

Movement and the developing brain

Much is being written and researched today about the importance of movement in the development of the brain. **Sandra Morris-Coole** revisits Dr Montessori's ideas on the education of movement.

In many ways Montessori was ahead of her time in determining that the child needed to experience the world in order to build his/her understanding and knowledge. She dismissed those who would keep children contained behind a desk and ensured that all furniture in the Casa dei Bambini was lightweight and could be easily moved and accessed by the children. The materials also were child-sized and capable of being transported by the children.

Montessori was very aware of the importance of movement in the development of the child. From her medical background of human anatomy and physiology, she understood how the various parts and organs of the body were independent yet interdependent, sometimes even working in opposition to each other. "It is the system of relationship which puts them (the person) into contact with the world" (*The Absorbent Mind*). Montessori believed that there needed to be a harmony between thought (mind) and action (body) if the infant was to reach his/her full potential. "Mind and movement are two parts of a single cycle" (*Education for a New World*).

She determined that movement was one of the human tendencies that children are born with. This also linked with the human tendencies for exploration and repetition. Consider how often an infant repeats an activity for no obvious extrinsic goal, but just for the joy of the action and, at the same time, gaining control and competence. Control and competence will support the child's sensitivity for order.

Gross motor movement is obviously important for physical well-being; it is also important as it enables the child to explore and discover the world. Even before the infant is mobile, movement and exploration will be carried out

through the hands. In fact, Montessori described the hands as being the "instruments of intelligence" (*The Absorbent Mind*).

Movement is also seen as one of the main sensitive periods during the first plane of development. Babies are constantly moving, even in the womb. In the first weeks of life their movements are uncoordinated because their muscles are not working in harmony. However, a baby's first accidental encounter (through uncoordinated movement) with a mobile stimulates him/her to repeat the action. Such repetition will lead to coordinated action, the muscles will begin to be directed by the will (mental activity) and the infant will make his/her first intentional grasp, a self directed movement.

In the Montessori environment, there is space and accessibility for the child to be an active learner. The ethos of freedom enables the child to move and make choices. The materials themselves ensure that the child constructs knowledge through manipulation.

Montessori stated that the kinaesthetic sense was the most tenacious sense we possess, and she has



PHOTOS: HAPPY DAYS MONTESSORI, WEMBLEY

Coming to an understanding of three dimensional shapes through the hands.

Imprinting the shape of the letters on the mind through the hand.

put this to full use when designing the flat geometric shapes – the two dimensional shape will imprint on the child's mind through the hand, and then the name of the shape will be given, really consolidating the child's understanding of shape. The same is true of the Sandpaper Letters and the Sandpaper Numerals. With the stereognostic sense, the child comes to an understanding of three dimensional shapes through the hands – this knowledge enables the child to discover relationships between the shapes and sort them accordingly, before consolidating this knowledge with the names of the shapes. Balance is encouraged through 'walking on the line' and spatial awareness through being aware of and walking around mats on the floor.

Montessori stressed the need for and importance of purposeful movement: "Movement has great importance in mental development itself, provided that the action which occurs is connected with the mental activity going on" (*The Absorbent Mind*).

So, Montessori's approach to learning and the essential need for movement is as valid today as it ever was, and is evidenced in the on-going achievements of our children.

References

- Montessori, M. (1988) *The Absorbent Mind*, Clio Press Ltd, Oxford, England
Montessori, M (1989) *Education for a New World*, Clio Press Ltd, Oxford, England