

The Learning Brain

A substantial number of primary teachers continue to believe that the human capacity to learn is inherited through the genes and is fixed throughout life. "They take on, without question, pervading social views and practice grounded in a fixed-ability ideology" (Marks R., Ability Grouping in Primary Schools. Critical Publishing. 2016) . This is also a political assumption which underpins support for selectivity in education both in terms of 11+ allocation to grammar schools and internally through setting and streaming into segregated learning groups.

Evidence of the unsoundness of the belief that intelligence is inherited and fixed first emerged more than 40 years ago when it was shown that Sir Cyril Burt, a distinguished psychologist and the leading protagonist for such views had falsified his research data while inventing correlations of IQ in separated twins . His advocacy of the inheritability of fixed intelligence received a death blow. Since that time there has been a flow of evidence confirming a more flexible view of children's potential to learn and yet the old discredited beliefs continue to harm the growth and development of pupils particularly those at the early stages of their schooling.

Recent neuroscience research has informed a more accurate view of our capacity to learn. Inherited genes do make a difference but there is much more to be considered.. They account for around half of the differences among people and hence there is strong support for the importance of environmental factors. It is absolutely clear that the inherited element is not fixed, the brain has plasticity and depending upon life's experiences can grow or decline in the capacity to learn. Growth is related to levels of stimulation and challenge, the brain's plasticity responds positively to the totality of our experience whatever form this might take. This is particularly true for very young children and has major implications for early and primary education.

The neuroscience of the learning brain tells us that children need to be in a stimulating and nurturing environment for far longer than we had earlier assumed. There is no necessity biologically to begin formal teaching in year one and this confirms the unwisdom of the UK's very early start to primary education in comparison with a majority of developed nations. Indeed it may well be harmful to remove children from a nursery environment focused on the challenge of free play too soon. We should, instead, provide an active, fully experiential learning environment throughout the primary years. There will , of course be changes in the balance between adult centred and child centred activities as the children become older and nearer maturation cognitively.

Current government policies which emphasise early measurable attainment and which demand the acquisition of formal skills in reading, writing and mathematics at a young age should give way to learning how to learn through self directed, fully sensory activity monitored, sometimes stimulated, and often shared by teachers and their assistants. The learning brain requires time and opportunity to grow in the capacity to learn and, undoubtedly, such a primary curriculum which has an increased focus upon human development would bring higher attainments in the later years. Once and for all we must clear our minds of old fashioned and crude assumptions about intelligence and IQ.
