# Montessori Notes

***The monthly newsletter from The Montessori Partnership***



**UNPLUGGING THE HANDS**

In our technological world it’s so easy to forget one of Maria Montessori’s fundamental principles of education, adopted from the ancient wisdom of Aristotle, ‘The hands are the instrument of man’s intelligence.’1 This collective amnesia frequently occurs in Montessori classrooms, where it’s so tempting to fall in with the received wisdom from the educational rule-makers that pressing, swiping, mouse-pointing, dragging and dropping are the movements that children most need to be learning and practising.

But we know that one of the key underpinnings of Montessori’s vision of cosmic education is her extraordinarily forward-thinking take on the need to combine movement with the engagement of the brain in order for effective learning to happen. Fortunately, despite the inroads of technology into our Montessori classrooms, Montessori teachers are generally still very focused on educating the children’s movements through getting them to work with the practical life and sensorial materials in particular.

This interplay between hand and brain doesn’t just apply to the early years though. We know from experience that enabling children to use their hands in their learning gives joyful and positive results, a desire to continue, and a vivid understanding of both the process and the achievement, impossible to achieve through abstract work on paper. An example of this was the two 8-year old girls to came to after school club with their homework, addition problems using thousands, hundreds tens and units. They were unenthusiastic, reluctant to get started... Introduced to the golden beads for the very first time, they became excited, and once they’d mastered the need for ‘order and precision’2 in laying their materials out, they quickly did their set homework and then clamoured for more problems. Working with the golden beads became their preferred after-school activity.

This key relationship between hand and effective learning applies to adults as well. This is why we have taken the step, seen by some as retrograde, of banning students from using technological devices during lectures and tutorials. Being confronted by a barrier of raised laptop screens, very little eye-contact and the clicking of keys makes delivering a session intended to involve the students directly very difficult for the tutor. And the tutor’s flow is completely disrupted when one of these unengaged students suddenly says, ‘Please can you repeat what you just said. I haven’t got it down.’

Much more important than the effect on the tutor, however, is the impact on the students of making notes on their laptop or tablet. The engagement of their brain naturally becomes focused on the various procedures that using a laptop involves, so many more than using pen and paper. While it is possible to type what someone is saying verbatim, it is not possible to internalise the information at the same time. It’s like raindrops running off a pane of glass – they leave no imprint.

In contrast, there is an amazing connection between the hand that writes and the brain that processes what is being written. Neural pathways are opened and information transmitted by the movements of the hand, and it is those hand movements that are directly responsible for the internalisation of the information. However fast we write, we can’t capture long passages of speech verbatim, so other processes come into play. We need to listen, comprehend, evaluate and select what we are going to record. So already we are making what we’re writing our own. And the subsequent process of transcribing and editing our notes enables us to re-visit, and further evaluate the information the tutor has presented.

All of this is lost when we try to save time and effort by just capturing the information. It’s not the information itself that’s important. It’s your response to it at the time which will determine how you will use it subsequently. So students – our ban on laptops, recording devices and other technological equipment, phones included, is for your own good! Unplug your hands and become more effective learners!

1. Maria Montessori, The Absorbent Mind, Montessori-Pierson, 2007, Amsterdam, p. 23.
2. Ibid., p. 166.

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