



Hemispheric dominance: an element to consider in inclusive education

by Gerard Sharpling

In recent years, the concept of 'inclusiveness' in teaching, learning and assessment has become increasingly acknowledged. Inclusive education, as a philosophy, addresses the fact that many learners, of all ages, experience barriers to learning and education because education systems are often explicitly geared towards those possessing favoured (and often 'traditional') ways of learning. Among the many ways in which students may differ is in their means of processing information. One factor that is often seen to influence information processing is whether a learner is right brain or left brain dominant.

Barbara Prashnig (1998), a leading pioneer in introducing the concept of 'diversity' into education, sees the notion of left brain or right brain dominance as one element within the wider framework of learner styles. Left brain processing, she confirms, may be described as 'logical', 'sequential', 'analytical' or 'objective', while right brain processing may be thought of as 'fantasy', 'random', intuitive' or 'holistic'. It is the former group of terms, indicating left brain dominance, that is frequently seen as the preferred 'learning style' in traditional education settings and traditional assessment procedures.

Differences in brain dominance may also extend to a student's preferred study strategies. Typically, a student with left brain processing, as Prashnig (1998) indicates, will favour a study environment which is brightly lit and relatively formal in configuration. This is akin to what may be termed the 'traditional' classroom, in which desks are laid out in rows and students are characteristically seen as sedentary individuals. Meanwhile a student with a more holistic, or right-brain processing may prefer to work with 'distracters', such as noise, music, dim lights, mobility and peer interaction. Whilst many people tend to be more right brain or left brain dominant, Prashnig also indicates the possibility, and indeed the importance of being able to 'integrate' the use of both right and left hemispheres of the brain. Such integration leads to a better ability to adjust to the needs of a given and unpredictable situation, and to rise to challenges. The implications of this are that for any student who finds that they are right or left brain dominant, it is always useful to work at developing the other hemisphere of one's brain.

The possibility of seeing left and right hemispheres as acting in tandem, rather than separately and autonomously, is also inherent in the discipline of NLP (Neuro-Linguistic Programming). NLP cannot readily be defined, but as a discipline, is 'aimed at enhancing the healing process by changing the conscious and subconscious beliefs of patients about themselves, their illnesses, and the world.' (www.healthatoz.com). In their book on NLP, O'Connor and Seymour (1990) show that both hemispheres of the brain operate jointly in the way that language is processed. They argue that the left brain will

deal with our conscious understanding of language, while the right brain will deal with a more simple, straightforward and intuitive level of language which operates instinctively below our conscious understanding. They give the example of what may be called 'syntactic' ambiguities in sentences such as the following: 'Fascinating people can be difficult'. As the authors argue, it is not clear in this sentence whether the meaning is that people are fascinating, or whether the sentence means that it is difficult to fascinate people.

How can one tell if one is right brain or left brain dominant? A number of tests, some more reliable than others, have been created to determine what is known as 'hemispheric dominance'. The 'hemispheric dominance inventory' is probably the most frequently encountered test. It consists of a relatively straightforward set of questions or statements to which there are two responses. For example: When someone is speaking, do you respond to a) What is being said or b) How it is being said (tone, volume, emotion). There are a number of variations in this standard test, but all approach the issue similarly. The problem with this kind of test is that one may sometimes approach it with preconceived ideas, given what one knows about oneself, and this may make the results unreliable. Other multiple choice item tests available ask respondents to find an example, out of two or more alternatives, which demonstrates a similar pattern to the example given. A slightly different test of hemispheric dominance involves a silhouette of a dancer who may be spinning either clockwise or anticlockwise. When asked to determine the direction of the dancer's turns, a left brain dominant person is supposedly thought to be likely to select the clockwise turn, while a left brain dominant individual is likely to respond that the dancer is turning anticlockwise. This test has been used in many on-line web pages and has generated a large amount of discussion. It is not regarded to be a standard or believable test by all. A further visual test involves locating chevrons (arrows, such as one might find on a road signal) within a geometrical shape. Individuals with strong right brain dominance experience more difficulty than their left-brain dominant counterparts in locating the chevrons (www.sjc.ceu.edu).

Assuming that one is able to determine whether one is right or left brain dominant, or whether perhaps one may use both hemispheres in equal measure, what are the implications of this knowledge for inclusive education? The most obvious point is that the traditional classroom configuration may not suit all students equally, and may indeed set up significant barriers for some students. Karen Curry (2002) has suggested a range of options and possibilities to help the right brained child within the classroom environment. Among these are using humour, presenting information visually, using computers, making use of fantasy and using discovery techniques. Other strategies involve putting learning to music and drawing positively on emotions. One interesting finding is that children who are right brain dominant are often less good at handwriting than their left-brain dominant counterparts. It is though that students with dyslexia or Attention Deficit Disorder (ADD) also have right brain dominance. However, research also suggests that students with dyslexia can go on to be good speed readers. The odds against right brain dominant children are even greater when it comes to assessment, since traditional forms of assessment (for instance, paper-and-pencil tests) favour 'visual' learners with strong reading and writing skills, and tend to neglect oral and listening ability. This leads to a re-examination of assessing different kinds of intelligence.