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Developmental Awareness



One of the things that I encounter time and again when delivering training, whether to parents or professionals, is the importance of emphasising the necessity of meeting the child at their stage of development, whatever their chronological age. Although this has been proposed as the best approach to individual assessment and planning, and the concept of the “unique child” was central to the development of the Early Years Foundation Stage, this still seems to present a challenge. In addition the approach is further complicated by the fact that a child or young person can be at a different developmental stage in each of three main developmental areas – physical, cognitive and social/emotional

Developmental Milestones:

Arnold Gesell (1880-1961) developed his theory of Biological Maturation in the 1940s. According to Gesell human development in all areas – physical, cognitive and emotional/social - is predetermined by the genetic blueprint which is the result of the combined genetic background of the parents. Gesell believed in “maturation patterns” which occur in predictable sequences. This being the case, it was possible to construct a timeline for human development. These guides could then be used as a benchmark against which to assess the development of any individual. This was clearly extremely useful, as the theory also allowed any developmental issues to be identified and followed up, and appropriate support given.

Factors which influence development

It comes as no surprise that there are many factors which influence how children and young people develop. If we break this down, then we can look more closely at the reasons for the variations we see in individual cases.

Environment

As I write this, we are better placed than ever to begin to understand the impact of the environment on the developing child, as our understanding of and research into neurodevelopment grows and develops, posing new questions even as original queries are answered.

Maslow's hierarchy of needs suggests that a child's environment needs to be able to provide for physiological, safety and belonging needs (also known as deficit needs) in order for the individual to achieve their individual potential. My observations tell me it is not enough for needs to be met, they must be perceived and understood as being met by the individual for progress to be made. In other words, moving a child from a harmful home and placing them in a safe and secure home where their needs will be met means that as adults we know those deficit needs are met, improving outcomes for the child. However for the traumatised child, it is likely to take time, patience and repeated experience before they are able to move on from their sense of danger – their development may be delayed or arrested. Their initial reaction to the move may be fear and anger, which may be heightened by the strangeness of their surroundings, and overwhelming feelings of isolation and rejection.

In 1977 Urie Bronfenbrenner published *The Ecology of Human Development*, whereby the development of an individual is placed at the centre of external influences from family and friends to community and school, country and global influences. We now know that environmental influences can literally change the way our genes are expressed, with clear implications for health and medical issues including mental health. For instance, children whose mothers were exposed to chronic and severe stress during their pregnancy have been shown to have a higher incidence of psychological and behavioural disorders. This is linked to the toxic effect of stress hormones, and it has been proven that these children are likely to have higher than average levels of stress hormones produced as well as higher than average numbers of stress hormone receptors. The result is a child who is easily stressed and fearful of change or transitions. Furthermore, research into epigenetics has shown that the alterations to DNA are handed on to subsequent generations.

Neurological and cognitive Development

Richard Bowlby states that *“neuroscientists are discovering that they cannot explain the rapid neurological developments in the brain of a child without reference to the interaction between the baby and his/her environment”*.

(<http://www.allianceforchildhood.eu/files/QOC%20Sig%204.pdf>)

When a child feels safe, secure and loved, (deficit needs met according to Maslow) then their exploration systems are switched on and they are eager for new experiences and stimuli which gives them further information to support their cognitive development.

Where there has been a positive attachment experience, needs are perceived as being met by the individual (for an infant, this is a sensory state of comfort or discomfort), they are confident in the provision of physiological and safety needs and have been able to engage in a loving reciprocal relationship that has enabled them to build an expectation based on the primary emotion of love. They have a core knowledge that their needs will be met, enabling them to be resilient and tolerant if they are occasionally hungry, cold, upset, have an argument, etc. They are able to manage social interactions and make connections readily. Their experience of the world as accommodating means that they can take risks; are able to bear the disappointment of being wrong; and can explore different experiences with confidence. They will be able to better manage impulsivity as a result of their needs being appropriately met, and the secure unchanging nature and routine of their life gives a grounding for well developed executive function. These individuals will be able to embrace a challenge whether this is academic, physical or emotional.

Where there has been an insufficient, absent or disengaged attachment or other developmental trauma, the individual will be focussed on getting survival needs met. This focus is driven by the primary emotion of fear. The stress created by this existence will also disrupt the healthy development of the brain. This individual may filter most of his experience via fear of being able to survive in this hostile environment. It may be hard to connect and engage with others. The individual may have issues with their self esteem as well as finding it hard to trust or maintain a positive outlook. In this case the executive function (higher brain activity controlling impulsivity, enabling analytical thought, mediating responses, enabling capacity to be organised and to plan) is largely shut down, or dependant on information that will feed into adaptive responses based in fear and presenting possibly as anger or withdrawal that will reinforce the fearful outlook of the individual. Resilience,

trust and hope may well be alien emotions. This individual is likely to be resistant to and fearful of change.

Cognitive Development

There are many learning theories, but it was Jean Piaget (1896-1980) who proposed a timeline of developing cognitive function.

Sensorimotor

(Birth-2 yrs) Differentiates self from objects

Achieves object permanence: realises that things continue to exist even when no longer present to the senses.

Pre-operational

(2-7 years) Learns to use language and to represent objects by images and words

Concrete operational

(7-11 years) Can think logically about objects and events

Formal operational

(11 years and up) Can think logically about abstract propositions and test hypotheses systematically

<http://www.learningandteaching.info/learning/piaget.htm>

The issue that I have with this theory, is that these learning milestones do not necessarily occur at the age that has been indicated as the "norm" but will be dependent on the pattern of the child's developmental process from conception to birth and through early experiences. Trauma, whether this is a result of early attachment history, illness, maternal substance abuse, a genetic condition or medication, will affect this process with results that are entirely individual.

Furthermore, our sense of how mature an individual is, and therefore our expectations of them is determined by size and level of physical development, not by observation of behaviour. Therefore a mature individual with a severe learning difficulty can appear to be very threatening and scary if they are trailing after their parents in a supermarket, yelling and calling for them because they are bored and want to go home, behaving like a three year old (level of cognitive development) even though they may

be a fully grown adult (level of physical development). For this reason I think it is useful to consider the stages without the relevant ages.

Sensorimotor – This is the stage when attachment occurs in the presence of a relationship with an attuned primary carer. Learning is sensory, as the infant has no language to express ideas, thoughts or feelings and expresses their needs or mood by the limited means available to them. Attachment is a sensory process, and at the same time the infant is developing a cognitive blueprint to understand and adapt to the environment that they are born into. In addition, the positive attachment process provides a mirror for the child to understand himself by the responses of the primary carer and gives building blocks of consistency, pattern, trust and resilience. The negative attachment process gives a distorted view for the child to understand both themselves, their importance and their impact on the world. At this time, the building blocks of psychological, physical, emotional and cognitive development are constructed based on the immediacy of the infants needs and whether they are responded to, which is in turn dependant on their environment and care givers.

Pre-operational -

At this stage children's learning is still a highly visual process – they believe what they can see. They have difficulty holding ideas in mind and cannot visualize something they have not seen. Imaginary play and role play will be based on observed events or TV characters. Children at this stage will still place themselves at the centre of any action – they are egocentric, and only relate to their own feelings. Their sense of their impact on the world is such that they believe everyone will share their feelings and opinions, and because they are emotionally and cognitively immature, they may assume that they are responsible for any trauma which occurs.

Children at this stage will often tell the most incredible stories and this is a normal developmental stage for a four year old. As a general rule the pre-cognitive child is still also operating from a mainly emotional (limbic brain system) base, so if they are caught out in unwanted behaviour, they will in their panic tell a crazy lie. This is not naughty or manipulative, it is just panic – fear of consequences, fear of rejection. Very many adoptive parents complain of exactly these two issues – crazy lies and incredible stories. One of the problems is that when an older child is doing this, because they are at the wrong developmental stage, adults think they must be telling the truth (or if it is an obvious story, that they are being manipulative).

Fact and fiction can be very blurred for children at this stage. Pre-cognitive learning is a visual and practical process, and you believe what you see in a very literal sense. This can have repercussions, for example, having watched her favorite Disney film my daughter said to me how she likes Labrador puppies. I agreed with her before gently saying to her that she did know that they cannot really talk, didn't she? "Oh yes" she said. Then added "But those ones can!" Now we have dogs, walk dogs and frequently come into contact with dogs, however because the Labrador puppies "talked" on film, she believed that as truth. Her logical thinking function had not yet developed at 9 years old, and she had no concept of the mechanisms of filming and camera tricks.

Concrete Operations – This occurs when the individual is able to keep ideas "in mind" and has good use of symbology (numerals and language – both spoken and written), requiring less practical learning. The individual has had more extensive experiences which have further developed and extended their cognitive ability, and made basic logic achievable – at this stage individuals might be expected to predict outcomes and design ways to test their ideas. Logic will be applied to objects and events within the scope of their experience. This stage of cognitive development is governed by the "rationalising" pre-frontal cortex.

Formal operations – The individual is able to use their experiences and manipulate information in an analytical and hypothetical way. This is the final stage, however we continue to be able to live and learn, take on new experiences and new ideas and fit them into our existing perceptions. We are able to change our minds and to see from others' perspectives.

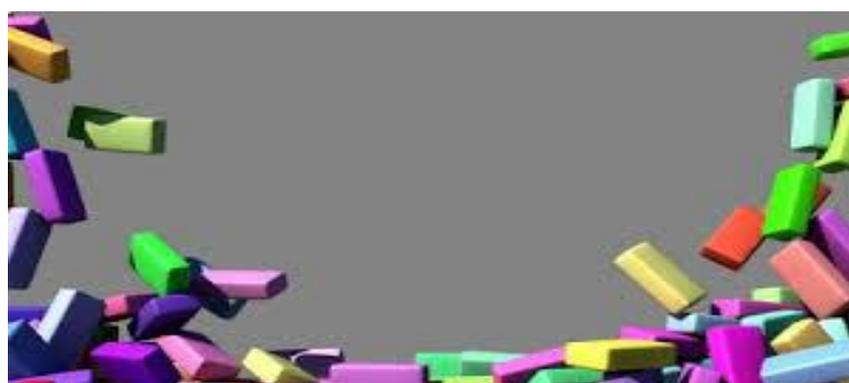
In order for us to develop cognition, the correct developmental tasks need to be accomplished. As in the hierarchy of needs, the foundation must be secure before we can move on to the next stage and not all individuals will reach the same levels in the same sequence. In addition, development may exceed the norm in some areas giving rise to specialist skills and vocations. You cannot build a wall from the top down: likewise the strength of our developmental walls depend upon their foundation and construction. In some cases there may be fundamental damage due to illness, medicines such as Thalidomide; toxicity in utero or genetic malfunction. In others developmental trauma may occur as a result of early abuse and neglect.

We can think of cognitive development as a wall, where each course builds upon the previous one:

Experimental	Analytical	Non judgemental	Balanced	Open minded
Interested	Motivated	Questioning	Resilient	
Playful	Confident	Exploring	Secure	Growing
Engagement	joyful	Trust	Belonging	
Safety	Nutrition	Love	Stimulation	relax

Developmental wall

If some of the foundation is removed, we get a different picture, and the resulting structure is not able to develop– there are too many gaps.



It has been my observation from my own experiences working with children and from conversations with many parents that children seek to rebuild their walls – they may actively seek the activity that they need in order to progress, and this may not be age appropriate. Similarly, children may display behaviours which are confusing – again it may be useful to look again at the behaviour in order to get an idea of the developmental stage of the child.

A very useful tool when considering different aspects of child development for children exhibiting younger behaviour patterns is the Early Years Foundation Stage. This document can be downloaded easily. It gives many ideas under six key areas: Personal, Social and Emotional Development; Communication and Language; Physical Development, Literacy; Mathematics; Understanding the World and Expressive Art and Design. It shows you what children are capable of at each developmental stage, then gives ideas for what to do and next steps.

<http://www.foundationyears.org.uk/files/2012/03/Development-Matters-FINAL-PRINT-AMENDED.pdf> or enter www.foundationyears.org into your search engine.

If we want to help our children progress, we first need to establish what stage they are at emotionally, socially and cognitively or whichever of these areas takes priority. When teaching a child new skills it is useful to remember that with very young children, we always give simple clear instructions, we demonstrate, we encourage, we praise, we let the child find their own pace. With older children we expect them to have the experience to understand an instruction and get on with it. Try taking a step back to build practical skills and confidence in learning.

Active Modelling

Parents have always known instinctively that their children learn from their everyday activities – that is why we have play areas for make believe and to practise those observed skills – mechanics toolbenches, small scale kitchens, baby dolls and prams etc. Today we know that we have brain cells called “mirror neurones”. BrainFacts.org (2008) states that motor neurons are “a special class of brain cells that fire not only when an individual performs an action, but also when the individual observes someone else make the same movement”. (<http://www.brainfacts.org/Brain-Basics/Neuroanatomy/Articles/2008/Mirror-Neurons>) In other words, watching an action allows our bodies to understand the mechanics of that action so that we can imitate. This is an important leaning tool. We assimilate and learn behaviours appropriate to our environment by observation. This can be further embedded by giving a simple language narrative to explain –“I am cold, so I think I will put my coat on”. “I feel thirsty, do you? Shall we have a drink?” In this way, you give a name to the feeling, and a strategy for managing that feeling. At the same time, your mirror neurons and your child’s are engaging, allowing the child’s body to experience and understand the feeling and the action

Key Points

- ❖ Development follows consistent sequences. This may mean that key stages need to be revisited, especially emotional and social areas.
- ❖ Early attuned relationships and a “good enough” environment are key developmental issues
- ❖ Although developmental milestones have been established, developmental trauma may delay or arrest development in key areas.
- ❖ Neurological development follows a sensory:emotional:reasoning pattern which mimics the three areas of the triune brain.

- ❖ Cognitive development is also dependant on early experience
- ❖ Early experience of trauma can affect the individual perception of the here and now
- ❖ The human brain is an astonishing thing: It really is never too late to learn, it just may take more time, effort, practice and support