

How Children Learn



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3

THINKING AND LEARNING IN THE EARLY YEARS

This chapter aims to:

- examine learning and early brain development
- explore how young learners develop
- examine the relationship between learning and play
- emphasize the importance of language in learning
- highlight early interventions and recent Early Years initiatives in the UK.



INTRODUCTION

It is really only in the past decades that we have begun to more fully understand the nature of thinking and learning in young children. As theorists and philosophers have added to our understanding of child development, so have researchers and practitioners also contributed to the accumulation of knowledge, in particular the learning behaviours of children in informal and formal educational settings (Beckley, 2012; Moyles et al., 2011). New methods of exploring learning have increasingly been taken on board as researchers engage in seeking to understand how children think and how their thinking links to learning. In fact, it would be accepted by most researchers and practitioners working in the field of education that our understanding of how children think and learn has increased dramatically within the last three or four decades. This has led, in many cases, to significant changes in practice and in how childhood is perceived and understood. Whilst significant advances have been made in our understanding, it is, nevertheless, important to recognize that much debate continues as to how children think, how they learn and, perhaps most controversially of all, how they are taught.

This chapter begins by focusing on the part that the brain plays in learning during the early years. The importance of play and how it underpins learning, especially in the early years is then explored before the chapter examines key aspects that are

central to developing young learners. Then a number of recent initiatives in the UK in the field of Early Years education are explored before looking at our emerging understanding of the importance of understanding learning and thinking in relation to problem solving.

LEARNING AND EARLY BRAIN DEVELOPMENT

It is surprising how few books written on the subjects of learning and teaching contain any substantial references to the brain and yet this is the organ within all individuals that controls, regulates and drives learning. It is also surprising how few practitioners involved in the teaching of children have any real understanding of how the workings of the brain contribute to learning.

Central to our appreciation of early brain development is our need to understand the important role that neurons play, for it is through these that information passes in the form of electrical impulses. Estimations of the number of neurons in the brain are agreed to be in the region of many billions. It is during the development of the foetus prior to birth that neurons are formed and go on to form different parts of the brain. In doing so, they react and establish responses to different chemicals. This process begins with the more primitive areas of the brain such as the brainstem where the autonomic functions necessary for bodily development lie.

At birth these functions have become relatively well developed and, because of this, newly born infants have the capacity to take in nourishment such as their mother's milk by sucking, breathing and sleeping, hearing and generally experiencing sensations around them such as touch. Following birth it is now the turn of the 'more advanced' areas of the brain to develop, for instance the cerebral cortex, which deals with higher order functioning such as the development of language, thinking, emotions, and so on. Of particular note is the fact that it is during the period following birth and during the early years that most brain development takes place. It is also important to note that the different areas of the brain develop their own functions and do so through chemical agents such as hormones and neurotransmitters.

Following birth, infants continue their learning at an accelerating pace, which involves the strengthening of connections between neurons. Neurons do not make direct contact with each other but, instead, have tiny spaces or gaps, which are known as *synapses* and it is across these that the impulses travel. As this occurs chemicals are released, which are known as transmitter substances. When a transmitter substance crosses to another neuron then it is destroyed. Hardy and Heyes (1994, pp. 262-3) have commented as follows:

All messages in the nervous system are carried in the form of nerve impulses, but their interpretation depends upon which part of the brain receives the message: in one part an impulse might be interpreted as a spot of light, in another as a sound ... Many of the so-called 'nerve gases' produced for warfare work by preventing the destruction of the transmitter molecules; death results from the continual excitation of many neurons which causes prolonged contraction of all of the muscles of the body.

Synapses are, however, developed at quite an extraordinary rate following birth and during the early years of development, so it is no wonder that researchers and practitioners have recognized the importance of stimulating learning in these first months and years. Indeed, it is generally agreed that the cerebral cortex of an infant may construct well over a million synapses every second. Whilst many of these synapses become established many do not and are abandoned by the infant. This process continues throughout the lives of individuals though by adolescence some 50 per cent of synapses have been shed. Indeed, it has become increasingly recognized that the brain works on the principle of use it or lose it, with connections between neurons being lost if not used. In this way the connections between neurons that are used become more durable. However, as infants grow they also shed connections that are not being used and it is as this process develops that the child constructs stronger pathways, which in a sense, results in the brain becoming organized.

With advances in our understanding of the structure and functioning of the brain, particularly in the field of neuroscience, we are coming to better appreciate how the development of brains in young children interfaces with their environments and how this complex and necessary interaction affects and impacts upon learning and thinking. The importance of the genetic make-up that a child inherits, therefore, and the experiences the child has in their environments is now much better understood than even a decade ago. We know, for example, that the quality of the relationships that children have with their primary caregivers is very important when considering early brain development.

It is during those first years and even prior to birth that important connections are made and strengthened. The more that young children engage in activities such as play, movement, language, and so on, the stronger these connections will become. For this reason, the experiences they have take on significant importance. Take, for example, the case of a very young child during the pre-school years who is read to every night after being put to bed and spoken to in a soft, affirming and loving way. This child will form connections within their brain that are very different to the child who is allowed to stay up late and watch television and who communicates with their parents mainly in monosyllabic terms and shouting. Equally, if the first child is given lots of opportunities to engage in physical play and exercise

then he will develop stronger sensorimotor connections than the second child who may spend many hours watching television and sitting on a chair.

As we have seen in the previous chapter, theorists have for some time recognized the importance of young children interacting meaningfully and purposefully with their environment and its being central to their learning and cognitive development. The more that young children interact with their environments in this way then the stronger the connections in the brain will be and the more secure the foundations will be for future learning. This is especially the case in regard to language development. Once again, let us take the earlier example of the first child whose parents employed richer vocabulary when talking with him and when explaining facts, their own wishes and desires, and so on. This child will develop much stronger, and qualitatively different, semantic networks than the second child whose parents offered little in the way of vocabulary extension.

A further process that is a feature of brain development is 'myelination'. This is where a 'fatty' substance known as myelin acts as an insulator and allows for the transmission of impulses across synapses. The experiences, and degree of stimulation, that infants and very young children have in these first vital years can affect the development of myelination and, therefore, future learning. By the time children have reached the age whereby they can attend preschool their brains are almost fully grown in size.

It is an interesting feature of brain development that infants and young children can adapt successfully to their environments. Readers might imagine the ways in which infants born into extremely cold or extremely hot environments quickly and naturally adapt. This said, it needs to be recognized that, whatever the environment, all infants and young children need stimulation and enriching experiences. It also needs to be recognized that all newly born infants and young children need to be loved and cared for, as it is through the love and care they receive that they also develop those aspects of their brains that will, in turn, contribute to their capacity to live balanced and emotionally fulfilled lives.

A further interesting and very important aspect of brain development in infants and young children is that of memory. As experiences are encountered by children and then repeated over time, the sensory neural pathways that are created within the brain contribute to the building of memories. Take, for example, a very young child who is lifted and tickled by his father when he returns home from work. Gradually the child will build a memory of that event whereby he learns that when his father picks him up he may well tickle him and that the experience of being picked up will be a pleasant one. Equally, if the experience of being lifted by his father leads to pain then the child also internalizes the interactions with his father as being essentially unpleasant ones. It is in such ways that the brain serves to help infants and young

children adapt to their environment and to those around them, and in doing so they come to construct an understanding of the world within which they live. Recently, Claxton, author of the report *An Intelligent Look at Emotional Intelligence* (ATL, 2005, p. 20), commissioned by the Association of Teachers and Lecturers, spoke of very young children as having an 'emotional apprenticeship' whereby they observe how those around them manage their emotions. Claxton drew an important connection between these observations and learning as follows:

When uncertain how to respond emotionally to a new person or event, babies and toddlers take their cue from the facial expression and tone of voice of the people they trust – parents obviously, but also, very effectively, older brothers and sisters. Whether deliberately or inadvertently, family members act as powerful role models that steer the child's emotional development. Studies of children in the Second World War showed that it was not the events they witnessed that affected their development; it was the way the adults around them reacted to those events. Being around an adult who continually 'loses it' is bad for a child's own emotional development.

DEVELOPING THE YOUNG LEARNER

Central to the development and management of children's learning in their early years is the nature of the environments in which they learn. Of equal importance is the active and meaningful participation of children in what they do and the extent to which children are encouraged to become involved with problem-based activities, not only on an individual basis but also with their peers and other adults. Also of importance is the need for adults working with young children to engage in critical reflection in a purposeful and meaningful way. It is worth taking time at this point to consider what is meant by critical reflection. Daudelin (1996: 39), quoted in Zwozdiak-Myers (2007, pp. 160–1) has offered a helpful starting point:

... reflection is the process of stepping back from an experience to ponder, carefully and persistently, its meaning to the self through the development of inferences: learning is the creation of meaning from past or current events that serves as a guide for future behaviour.

This definition is useful as it places particular emphasis upon a number of key constructs that can act as signposts in directing us towards understanding those elements that can be observed to underpin best practice when working with young children, namely: 'stepping back', 'carefully and persistently', 'meaning', 'inferences' and 'behaviour'. These words and phrases not only offer practitioners a means by which they can examine and evaluate their own practice, in particular their own behaviours, but they also provide the means by which practitioners can reflect with purpose on their own management of the environments they create for children. In addition they

provide practitioners with the means by which they can observe, interpret and understand the actual behaviours of the children with whom they are working.

Exercise

Recall an account of a sequence of behaviours you have observed in young children. Take time to identify the words and phrases you might have used to describe the behaviours, and then consider what specific information these words and phrases would actually communicate to others.

When one observes effective practitioners working with young children it becomes quickly apparent that the conversations they have when talking about the children are characterized by a strong sense of purpose about what they are asking of the children, about the nature of the learning environments they are creating, and about the tasks they are giving to the children. Conversations are also characterized by their objective nature and there is little evidence of overly descriptive accounts when discussing learning. Instead, discussions are focused and typically evidence-based. These types of conversations suggest a deeper and more systematic understanding of the nature of those emotional, social and cognitive factors that reflect the individual learning needs of each child.

Effective practitioners also take time to engage purposefully in careful and meaningful observation. In doing so, they critically reflect upon the inferences they find themselves making about the behaviours of children and they make time to listen carefully to what parents are saying, or not saying, about their children. They '*carefully and persistently*' focus upon patterns of behaviour in children, especially those specific micro behaviours that can be observed when children are playing and working by themselves and with others. Careful and purposeful observation and correct interpretation of behaviours can tell practitioners a great deal about how their children learn, their stages of cognitive development, their language development, social learning, and so on. Observing, for example, how often a child initiates verbal interactions during structured and unstructured play and the ease with which a child engages in verbal interaction with others can provide significant amounts of very useful information.

It is worth exploring a little further the importance of practitioners engaging in purposeful and meaningful observation of children's behaviours and the way they listen to children. This has been recognized for some time. Dowling (2005, p. 30), for example, has commented as follows, 'The task of really getting inside children's minds and understanding them can only properly be achieved through observing

their actions and conversing with them', whilst Penny Lancaster (2006, p. 69) has suggested that:

Listening to young children fits a rights-based approach in relating to children. It ... advocates a move away from viewing young children as passive recipients of adults' decisions, where choices and decisions need to be made on their behalf.

Lancaster (2006, p. 72) suggests that in order to respect the voice of children practitioners need to have, '... understood how they [the children] have made sense of their experiences'. This point is crucial and emphasizes the importance of Early Years practitioners and teachers in primary schools giving time, not only to active and purposeful observation but also active listening within different contexts and really hearing what children are saying. In doing so, it is important to give children 'thinking' space to process information at a level appropriate to their own level of development and in their own time. This is especially important where adults are talking and listening to a child. To not do so might, in some cases, result in important aspects of a child's emotional, social and cognitive development being missed and children learning to be passive agents in what are essentially adult dominated relationships. In extreme cases where children may be experiencing emotional trauma in their lives they may even fail to have their trauma and home situations recognized. In the deeply sad and disturbing recent case of the young child Victoria Climbié, who was physically abused and then died, Penny Lancaster has noted:

Victoria Climbié needed someone to listen to her life experiences, her concerns, her feelings and her perspective of her situation, but no one did. Her rights were overlooked and the care she received was steered by adult demand. (2006, p. 65)

Equally important to observing and listening to young children is the need for Early Years practitioners and primary school teachers to develop their observation skills and to take time to reflect and critically analyse their observations, either by themselves or with their peers. Reflective and purposeful observation can not only inform practitioners about children's social, emotional and cognitive development but can also inform them in regard to effective assessment and intervention, and subsequent planning of learning activities. Nutbrown (2006, p. 99) in respect to the importance of observation, has suggested that:

... observation and assessment are the essential tools of watching and learning with which practitioners can both establish the progress that has already taken place and explore the future.

In commenting on observation in the classroom, as undertaken by Montessori teachers, Feez (2010, p. 24) has noted:

When learning to observe, trainee Montessori teachers sit where they will not disturb, distract or interact with the children in any way. They record everything, including small details others might not recognize as being important. In particular, they record:

- everything that interests each child, no matter how apparently insignificant
- how long a child sustains interest in each activity they choose, whether for seconds, minutes or hours
- how a child moves, especially movement of the hand
- how many times a child repeats the same activity
- how a child interacts with others.

Such an approach to the observation of young children can inform practitioners wishing to develop their own practice.

Now, take the case of Mark.

Example

Mark is in his first year at his local primary school. Mark's teacher feels intuitively that something is not right and she has already expressed concerns to the Special Educational Needs Coordinator (SENCo) and the head teacher. Together with the SENCo she takes time to observe Mark during class activities. Firstly, they both observe Mark working in a group situation with other children where they are tasked with collaborating together to solve a problem. Secondly, they both take time to observe Mark outside in the playground. What they find during both observations surprises them. Because they have chosen to focus mostly on Mark's micro behaviours (those tiny sequences of behaviours that we all do) they come to realize that within the classroom when Mark was working with the other children he did not once initiate any verbal interaction even though the group worked together for nearly an hour. Again, outside in the playground they observed that not once did he initiate any verbal interactions with others. They did observe, however, that he continually ran around the playground going from one group of children to another after only a few minutes and hovering on the edge of each group, but never actually joining in. When they again observed him a week later in the same social situations his behaviours were similar, in that he did not initiate any verbal communication with the other children. Subsequent discussion with the school social worker and assessment by the school's educational psychologist led to the realization that Mark was being severely neglected at home.

It is clear from the above example that Mark is an unhappy child and though he generally presents within class as being a quiet rather unforthcoming child it is not until his teachers actually take time to direct their observations towards his micro behaviours and patterns of behaviour that they fully appreciate that all is not as it should be. Now consider the following:

Exercise

Take time to consider the case of Mark and what type of micro behaviours the class teacher and the SENCo might have observed. Share with others your own experience of observing children and identify a range of micro behaviours you observed as well as those you could have observed. Consider how time taken to observe children's behaviours in detail might be viewed by parents as a positive activity by a teacher or just a waste of time.

In considering the development of young learners it is perhaps now, more than ever, important to understand the influence that technology plays. Few young children nowadays fail to have access to televisions, computers, mobile telephones, and so on. Indeed, many readers will be familiar with those concerns, often expressed publicly, about the diet of aggression and violence and sexualized activity now available to young children through the media. Indeed, there is a significant number of children now entering school with poorly developed listening skills, with delayed language development and lack of maturity, and little in the way of even adequate preparedness for formal learning. For these children, the type of formal learning environment being offered by their school is crucial.

Now let us explore further the importance of creating suitable learning environments for young children, and especially those who enter school with poorly developed skills and knowledge or who are beginning their education having just arrived from a different country or culture. It is clear that the culture of Early Years settings and primary schools has undergone significant change in the last decades. There has, for example, been a large increase in the diversity of children's needs, as can be witnessed by the growing number of pupils with a wide range of special educational needs and/or disabilities now being educated in mainstream settings. It was estimated that, in England alone, in the year 2008 there were approximately one and a half million pupils with special educational needs in schools, representing approximately 20 per cent of the school population. In addition, just over half of the 223,600 children (nearly three per cent of the school population) with formal Statements of Special Educational needs had been included within mainstream schools (DCSF, 2008). In regard to linguistic diversity it has been estimated that there are currently some 900,000 pupils in schools in England learning English as an additional language, with estimates of some 200 languages being spoken.

To help us in our attempts to gain a better understanding of the individual needs of children entering formal education and how Early Years settings and primary schools can meet the wide range of diversity it is worth framing our own thinking

and analysis within those theoretical constructs referred to earlier in this text. By doing so, we can compare our own perceptions of how we think children should learn, against a 'tried and tested', though admittedly not universally accepted, approach to teaching and learning. Through making such comparisons, readers will not only gain a much deeper understanding of the original ideas of these theorists and philosophers but will also generate within their own thinking new hypotheses and new insights. One notable example, which continues to exert significant influence on practitioners today, is that of Maria Montessori (see Chapter 1).

Montessori originally identified 11 'sensitive' periods during the first stage (or Plane, 0 to 6 years) of development. During the period from birth to around 12 months children are developing their abilities in movement, for example crawling and walking. Exploration of their environments is also a feature of this stage as children move about touching, grasping and holding objects and people. Young children typically move forward from making arbitrary sounds to babble and then to forming and using words and phrases. This is then followed by sentences, indicating understanding of their own ideas and actions to those of others around them. It is also during this first stage that children between the ages of one and four can be observed fixating upon objects and the detail contained within these objects.

This is a crucial feature of children's early learning as they are developing important attention and concentration skills, in addition to their emerging visual skills, which facilitate internal representations within their brain of visual features, for example contours and shapes. This process of fixation and visual representations within the brain also facilitates the process of verbal mediation whereby children attach verbal labels, including random sounds, to these objects. If, in the case of some children coming from dysfunctional families, they have few opportunities to engage with such learning situations then they may well be disadvantaged when they commence formal education. More particularly, they will have failed to move purposefully through this 'sensitive' stage and their development may have been restricted and even distorted in some ways. This has huge implications for how the learning of these children is managed and how the adults charged with managing their learning interpret their behaviours. For example, ought such children to be labelled at a very early age as having special educational needs or should they be viewed as children who require nurturing, greater access to expressive and receptive language, support with developing attention skills and improving concentration, and so on?

Montessori also proposed that with children between the ages of two and four there can be observed a desire for consistency and sameness. Some children at this stage can be observed to become distressed if their environments are altered. Children at this stage also appear to respond positively to routine. Readers might again wish to reflect

upon the impact that established routines and consistency both at home and in the classroom have for young children, and especially those children who live in dysfunctional homes characterized by disorganization and lack of stability. Readers might also wish to consider different parenting styles and how some parents are keen to impose clear boundaries within the lives of their children whilst others reject this notion and seek to avoid the imposition of any boundaries. It is also worth considering that parenting styles transcend all sections of society, with particular types of parenting not being restricted to any one 'class' or determined by income.

Montessori believed that between the ages of two and six young children typically demonstrate a natural interest in some aspects of music, for example, rhythm and singing. She also suggested that 'Grace and Courtesy' and 'Refinement of the Senses' can also be observed in young children at this stage. Young children at this stage between the ages of two and six demonstrate strong tendencies towards imitating the behaviours of adults and older siblings. Here, we can once again see the importance that good role modelling by parents and significant others in a child's life can have for them and how this can support future learning and important skills necessary for effective education, such as good listening skills, attentiveness, emotional control and perseverance.

Other elements that Montessori identified during this stage were (see Gray and MacBlain, 2012, p. 154):

- an apparent fascination with writing where the young child at around three to four years of age can be observed trying to copy letters and words or numbers and symbols
- an interest in reading where the young child between three and five years of age can be observed to display interest in the sounds of letters and words
- an interest in spatial relationships between four and six years of age where the young child internally represents relationships between objects and their immediate environments
- a development of basic concepts in mathematical thinking using concrete materials between four and six years of age.

Independence and the ability to care for oneself are key features of Montessori's philosophy. Again, readers might reflect upon the absence of this for some children who come from homes where their parents may be involved in substance abuse, criminality and neglect. Readers might also wish to reflect upon the notion of encouraging independence within children and how many parents feel anxious about allowing their children to play outside away from home and to take risks. Indeed, this is an aspect of parenting that has received much recent attention in the media.

In Montessori nurseries children engage with tasks such as putting on their clothes and tidying up their classrooms. This type of learning supports children's development in regard to contributing in later years to their own communities. This

is a rather seductive idea and one imagines the importance of preparing children to be 'good' members of their communities and to develop sound values that will mean that they more fully engage with society and come to view themselves as active participants who develop sound work ethics.

Repetition of tasks is a further feature of the Montessori Method as this is believed to underpin future abstract reasoning. As new concepts are introduced to young children a three-step process is employed by Montessori practitioners, namely, introducing the new concept, understanding it in concrete terms, and then understanding it in abstract terms. Teaching and learning, therefore, become individualized processes for each child, which is also a key feature of the principles underpinning the recently introduced *Statutory Framework for the Early Years Foundation Stage*, in the UK (see below).

Drawing upon Montessori's views about repetition, it is worth considering the purpose of over learning and rehearsal for children with the specific learning difficulties of dyslexia and dyspraxia. For many such children, who present in learning situations as inattentive and lacking in concentration, a primary need is to be given opportunities to engage in over learning and repetition as a means of confronting difficulties with short-term memory, organization and planning. A very important aspect of short-term memory is rehearsal. Many young children who are observed within classroom situations to be failing with aspects of literacy, typically experience difficulties with rehearsal and may well not have properly internalized efficient strategies for reading and writing text. All too often, such children use inefficient strategies when approaching reading and writing tasks. For example, they may guess at words or try to sound out individual letters and words when they have an impoverished understanding of blending and little knowledge about the structural analysis of words.

For many such children their specific difficulties are related primarily to phonological processing. Effective practitioners, therefore, when working with children displaying such specific difficulties employ much over learning which is sequential and cumulative in practice, and most importantly that employs multisensory and kinaesthetic activities. Central to these types of interventions is the acknowledgement by Early Years practitioners and teachers of the importance of movement and coordination, which underpins the multisensory approach.

LEARNING AND PLAY

Play is central to learning. It is through play, for example, that young children learn to cooperate with others and to form and maintain relationships. Through play they develop their language skills, their capacity to think and problem solve, their

observational skills and abilities to listen, and so on. In fact, play lies at the very core of children's development, and, as readers will appreciate, carries on throughout adolescence and the entirety of adulthood.

Smith et al. (2003, p. 218) have drawn an important distinction between play and exploration in very young children, located they suggest within the ideas of the Behaviourists and the Piagetians (see Chapter 2) as follows:

These were often subsumed together in earlier writings, perhaps because of the influence of behaviourism and learning theory. Both exploration and play were awkward for traditional learning theorists, as neither was obviously goal-seeking or under the control of reinforcers. It is also true that with very young children, during sensori-motor development ..., the distinction between exploration and play is difficult to make, as for young infants, all objects are novel. By the preschool years, however, the distinction is clearer.

Smith et al. go on to suggest three types of play: locomotor or physical activity play, which includes exercise play and what is often referred to as rough-and-tumble play; play with objects as well as fantasy play and sociodramatic play; and finally language play (2003, p. 219). Readers will be familiar with these types of play where, with the first of these, young children can be observed in playgroups engaged in physical activity such as running and jumping, often without objects being present. Pellegrini and Smith (1998), cited in Smith (2003, pp. 220-1) have proposed that in physical activity play there are three developmental stages, namely: 'rhythmical stereotypes' such as the kicking of legs and waving of arms that can be observed in infants; 'exercise play' such as running and jumping, involving the child's whole body. This can be observed in preschool settings and overlaps with the type of rough-and-tumble play so frequently observed in primary school playgrounds and at home between young siblings – the third stage.

Smith et al. further propose that the next type of play, fantasy play, can be observed in children as young as 12 months. The earliest pretend play, they suggest, involves children in directing actions towards themselves and depends greatly upon using actual objects such as those found around the home. The ultimate in imaginary play, Smith et al. suggest, is where children have an 'imaginary companion'. They suggest that between a quarter and a half of children between the ages of three and eight (with most giving up this notion by age 10) have some type of 'imaginary companion'. Children with 'imaginary companions' can be often observed engaging in quite sophisticated pretend play with their 'imaginary companions'.

The final type of play suggested by Smith et al., is that of language play. Again, readers will be familiar with the many ways in which young children use words and sounds to make themselves and others laugh and the joy they get from listening to and telling stories that involve noises made by animals, giants, and so on.

Children can also be observed to gain much from listening to rhyming poems, riddles, nursery rhymes, and so on. When children play together in groups such as at each others' birthday parties they can often be observed by their parents to have great fun and fits of giggles when they say 'silly' things to each other.

As children grow older they move towards playing games that have rules and clearly defined structures. This enables them to learn about cooperation, boundaries, relationships, and so on, and offers opportunities for children to move outside of their homes and join local clubs such as cricket and football clubs. Others may join outdoor pursuit clubs and engage in less group-oriented activities, which offer elements of risk as well as opportunities to play together with others and develop friendships.

Of course, the nature of play is changing and younger readers of this text may recall listening to older friends and relatives recounting the good old days when they played outside all day from early morning until the sunset and when they only had pieces of wood, lengths of rope and old pram wheels to play with. Nowadays, the nature of play for many children is very different. Significant numbers of children, for example, spend excessive amounts of time playing indoors on computer games, and this, rather worryingly some would argue, starts from too early an age. Take the case of Ned, aged six years, who gets up most mornings at around 7 o'clock and switches on the television in his bedroom, which he watches until his mother brings him some breakfast cereal at 8 o'clock and urges him to dress himself. As he dresses, he continues to watch television until he leaves the house for school. When he returns from school he plays in his room with his computer games and then comes downstairs for a meal at 6 o'clock for around half an hour when the television remains on as all of the family watch it. After his meal he remains watching television most evenings until around 9 o'clock and at weekends until around 10 o'clock. Clearly, Ned's play is very restricted and he rarely plays out of doors. Learning opportunities that he might engage in such as climbing, running and jumping and cycling are few and far between and these are important activities not only in terms of socializing but also in terms of developing sensory-neural pathways in the brain, which in turn, develop physical attributes such as gross and fine motor coordination, and attention span.

Exercise

Should Early Years practitioners and primary school teachers play a more active role in getting parents to restrict the amount of time children watch television and play on computers when at home, and if so, how might they do this?

THE IMPORTANCE OF LANGUAGE

Most if not all readers will be aware of the function that language plays in learning. Before looking more closely at how spoken language impacts upon learning it is worth exploring the importance of written language, for it is through written language that children are typically asked to demonstrate much of their learning when at school. Arguably, this aspect of language has received little attention by researchers working in the field of language and communication. Some decades ago Brown (1977, p. 119) made the following observations:

Before the child can write or read he must be able to identify the symbols and the sounds they represent. Evidence suggests that visual recognition may be possible quite early, but that the association of the symbol with a sound, a cross-modal link between vision and auditory discrimination, may take longer. For written language the child must also have a high degree of motor coordination.

There is a further important consideration here in that some researchers, perhaps most notably Bruner (see Chapter 2) have suggested that the cognitive structures of children who are actively encouraged to engage in written activities alongside reading activities will typically be different. Drawing upon the work of Bruner (1975), Brown (1977, p. 119) has again commented as follows:

He [Bruner] suggested that the mind of a person who spent much of his time in these activities might be 'profoundly different' from that of one who was involved in non-linguistic activities such as drawing or building, and perhaps even different from that of one who mostly talked and listened. He suggested that there may be a minimal use of language in ordinary discourse which has little effect upon an individual's thought patterns, but beyond that level it may transform them. The most important step in this transformation he saw as instigated by the transference from speech into some form of notation such as writing or mathematical symbols. In this form it becomes more powerful. The rules which must be obeyed to construct written sentences may allow some people to analyse the products of their thoughts and to operate with formal operations (Piaget's term) in ways which would not otherwise be possible.

Clearly such a view has important implications for the practice of Early Years practitioners and teachers in primary schools in the UK, many of whom are becoming increasingly concerned by a growing perception in some quarters, even in government, that children ought to be introduced to a more formal pedagogy involving writing and reading at preschool level. Such concerns have been recognized for some years. Miller and Pound (2011, p. 165), for example, have commented as follows:

External pressures from government guidance or a management hierarchy can lead practitioners to focus on curriculum 'delivery' or 'coverage' as the main focus of their practice. Such

a view would have been anathema to the foundational theorists ... but in England it has become a feature of the Early Years Foundation Stage (EYFS) (DfES, 2008) and the National Curriculum in primary schools, causing uncertainty for many practitioners.

Though the debate continues as to the nature of the pedagogies in Early Years settings and primary schools it is, nonetheless, important to emphasize that stimulating spoken language alongside reading and written language, even in its most basic form such as that of making marks and symbols, must continue to receive serious consideration by practitioners and parents alike.

Exercise

Consider the view that the work of Early Years practitioners should not involve any formal teaching and that children under their supervision should engage totally in learning through play. Consideration could also be given to the lack of formality in many European countries in regard to the education of young children and also other philosophies of education such as that of the Steiner tradition.

It should also be recognized that language is central to the social and emotional development of children and from a very early age infants learn to gain the attention of others around them, to get food, to be played with and cuddled, and so on. Indeed, most infants become competent in their abilities to communicate with others and have their needs met long before they acquire words and phrases. In this regard, we can acknowledge that humans are most probably programmed to acquire language and to develop through stages of this acquisition. For some children growing up in households where language is limited they may come to experience difficulties in expressing their feelings and emotions (see Chapter 7).

It is certainly the case that many children currently entering primary schools in the UK have language delay and poor listening skills. Palmer (2006, p. 105) recently offered the following rather disturbing observation:

Everywhere I went it was the same story: four- and five-year-olds were coming to school with poorer language skills than ever before; they weren't arriving with the repertoire of nursery rhymes and songs little ones always used to know, and children of all ages found it increasingly difficult to sit down and listen to their teacher or to express complex ideas in speech or writing ... I also discovered that this issue was bothering teachers across the developed world.

Palmer's accounts are worrying and suggest a growing malaise amongst many children and sections of the UK population where children are not being supported

in many areas of language development. In an attempt to address the importance of language development in young children Cowie (2012, p. 83) has proposed four key areas of language that she suggests young children have to master:

1. *Phonology* refers to the system that governs the particular sounds (or phonemes) used in the language of a child's community in order to convey meaning ...
2. *Semantics* refers to the meanings encoded in language. Phonemes are in themselves meaningless but they are combined to form morphemes, the smallest meaningful units of language. These may be whole words ('cat' in English, 'chat' in French) or grammatical markers, such as '-ed' at the end of a verb to make the past tense.
3. *Syntax* refers to the form and order in which words are combined to make grammatical sentences. The child progresses, for example, from saying 'Ben cup' to saying 'Ben wants that red cup'. The rules that govern such sequences are known as *syntax*.
4. *Pragmatics* is knowledge about how language is used in different contexts. The young child must learn to adapt her language to the situation in which she finds herself ...

It is of course important to recognize that whilst many children have poor experiences of language modelling at home and in their immediate communities other children experience more specific and even neurological difficulties in some of the above four areas identified by Cowie. Children with dyslexia, for example, can be observed to have problems with aspects of their language functioning, as can children with dyspraxia and Asperger's Syndrome (see Chapter 8). For this reason, it is crucial that Early Years practitioners and primary school teachers are informed about the nature of language development and the potential difficulties that face children who enter learning environments with delayed language, or more worryingly perhaps, language disorder, when referral to a Speech and Language therapist will be appropriate.

EARLY INTERVENTION AND RECENT INITIATIVES IN THE UK

The UK is certainly not short of initiatives. In fact, there are some who would argue that education in England over the last few decades has been essentially flooded with initiatives. They are everywhere. Early Years and primary education, especially, have had their share of initiatives, and whilst teachers and Early Years practitioners may have at times welcomed these, they may also, at other times, have felt completely overwhelmed by them. We now look at a number of key initiatives whose origins were not always in the UK but have come to influence practice in the UK. We commence with HighScope, which although originally developed in Michigan in the USA is now used within the UK, as well as throughout the world.

Drawing initially upon the work of Piaget and Dewey, HighScope has also drawn upon other theorists and researchers over the years such as Vygotsky and Bruner (see Chapter 2), and more recently, Goswami (2002) and Snow et al. (1998). In the UK, HighScope has also drawn upon the experiences of practitioners in the USA and is used across many sections of the education system. Indeed, it is used creatively to address, for example, the learning needs of young children with additional needs or those who are considered to be vulnerable. Like other approaches HighScope seeks to support young children in actively building their knowledge and understanding of the world in which they live. Learning, therefore, is an active rather than a passive process. Miller and Pound (2011, p. 103) comment as follows:

HighScope practitioners are as active and involved as children in the early years setting ... The HighScope approach promotes independence, curiosity, decision-making, co-operation, persistence, creativity and problem solving in young children.

Such principles are now fully recognized and accepted by most if not all primary teachers and practitioners working in Early Years settings, who regard these principles as central to their work with children. This said, they also need to be viewed critically against the shifting dynamic of government-imposed change and directives currently in the pipeline for education in the UK, for example, an apparent, and growing, emphasis on the use of formal teaching methods at preschool level.

Exercise

How do the principles of the HighScope approach fit with those policy and decision makers who argue for less creativity in primary and post-primary schools and a return to a more traditional way of teaching and learning where children are much more directed in their learning and rewarded with praise when presenting the desired responses?

Another initiative introduced in the UK which has received a great deal of interest was the *Sure Start* initiative, which was introduced back in 1998 by the then Chancellor of the Exchequer, Gordon Brown. Though aimed particularly at children and families in England, other regions, namely Wales, Scotland and Northern Ireland embraced and adapted this initiative to meet their own needs. *Sure Start* was initially introduced with the aim of giving those children who needed it the best possible beginning in their lives. Proposed improvements in child care support for families, and early education, as well as important aspects relating to health and well-being, were viewed as central to the approach, with greater attention being given to the

development of communities. The funding allocated to this initiative was significant; around £540 million was allocated between 1999 and 2002. It was estimated at the time that some 150,000 children living in deprivation would benefit. The government initially agreed to provide funding for this initiative for 10 years. However, the Chancellor reported in 2003 that the government planned to relocate Sure Start to within local government by 2005, thereby establishing Sure Start centres in all communities.

More recently, the UK government has introduced the *Statutory Framework for the Early Years Foundation Stage*, which became mandatory on 1 September 2012 for all early years providers, that is, maintained and non-maintained schools, independent schools, and all providers on the *Early Years Register*, although there may be some exemptions to this last group. The introduction of this new Framework, which builds upon existing practice is premised on the view that '... every child deserves the best possible start in life and the support that enables them to fulfil their potential' (DfE, 2012, p. 2).

The Early Years Foundation Stage (EYFS) Framework embraces the notion that children today are not only developing quickly but that the life experiences following birth and up to when they commence formal schooling at age five are extremely important and exert a significant impact upon them. Such a view is, of course, not new and has been promoted throughout the centuries by philosophers and theorists (see Chapter 1). What appears to be new, however, is the emphasis that government is placing upon ensuring that all providers must offer children provision that is effective, purposeful and that falls within parameters that are viewed as key to children's social, emotional and educational development. Good parenting is also viewed as a key aspect of development in these first years, as is the need for children to access learning that is of a high quality.

Of note is the fact that Ofsted will have regard to the EYFS in as much as they will undertake inspections of the implementation and application of this new Framework and report on the quality and standards of provision being offered. Following inspections by Ofsted they will publish their reports and may in some instances issue a 'notice to improve' or a 'welfare requirements notice'. Of particular note is the fact that any provider who fails to comply with a 'welfare requirements notice' is committing an offence.

It is now worth exploring this new EYFS Framework in much greater detail as it currently affects the practice of all providers working with young children.

The *Statutory Framework for the Early Years Foundation Stage* proposes four overarching principles, which should be central to practice in Early Years settings:

- every child is a **unique child**, who is constantly learning and can be resilient, capable, confident and self-assured [Readers should refer to the section on developing emotional intelligence in Chapter 7 where the concept of resilience is more fully explored];

- children learn to be strong and independent through **positive relationships**;
- children learn and develop well in **enabling environments**, in which their experiences respond to their individual needs and there is a strong partnership between practitioners and parents and/or carers; and
- **children develop and learn in different ways and at different rates** (DfE, 2012, p. 3).

Now consider the following:

Exercise

Consider how realistic the above principles are for Early Years practitioners working with children from severely disadvantaged and dysfunctional homes. What steps can be taken to ensure that providers adhere to these principles?

The *Statutory Framework for the Early Years Foundation Stage* proposes seven areas in regard to learning and development and how these should inform and shape practice in Early Years settings. These are: communication and language; physical development; personal, social and emotional development; literacy; mathematics; understanding the world; and expressive arts and design. The first three of these are seen as 'Prime' areas, which are viewed as especially crucial, and the next four as 'Specific' areas, which providers must use to support children in developing the first three. The Framework emphasizes the importance of providers taking particular consideration of the individual needs of children as well as their stage of development. Information gained from consideration of these areas should, the Framework proposes, inform the planning of children's experiences. Particular attention must be given to the 'Prime' areas when working with very young children, which the Framework indicates, 'reflect the key skills and capacities all children need to develop and learn effectively, and become ready for school' (DfE, 2012, p. 6). The Framework also gives particular attention to whether children have special educational needs or disabilities which might call for specialist intervention, and in this way links with families to assist them in accessing relevant services from external agencies where this is appropriate.

In addition to the above, the Framework places particular emphasis upon the importance of assessment as follows:

Ongoing assessment (also known as formative assessment) is an integral part of the learning and development process. It involves practitioners observing children to understand their level of achievement, interests and learning styles, and to then shape learning experiences for each child reflecting those observations ... (DfE, 2012, p. 10)

Of encouragement to many practitioners in regard to assessment will be the inclusion within the Framework of the clear emphasis that is placed upon the reduction of paperwork:

Assessment should not entail prolonged breaks from interaction with children, nor require excessive paperwork. Paperwork should be limited to that which is absolutely necessary to promote children's successful learning and development. (DfE, 2012, p. 10)

The Framework also places particular emphasis upon child protection and indicates, for example, that, 'Providers must have and implement a policy, and procedures, to safeguard children' (2012, p. 13). Similarly, the Framework also places emphasis upon the qualifications, training and skill level of providers and their need to engage effectively with induction training for new staff and continuing professional development.

The British Association for Early Childhood Education (2012) has produced a most helpful publication *Development Matters in the Early Years Foundation Stage (EYFS)*, which offers clear guidance to providers and practitioners in an accessible and helpful format. In particular, it offers information regarding the learning of children in all of the 'Prime' and 'Specific' areas from birth to 11 months through to 40 to 60 months, giving providers, practitioners, parents and carers, and other relevant professionals, an indication of what can be expected of children at different ages and stages.



Summary

The importance of understanding thinking and its relationship to learning cannot be emphasized enough. At the very core of this relationship lies the early development of cognitive and neurological functioning. Children born into families where there is much stimulation, care and love will typically enter formal education with greater opportunities to embark upon their learning and schooling, which will lay down the building blocks for future success. Those children who are not, may find that they commence formal education with more poorly developed cognitive and neurological structures, which may well put them at a distinct disadvantage.

This chapter has explored a number of key issues central to this relationship, with particular emphasis being placed upon the role of the teacher and Early Years practitioner and the importance of creating effective and purposeful environments where children can develop their learning and thinking. The importance of play and language has been especially emphasized as these two elements are central to the development of thinking and learning. Recent initiatives in regard to Early Years practice and preparing children for their formal education were explored and offer an introduction to the following chapter, which now explores learning in the family.

RECOMMENDED READING



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