundings and to use fingers and mouth to explore objects. Stern (1974) suggested that at this age babies enjoy being drawn into play by their familiar adults and that the adults come to know just the right level of arousal for the baby – under-stimulation or over-stimulation will both result in non-involvement or curtailing of interest by the
baby – so adults who are responsive adjust their actions in response to babies’ cues. Babies’ preferred games at this stage are repetitious and ritualised, such as tickling a baby’s chest before putting on a clean nappy, the beginnings of intimate family or baby-carer rituals. Winnicott (1971) believed that because the adult adjusts the play according to the baby’s cues, this helps the baby feel to some extent in control of the interaction.

As Trevarthen et al (1998: 185) suggest:

‘Dyadic, emotional and dynamic patterns of communication are shown by infancy research to form the foundations of psychological and cognitive development, social adaptation and personality integration.’

They continue by stressing the adverse impact of a lack of, or disruption to, the ‘fundamental vitality’ of these communications, adding that the expressions and responses of a child with autism are often difficult to ‘read’ because they tend to be idiosyncratic or imperceptible. As Kate Wall (2003) maintains, there are also implications for any child who is experiencing difficulties in communication skills.

It is in early encounters, exploring through movement and the senses, that cognitive development progresses. In fact Papoušek’s research over thirty years ago (reported in Papoušek et al 1987) showed that very young babies enjoyed learning and continued to engage in experiments when the milk which had been their reward no longer satisfied them; the activity had its own intrinsic reward.

In chapter 2 the theories of Piaget and Vygotsky were outlined very briefly and in particular the way in which Piaget’s ideas had been interpreted in ECEC practice was highlighted. In the field of ECEC they have had a major impact and the messages taken from their theories have largely been that the Piagetian model of children’s thinking involved the idea of the ‘child as lone scientist’ and stages in cognitive development. Margaret Donaldson (1978) and the Post-Piagetians (for example, Hughes, McGarrigle and others) demonstrated how Piaget’s theory had been misunderstood and misapplied, and that their revisions ensured that the context in which children developed their understandings was crucial. They showed how young children’s understanding is contingent – related to what they experience and know – and that it is up to the adults who are educating them to help them (usually later in life) understand how to apply those understandings to thinking about other unfamiliar contexts. Research by Tizard and Hughes (1984) and Gelman and Gallistel (1978) was seminal in drawing attention to the ways in which children found tasks incomprehensible in nursery and school, which they could have solved in their homes because the tasks would have been meaningful and relevant. Among others, Gopnik et al (1999) have further shown that babies and young children arrive in ECEC settings already knowing a great deal and they use this knowledge to learn more, but they
need other people to help them. Parents and practitioners can provide that help — and sometimes other children do too — in indirect as well as direct ways. For example, by hanging a mobile over a cot or giving a baby a rattle which they have enjoyed together previously, to explore sound, feel and taste, independently.

Meanwhile Vygotsky’s theory has been seen in terms of an emphasis on learning as social, the ‘young child as apprentice’ model, and his notion of the ‘zone of proximal development’ — meaning adults responsible for a child’s learning would need to observe and assess both what the child knows and can do and what that child is striving to learn. The adult is then to plan how to help that child engage in appropriate activity which will both interest the child and help the child achieve the next step in the process of learning relevant to the topic in hand. Another important idea which links with Vygotsky’s work is that of ‘scaffolding’. Bruner (1977) suggested that when an adult or more knowledgeable other child ensures manageable steps, support and encouragement for a child trying to do or to learn something new, they are scaffolding the learning.

Meadows (1993) provides an overview and critique of Piaget’s and Vygotsky’s theories and research on children’s thinking in which she points out the flaws but also highlights the tremendous achievements of these two researchers. As we pointed out in chapter 1 however, it is important to remember that both were from ‘Northern’/Minority World countries and even theorising is subject to cultural assumptions. Perhaps one of the most important ideas that should be taken from their research and theories is the key point that babies and young children are active learners. They are not simply vessels waiting to be filled up with knowledge. This response to learning has formed the basis for many of the intervention programmes devised for children with special needs, particularly in the USA, for example, the Direct Instruction programme developed by Bereiter and Engelmann in the 1960s, which still has echoes today. Such approaches do not take into account the rich, natural, experiences available to children who are included within a mainstream setting.

During these first years they are actively trying to make sense of the worlds in which they find themselves. As Donaldson (1978: 111) comments after reviewing earlier research on babies ‘we may conclude that there exists a fundamental human urge to make sense of the world and bring it under deliberate control.’

Gopnik et al (1999) stress how babies and young children approach the world as if they are scientists, actively engaged in looking for patterns in what is going on around them, testing hypotheses, seeking explanations and formulating new theories. They suggest that two year olds in particular have a drive to find out how people and their familiar world ‘work’. They argue that,
like scientists, getting to the ‘truth’ about something is a passion for young children, but sometimes that passion makes them sacrifice happiness in the home (Gopnik et al. 1999).

Gopnik and her colleagues go on to suggest that babies play imitation games to try to understand other people, babble to ‘try on’ language; and play games like peekaboo and hide and seek to find out about objects and how people see them.

The research reported by specialist ECEC researchers such as Athey (1990), Bruce and Meggitt (2002), Matthews (2002), Davies (2002), Nutbrown (1994), and Whalley et al. (2000), has provided practitioners with powerful information, which they have used to explore young children’s schemas – early patterns of behaviour indicating that a child is working at a systematic investigation (see chapter 2 for further information about schemas). As Nutbrown (1994: 11) comments:

‘Early patterns of behaviour seen in babies become more complex and more numerous, eventually becoming grouped together so that babies and young children do not perform single isolated behaviours but co-ordinate their actions. Toddlers work hard, collecting a pile of objects in the lap of their carer, walking to and fro, bringing one object at a time. They are working on a pattern of behaviour that has a consistent thread running through it...related to the consistent back-and-forth movement. The early schemas of babies form the basis of the patterns of behaviour which children show between the ages of 2 and 5 years, and these in turn become established foundations for learning.’

**Egocentricity**

Piaget (1962) argued that young children are egocentric, that they can only see the world from their own point of view. They assume that everyone thinks as they do. Gopnik et al. (1999) describe an ingenious experiment in which they showed that children roughly younger than 18 months could not see another’s viewpoint, by providing bowls of broccoli and biscuits. When they asked a child under 18 months to give them broccoli, saying they liked it better than biscuits, the infants still gave them biscuits, because that is what the children themselves preferred. The children older than 18 months however, gave them broccoli even when they had expressed a preference for biscuits. Gopnik and her colleagues suggest that at about this age a child’s brain is actually reprogramming itself to recognise this new understanding about other minds. So although babies seem to be able to empathise by crying when other babies cry, it may be that they are emotionally tuned in to other people – both adults and children – but do not yet understand other viewpoints. Despite this, Bruner (1983) has pointed out that in observations of two babies, begun when they were three and five months old respectively, they began pointing (see chapter 4) at just over nine months and at thirteen months. He argued that pointing indicates an understanding of other minds,
and of trying to share what is ‘in one’s own mind’. To Bruner, their behaviour even before they began pointing signalled that babies are ‘Naïve Realists’, they believe there is a world of objects and that others experience the same world they do. Making connections about the world, about what things are and their significance in one’s culture, is important, but being able to appreciate that others’ minds may ‘hold different perceptions and thoughts from one's own’ is a major step.

**Memory and cognitive development**

Although some recent experiments show that even young babies can remember what happened in the past and can predict (see for example Wynn’s 1992 experiment on babies counting toy ducks which ‘disappear’), their memory abilities clearly develop rapidly between eight months and a year (see also chapter 6). This is displayed by their fear of strangers during this phase, where earlier they would have smiled.

Memory plays an important role in understanding the world and in being able to think. When a toy is hidden under a cloth a baby under about 8 months will not search for it. Gopnik et al (1999) argue that babies live in a ‘magic’ world where things can just vanish. Later, the baby will search for the hidden toy, realising that it still exists somewhere. This phenomenon is called *object permanence*. Similarly, when a baby recognises that people do not simply vanish, this is known as *person permanence*. It is thought therefore that during the last part of their first year babies are able to internally represent – or think about – people or objects that are familiar to them. As memory develops during the second and third year of life, children become able to engage in the construction of narratives about themselves, their families and things that interest them. These narratives help them develop their sense of self and self-regulation (see chapter 3), relate to past experiences and project into the future. These activities indicate a child’s level of thinking as we will see in the next section.

**Language and thought**

Vygotsky (1978: 24) suggested that ‘the most significant moment in the course of intellectual development, which gives birth to the purely human forms of practical and abstract intelligence, occurs when speech and practical activity, two previously completely independent lines of development, converge.’ Vygotsky believed that although language may begin in social interactions, its use as a method of reflection means it is a tool of complex thinking. According to Nelson, K. (1999), Bakhtin’s idea of multi-voicedness may be useful in understanding young children – for multi-voicedness means that a parent's or carer's ‘voice’ may ‘infect’ the mind, so influencing the child without this being realised. Nelson adds that narrative has now been recognised as linking human thought and language, and that what dramatists do is to emphasise the psychological processes involved in the construction of a story-line or plot. Even three year olds need to be able to weave their
understanding of action, intentions, motives, emotions, other minds, and so on, in order to engage in ‘storying’ (dramatic play) (Nelson 1999). (See chapters 2 and 6 for the emphasis on narrative by lead figures such as Bruner, Feldman, and Siegel). The research indicates that language development facilitates cognitive development, but equally, cognitive development fosters language development.

Jean Mandler (1999) has explored the fact that babies do not wait until the onset of language to start thinking. She states that the more she researches cognition in the first year of life, the more she is convinced that many of the most basic foundations on which adult concepts rest are laid down during this period. Mandler (1999) suggests that babies can form categories, because, for example, babies respond to dolls in a different way from how they respond to humans; and they can pick up the property of motion. Mandler concludes that language is mapped onto a meaning system. According to Bruce this means that ‘it is developing a meaning system that will lead a toddler into increasingly more complex layerings in play’ (Bruce 2001: 43).

Talk with other familiar people is an essential component of cognitive development. Researchers of private speech tentatively suggest (because much of their research is small scale) that pretend play with a caring adult during the second year of life may form a basis for the private speech that is used to solve problems and for self-regulation in young children (Smolucha 1991).

Practitioners should be alerted therefore to the fact that, as we pointed out in chapter 3, depressed mothers were found to talk less frequently with their babies if they were boys. Further, this was found to correlate with the infants' delayed cognitive development, compared with that of young daughters of both mothers who were depressed and those who were not, and the young sons whose mothers were not depressed (Hirose and Barnard 1997).

**The importance of social interactions and cognitive development for making connections**

Social interactions with their mothers and reliance on them during emotional challenges at six to nine months have been linked with cognitive and language skills at age two years (Robinson and Acevedo 2001). Children who had shown low reliance on their mothers when distressed and whose mothers had low psychological resources had less well developed language and cognitive skills than those whose responses displayed high emotional reactivity and who relied heavily on their mothers for support and social referencing. Further, Murray and Cooper (1997) discuss the growing body of evidence indicating that postnatal depression is implicated in a range of adverse outcomes for babies, especially males, impacting on their cognitive and emotional development. Emphasis on the importance of early, supportive interactions between babies and the adults ‘mothering’ them and
the impact on cognitive abilities, is also found in Wijnroks’s (1998) research. Where mothers were able to maintain the attention of their babies in interactions, whether the babies were pre-term or full-term, the better the outcome for the babies’ cognitive development (Smith et al 1996).

Bornstein (1998: 301) reported on research concerned with the way ‘Mental growth in the human child consists of the increasing coordination of mind and reality.’ To do this he looked at ‘habituation’ – the way in which babies are at first interested, then become bored with, and lose interest in, objects they are shown several times. An important finding from this research related to babies who had been exposed to cocaine in utero. At first it was assumed that the problems such children had on entering school were the result of long-term damage from the drugs. However, Bornstein’s work indicates that, while the children may well be experiencing difficult lives through continuing risky behaviour in their parents, the drug-exposed babies were not necessarily disadvantaged in their information processing abilities per se. They were suffering from an arousal regulation problem, often crying in response to novel stimulation where the drug-free babies were interested and positive.

Teasing of toddlers by fathers is more prevalent than by mothers, according to research by Labrell (1994). Such interactions introduce novelty and ambiguity, which challenge and often delight young children. However, interactions resulting in arousal mean that the adults involved need to be sensitive to levels with which their children are comfortable.

Equally, as children interact more with siblings and peers, they will be in situations where conflicts may arise. Several researchers (for example Gopnik et al 1999; Light 1983) discuss how conflict can act as a spur to cognitive development. This idea was also put forward by Piaget (1932), particularly in relation to moral development.

In research in French daycare centres, Sylvie Rayna (2001) found that very young children (less than two years old) were displaying the notion of a ‘community of learners’. In one example, a seven month old baby had tried to copy the action of an older child who had inserted a straw into a tube. Rayna discusses her observations as examples of the cognitive dimension of togetherness, usually noted between mothers and infants, but in this case noted among children themselves. She links her work to Piagetian constructivism (the child as active constructor of knowledge through experience and not as an ‘empty vessel’).

Being imaginative

Play and cognitive development

In 1972 Bruner’s article ‘The nature and uses of immaturity’ was published. In this article he argued that the young of animals play to learn and that the
capacity for learning is related to the length of immaturity. Bruner added that play involves flexibility of thought. Corinne Hutt (1966), building on the work of Piaget, suggested that when children explore, it is as if they are asking the question ‘What does this do?’ and when they have discovered some of the properties of whatever they are interested in, they play as if they are asking the question ‘What can I do with this?’ Research with school age children (Bruner et al 1976) suggests that when they have had opportunities to play (explore and experiment freely) with materials, they are better able to solve tasks using those materials later. Although play with babies may be initiated by a familiar adult, once they have had some experience babies will begin playing spontaneously – this spontaneity is an essential characteristic of play. The other key aspect is that it is the baby, or child, who is in control and any adult involved needs to follow that lead. Stern’s (1977) research showed that parents who behave as if their interactions with their babies are a ‘dance’ in which the baby takes the lead are those who most effectively foster their children’s development and learning.

In the very early years young children are playing to find out about the materials and people – the world - they find around them. Young babies will repeat the same action – for example, throwing a toy down on the floor when in a high chair, so an adult or another, older child will retrieve it – or enjoying a hiding game when they are beginning to understand object permanence (coming to know that even when out of sight, an object or a person still exists).

Goldschmeid’s (1986) video Infants at Work showed the play and social interactions between very young babies, as they share the contents of a treasure basket, with caring adults nearby to give reassurance. Bruce (2001: 46) stresses that

‘Children at play are able to stay flexible, respond to events and changing situations, be sensitive to people, to adapt, think on their feet, and keep altering what they do in a fast-moving scene. When the process of play is rich, it can lead children into creating rich products in their stories, paintings, dances, music making, drawings, sculptures and constructions, or in the solving of scientific and mathematical problems.’

Some learning in young children occurs through imitation. They will try to do what their carer does, sometimes after a time lapse, which indicates how memory is assisting that learning. But usually that ‘imitation’ is actually a reconstruction – the child’s own version of what s/he has observed and noted, constructed and transformed – in just the same way a painter like Picasso would transform experiences, ideas, feelings and perceptions into a work of art. Bruce (2001) provides a detailed overview of learning through play in the years before six, commenting that during the toddler years children begin to
rehearse roles, pretend and create play props, as their ability to imagine accelerates rapidly, along with language and play with symbols.

Meanings are made, not merely dispatched and consumed, as Meek argues, ‘The most strenuous period of imaginative activity is that time in childhood when we play with the boundaries of our view of the world: sense and nonsense, the real and the fictive, the actual and the possible, all within the cultural domain we inhabit.’ (Meek 1985: 53)

Observing children when they play in familiar surroundings is not only enjoyable, it is essential, because it is during play that children are relaxed enough to ‘perform’ in ways which demonstrate the amazing extent of what they know and can do (see Lindon 2001). MacNaughton and Williams (1998) and Bruce (1996a) provide valuable insights into the ways in which adults can teach very young children, fostering learning through play and the kinds of meaningful activities in which they become engrossed.

**Being Creative**

Robinson, and others, claim that creativity is in crisis (Robinson 2001) as instruction and information giving and gathering overwhelm the time available for nurturing and valuing different intelligences and ways of being and belonging.

Yet the curiosity of very young children and their ability to take risks in discovery provide a firm basis on which creativity can be developed. By about eight months of age, when children can move reasonably independently, away from the familiar landscapes of the adult faces who entertain and communicate with them, children will range independently around their home landscape, seek out and explore objects constantly. Anything reachable can be turned into a plaything. Many parents are familiar with the idea that, in this, the child’s research, places such as kitchen cupboards become play sites (Pierce 2000). Such exploration satisfies curiosity but it is also helping the child develop perceptual and spatial awareness. Again, the restricted ability to move and to explore of their own accord, experienced by children with cerebral palsy or those not motivated to move like some children with Down’s syndrome, means that these children will not develop perceptual and spatial awareness as effectively as other children.

In Kate Pahl’s longitudinal research study of young boys’ meaning making activities in their homes, she found that children often drew on the ‘cultural capital’ available to them at home, including games played, televisual texts, Supermario, the home site: spaces and artefacts as well as stories heard, etc, (Pahl 2001:120) in order to enrich their meaning constructions and transformations. Commercially produced toys are seldom used in isolation for creative purposes and sometimes their use can be counter productive,
particularly if directed by adults. In Pridham et al’s (2000) research project, investigating the optimum conditions for children’s focused exploration of toys, they found that a care-giver’s ‘attention-directing behaviour had a negative effect on infant exploration of toys. The more a mother directed and consequently, refocused her infant’s attention, the less focused exploration of toys the infant did’ (Pridham et al 2000:1445). More often, play, storying and creative acts appeared to take place in the co-constructed worlds of adults and children and Pierce discovered through her observations the significance of ‘dyadic interplay between the occupations of the mother and those of the infant and toddler’. She found too that the mothers in her study ‘supported and shaped infant and toddler play in the home through their management of home space and its play objects’ (Pierce 2000: 297). It is, as Meek suggests, the affective nature of play, the exploration of alternate worlds, the ‘rituals of story play’ that serve as cultural reference points in the development of what children see as real and not real (Meek 1985: 49). (Note again here the involvement of shared, co-constructed rituals and narratives, shaped by the children with adult support and encouragement, reiterating the ‘messages’ in the section on language and thought earlier in this chapter.)

It is Malaguzzi, in discussing the philosophy of Reggio Emilia, who describes the nature of children and creativity from his work and observations:

‘They have the privilege of not being excessively attached to their own ideas, which they construct and reinvent continuously. They are apt to explore, make discoveries, change their points of view and fall in love with forms and meanings that transform themselves.’ (Edwards et al 1998:75)

Malaguzzi’s belief is that ‘creativity requires that the school of knowing finds connections with the school of expressing, opening the doors to the hundred languages of children’ (Edwards et al 1998: 77).

Through the use of language and literature, and playful encounters with both, parents and carers are able to show young children the nature of what is possible. Robinson claims that creativity is actually a process whereby one sees new possibilities and that a feel for the materials and processes involved, as well as using one’s intuition, is vital (Robinson 2001). The emphasis in the discussion of creativity in young children is on process rather than production and the exploratory and affective nature of children in determining their play spaces and contexts is, by definition, creative. If, as Robinson claims, creative processes find their roots in imaginative thought, in transformation, and in conceiving of new possibilities, then the child ranging through kitchen cupboards and using saucepans and kitchen utensils as percussion instruments is engaging in creative acts.

‘Where there are high quality opportunities for babies and toddlers to create and imagine… the key person is attentive to a child’s creative explorations, providing assistance in a way that does not disrupt the
child’s flow of thinking and through their unobtrusive support gives the child the emotional security to experiment.’
(Manning-Morton and Thorp 2001: section 7: 3).

Although, most frequently, creativity is seen in childhood as taking part in a cooperative and co-constructed world (Meek 1985, Dyson 2001), the very young child can be regarded as being creative when engaging in a monologue while pushing a toy train, or while simply digging sand. Similarly, Weir’s pre-sleep monologues, the noise production of a single child exploring clanking resources or a song or rhyme constructed playing with sounds or words are examples of children’s creativity. Anna Craft maintains that ‘creativity is dispositional and not a matter of ability... choosing a creative path in any given situation is less a matter of ability to do so and more about “mind set” or attitude’ (Craft 2000: 107) and, without the constraints perceived or collected as children grow and mingle in critical groups, young children in emotionally safe contexts are able to follow an exploratory and risk taking mind set.

Of course, as Chambers reminds us, it is ‘in literature that we find the best expression of the human imagination and the most useful means by which we come to grips with ideas about ourselves and what we are’ (Chambers 1993:16) and children need not only to construct and reconstruct their lived lives in playful contexts, but also to find their lives mirrored or referenced in the texts encountered in their early years, although there are still very few story books which include young children with disabilities as central, powerful characters.

There has been much celebration of Maurice Sendak’s (1970) story of Where the Wild Things Are (Meek 1998) simply for this reason; children are able to find their own relationships and temperment in Max as well as their own sense of safety and well-being in the delicious closure to the tale, back in his very own room. Such texts are reassuring but also risky and challenging and they dare to play with safe contexts and upend them, exactly as children do through play and role play.

Robinson (2001) believes that at the heart of the creative process lies the relationship between knowing and feeling. This relationship brings together the investigative, information gathering explorations of babies and young children and the affective nature of the world of they inhabit in safe, shared contexts. What artists do is to take what we know or see, feel or hear, and actively experiment (Gopnik et al 1999), transforming that knowledge through their creations - and babies and children do this too. As Bruce (2001: 4) suggests:-

The imagination makes images in the mind. Creativity is the process by which children turn these images into creations. They try out ideas, feelings and relationships in their role play or pretend play or find
things to be used as play props. ...In the context of play, creativity is
more of a process than a product.’

Representing
‘Children want to write... They mark up walls, pavements newspapers
with crayons, chalk, pens or pencils ... Anything that makes a mark.
The child’s marks say, “I am”.’ (Graves 1983: 3)

Babies’ fingers and hands, as we have seen, are used to feel, to touch, to
explore, to point, to reach and then to wave or gesture. In their movements,
cruising and explorations, materials with which to make marks are often
accidentally found, tested and enjoyed. For example, as soon as solid food
and drink is introduced, babies can be seen to pour drinks onto surfaces and
trail their fingers through it and dip fingers into food, not only to use their
fingers as tools for feeding but also to trace pathways and investigate trails
and tracks. Physical traces of babies and young children are often to be
found, before the use of pens, pencils, crayon and paint, on surfaces, walls
and fabrics and before the symbolic nature of mark making that we know as
literacy is discovered. What is happening, however, is that very young
children soon discover intentionality, that is the desire to make a mark, to
‘signify’ and to produce an effect. The pleasurable effect of such tactile
events is also felt by adults, as they too trail fingers in sand, tracing patterns
or shapes, or indeed doodle or idle with pens or pencils, letting minds wander
and allowing often non-representational shapes to develop. Making marks,
‘leaving my mark’, has often been described as a basic human desire and
function, leaving signposts or signifiers of our existence. This intentionality in
mark making parallels intentionality in their other forms of communication, as
a predictor of language development (Laakso et al 1999).

Parents and carers are often quick to seize on such marks made by infants
and interpret them as having significance although, while such marks are
clearly important, imposing representational significance at this stage would
be incorrect. However, in western societies, children are growing and
learning in print rich and print significant cultures and very quickly young
children become encultured into sign making activities. Also, as children
begin to develop an ability to conceptualise the abstract nature of language,
the next stage, Vygotsky’s ‘second order symbolism’ (1978), begins to take
shape. As Kress explains, ‘alphabetic cultures demand that children change
tack from their route which relates voice with image, which is plausible to
them, to the route of the alphabet, which relates sound with image (the image
of a letter) which is not plausible to them’ (Kress 2000:69).

Indeed, at this stage, during their first years of life, young children are busy
making sense of their world, interpreting sounds, language, intonation and
voice and establishing strong bonds and relationships with family and carers.
It is in this context that the representation of this world becomes possible with
all the cultural tools available to them (Pahl 1999; Kress 2000). That is, children will happily represent their world with toys, artefacts and available materials, in a multi-modal sense as well as with pen and paper, still through play, as they place-hold, or fix in time sounds, objects, events or people (Barrs 1988, Pahl 1999). At this stage, Kress argues, ‘drawing the world and writing the world are much the same thing for a child; both are recordings, transcriptions, translations, ‘spellings’ of aspects of the world of the child’. (Kress 2000: 69).

Beanie (then 2) wanted to play at being in a café. Her Mum and Nan were told to be customers but when Mum was asked what she would like by the waitress (Beanie), she asked for a menu. For a moment Beanie thought, then decided she would go to another room to fetch a book. Nan gave her a piece of paper, folded, instead. Without any prompting, she went to a table where there were pens and began to mark across the paper, each line a different set of shapes or loops. She had created a menu, which became part of the shared ritual of café play lasting many months and becoming more elaborate with each enactment.

‘Children need to represent their experiences, their feelings, and ideas if they are to preserve them and share them with others. When we represent we make an object or symbol stand for something else’ Duffy (1998: 9).

Before any evidence of alphabetic print emerges, children engage in mark making to represent immediate occurrences, for example ‘two to three year olds may represent the movements of clouds and water; the wind blowing the washing; washing one’s hands; combing one’s hair; bubbles rising to the surface of water; dinosaurs bleeding to death; the actions of walking along, tripping over and falling over into a dustbin; or even simply the act of sitting down.’ (Matthews 1998 :94). Such ‘action representations’, claims Matthews, are formed from observations, then interpreted and represented, often in ways that appear not to be representational or meaningful to adults. It is interesting that when children are engaged in such mark making activities, speech almost always accompanies the process, establishing Vygotsky’s notion that ‘inner speech’ becomes the director of language and action, ‘bringing awareness to speech’ (Vygotsky 1986:183). So, circular marks on the page may be the wheel ‘going round and round’ or a firework shape, and such drawing will often be accompanied by onomatopoeic sounds, shrieks and explosions.

Eliot (at two and a half) was at home chalking on a blackboard and narrating a tale of a donkey who ran away from a horrible, cruel person – he traced swirls as he told of the donkey’s wanderings and finally brought his drawing to the centre of the board when the donkey found shelter and happiness with a little boy and girl. The staff at his nursery, when told of this storying,
explained that they had read a tale to the children about a donkey who had a cruel owner and who ran away.

As well as signifying objects and events through making marks to symbolise them and fix them in time and space, children are also often encouraged at this stage to be involved in writing acts in different genres that are socially and culturally significant, for example signing birthday cards, mimicking shopping lists and writing notes. Their name, and the letters from their name, become the focus at this stage for much of the writing as well as a range of other circular and stroke-like shapes that young children perceive to be the nature of adult writing. It is interesting that very young children have been observed to make marks which reflect the written language of their culture at this stage with, for example, children from some majority world cultures making marks from right to left, or top to bottom, using dots, pictures and other symbols, some of their own invention, to represent and make meaning. They are drawing on all available cultural capital to create such scripts and ‘the decisions which children make in reading and writing... are not only organised but are laced with both personal and social organisation. This interplay between personal and social organisation in the evolution of literacy is universal’ (Harste et al 1984: 107). Thus, individual children can be seen to represent, in their representations, whichever society, community and culture to which they belong.

It is important to acknowledge the crucial part that the context, a writing environment which is accepting, emotionally positive and in which there are appropriate resources, plays in children’s developing understandings of the codes, symbols and signs that determine effective print communication. Such contexts, determined and defined by parents and carers, as well as accompanying interactions, form the basis of the affective nature of the experience. Because a child must ‘disengage himself from the sensory aspect of speech and replace words by images of worlds....which lack the musical, expressive, intonational qualities of oral speech’ (Vygotsky 1986: 181), then, whether or not there is any sense of emotional engagement by and with adults will affect whether or not children wish to repeat the process or event.

For many adults and care-givers, such pleasurable interactions are natural. Indeed, when Campbell recorded a day in the literacy life of his three years old granddaughter, he found that she was naturally, intentionally, playfully and cooperatively engaged in oral and written literacy events throughout the day. Further, Alice orchestrated these activities with everyday rituals and routines, such as meal times, and the events were almost exclusively initiated and led by the child (Campbell 1998). However, with parents and practitioners currently feeling pressurised into engaging young children in functional literacy at a very young age, it is important to remember that at this age children will attend most voraciously to what interests them. The
experiences, memories and interaction in which young children are engaged are constantly being revisited, refined and consolidated with both concrete and abstract connections being made between objects, events, people and interactions. It is in this everyday, social context in which young children’s development occurs that literacy can also emerge and grow. It is this idea of ‘literacy and literate outcomes as processes to be experienced, to be placed in relation to other literacy events and practices rather than seen as unchanging objects of study or unquestioning reverence’ (Bearne 1995: 4). Also, because the beliefs that we hold as adults, parents and carers, affect what child behaviours we value and encourage (Harste et al 1984), it seems important to develop and give status to opportunities and resources in safe and meaningful contexts for children to explore, imitate and reconstruct the sign systems which will influence and shape their lives, within their own and others’ cultures. Indeed, as Matthews claims, ‘what we represent, the forms this representation may take, and how far societies support the growth of representational and expressive thought, are pedagogical, social and political issues’ (Matthews 1998: 105).

What children ‘represent’ will be influenced by the material nature of their surroundings (including the voices and exchanges they witness) and the significance given to such materials by family and community. Bruner takes the view that ‘human mental activity depends for its full expression upon being linked to a cultural tool kit’ (Bruner 1986:15) and Kress reminds us that ‘as children are drawn into culture, ‘what is to hand’, becomes more and more that which the culture values and therefore makes readily available’ (Kress 1997:13). Allowing children the freedom to explore, express, denote and communicate through mark making in a supported environment that values talk and interaction will ensure that early mark making feeds into developing literate practices (David et al 2000).

Developing effective oral and written skills of communication and engaging affectively with such practices are both crucial to young learners as ‘language has to interpret the whole of our experience … with the child carving out for himself a route that reflects the particular circumstances of his own individual history and experience’ (Halliday 1978: 21).

As children experiment, take risks and make marks that ‘stand for things in the world’ (Kress 2000:6), within a literacy rich environment, including newspapers, cereal packets, signs, notices, advertisements, printed tee shirts as well as screen literacy, with adults who care and interact in supporting and challenging manner, then they will emerge as literacy users themselves. However, this is not a tidy process - such as underwriting or copying may seem to be. It is necessary to ‘live with the litter of literacy’ (Harste et al 1984:140), as those who have documented their own and other children’s literacy development will confirm (eg Bissex 1980, Pahl 1999). They suggest this involves signs, notices, scraps of paper establishing identity and
relationships, and offering persuasion, as well as maps, constructions and artefacts. However, the lasting effects of this temporary state are that young children develop as makers and users of the symbolic code in meaningful ways, learning of the power and influence that communication acts involving writing can wield.

**Links with the Framework**
The *Development Matters* points for this Aspect, *A Competent Learner*, in the Framework pack *Birth to Three Matters* are as follows:-

**Making Connections**
- Young babies use movement and sensory exploration to connect with their immediate environment.
- As they become more mobile babies connect with toys, objects and a wider group of people.
- Young children learn through repeating patterns of play (sometimes called schema).
- Children begin to connect objects and ideas: a *pair* of socks, a *big* teddy, armbands *for* swimming.

**Being Imaginative**
- Young babies enjoy and learn by imitating their key person.
- As they become mobile, babies use their whole bodies to recreate an experience.
- Young children re-enact familiar scenes with the help of people, props and resources.
- Children engage in concentrated play in which they extend their language and try out ideas, feelings, relationships and movements.

**Being Creative**
- Young babies explore their immediate environment of people, objects and feelings through all their senses.
- Babies quickly make sense of and respond to what they see, hear, feel, touch and smell.
- As young children become more mobile, they express themselves through physical action and sound.
- As children become more skilful in using language and other forms of communication, dance, music, 2D and 3D art, they talk about, and share in other ways, the things they paint, draw and play with.

**Representing Through Mark Making**
- Young babies discover mark making by chance, noticing for instance that fingers trailed through spilt juice can extend it or that a hand imprint remains in wet sand.
- Babies imitate and improvise actions they have observed - a scarf is made to stand for a blanket or a skipping rope handle for a microphone.
- As young children explore tools and materials they make marks to which they give meaning.
- Children begin to recognise some marks and realise these mean something to others.
Parents and practitioners can observe babies and young children engaging in the behaviour outlined in the lists above and reflect on the research information provided in the different sections of the chapter, which demonstrates the amazing competence, scientific exploration and ‘sense making’ capacity of these very young people.

Summary of key ‘messages’
This chapter has reviewed research about children’s incredible competence in learning – from birth (begun even before then, in the womb). The most important ‘messages’ from this research are:-

- Babies seem to be tuned to learn from, with and about, firstly the people and the cultural environment around them, followed by the material environment - they come into the world primed to be curious, competent learners
- Play, in which the baby or child takes the lead and makes choices, is a process which fosters cognitive development
- Children ‘make sense’ of and ‘transform’ knowledge, experiences and events through imaginative and creative activity
- Language and thought are developmentally linked; they each depend on and also promote the development of the other
- Children's developing memories and use of narrative help them make sense of their lives
- They want to share and express their ideas playfully through the ‘hundred languages of children’ (for example, dancing, singing, talking, ‘storying’, music making, painting, making patterns, building, model-making, ‘animating’ puppets and other toys, dressing up, gardening, looking after animals, drawing, mark making – to list but a few possibilities)
- Once again, the research points to the centrality of positive relationships with parents and other key people in young children's lives.