



Understanding, Emotions and Books Beyond Words: A neuroscience perspective

In last month's issue Leading SEND & mental health consultants **Prof. Barry Carpenter, Jo Egerton** and **Stas' Smagala** introduced a study involving Books Beyond Words. Part 2 this month looks further at pictures and accessing emotions.

In addition to information, illustrations are 'supreme in their capacity to arouse emotions' (Hibbing and Rankin-Erickson, 2003). According to psychoanalyst Jacques Lacan, and narratologist Dorrit Cohn, words are often inadequate for communicating complex emotional states, whereas images, being sub or pre-verbal, can 'take over when words become ineffective' (Nikolajeva, 2012).

Students that Hibbing and Rankin-Erickson surveyed described the power and role of illustrations in helping them to understand the emotions of the characters. They commented: 'You could

feel the emotion' and 'I could see the emotions on the faces and know what they were going through.' A Books Beyond Words book club facilitator (Bradley and Hollins, 2013) reported back from one of their sessions:

We read Mugged in one session. There were people in the group who had been mugged so it was very real for them. Jane was particularly struck by the 'punch' picture. She was surprised that it brought emotions up for her. It helped her think about the story and her own experiences of course but also the realisation that the pictures could move her in a way she hadn't thought possible.

We know that many people with learning difficulties experience high levels of stress in their lives. This may lead to frustration, extreme anxiety and inappropriate outbursts, which in turn may cause loss of dignity, and impact on the person's self-image and self-esteem. Books Beyond Words enable readers to access and reappraise emotions and events they have experienced in the past, as well as to increase their social understanding of other people.

Emotions, pictures and the brain
The brains of people with learning difficulties are often 'wired differently'



(Carpenter, 2015). Exposure to emotion words in conversation is generally key to developing an understanding of one's own and others' mental states and the ability to predict how people are feeling based on situational cues (Barrett et al., 2007). Language impairment, even aside from learning difficulties, is associated with difficulty with emotion perception tasks (Barrett et al., 2007).

When comparing the ability of words and pictures to elicit emotional responses, the interpretation of pictures in the brain is automated to a much higher degree than for written words (Bayer and Schacht, 2014). Therefore, individuals with and without cognitive impairments often find it easier to interpret pictures than written words.

Executive function skills are also linked with the ability to make sense of and self-regulate emotional responses (Gyurak et al., 2012). Executive function skills enable a person to plan, execute, reflect upon and learn from their actions. With emotional experiences, the brain's right hemisphere perceives real-world emotional experiences, while its left hemisphere processes them and enables us to make sense of them (Shobe, 2014). When a person's executive functions are impaired these processes become disrupted (Damasio, 2003). This means that, although when

calm an individual may be able to process and interpret familiar situations, if they are highly anxious (e.g. in an unfamiliar social situation) they will be more likely to interpret other people's actions as threatening (Jarcho et al., 2014) and to give greater attention to faces that appear angry (Chen et al., 2014).

People's ability to self-regulate emotions is critical to their health, behavioural flexibility and well-being and has been shown to produce beneficial psychological and physiological changes in multiple fMRI studies (Sripada et al., 2014). Continuous negative emotional experiences, over time, can erode the mental health of the person with learning difficulties (Carpenter and Egerton, 2015). 'Maintenance' and 'reappraisal' are important emotion regulation strategies. 'Maintenance' requires the reader to attend to and experience the emotions relating to a scenario without trying to change them (Sripada et al., 2014). 'Reappraisal' involves developing an alternative perspective for a scenario that transforms the negative emotional experience to one that is less negative or positive.

Books Beyond Words' book club approaches to discussions and story-telling is closely aligned with the 'reappraisal approach'; the leader-supported attention to the sequence of

pictures, the collaborative interpretation of the pictures and development of a scenario/story, which has a positive outcome in terms of final effect or action. Such a process is likely to help shape individuals' future responses in advance of a similar experience.

The future 'beyond words'

'Wordless books' were very popular in supporting school children with special educational needs in the 1980s and 1990s. However since 2010, their benefits for all children is becoming more widely recognised, including for children whose first language is not English. Books Beyond Words allow for reading from a wider sociocultural perspective. They allow 'readers' to create their own interpretation of the picture sequences, and bring to the story their own life experiences and feelings. As Green (in Baer, 2005) writes:

"To tap into imagination is... to carve out new orders in experience. Doing so, a person may become freed to glimpse what might be, to form notions of what should be and what is not yet."

www.booksbeyondwords.co.uk
orders@booksbeyondwords.co.uk

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