

Technology & Montessori

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Mark Berger, US Montessori teacher and administrator reflects on whether the use of technology could add anything to the Montessori approach or not.

It was nearly ‘a long time ago in a galaxy far away’ that Montessori education first came to the world. 1907 was indeed a fairly long time ago, none of the parents of children in Montessori schools today had been born yet, and neither had their grandparents.

In 1907 the world was very different. There was no commercial air travel. The average person didn’t travel further than 200 miles from their home and transatlantic communication was principally by boat (the first transatlantic radio signal was in 1901, the first cross-country telephone signal across the US wasn’t until 1915). ‘Technology’ was very basic and most people didn’t spend a lot of time concerning themselves with it - technology was the arena of engineers and builders.

Public education was less than fifty years old in 1907, and schools were primarily concerned with reading, writing and arithmetic. And here’s an interesting quotation from the era:

‘The central and dominant aim of (today’s technology) is to bring the world to the classroom, to make universally available the services of the finest teachers, the inspiration of the greatest leaders and unfolding world events which through (the technology) may come as a vibrant and challenging textbook of the air.’

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Sounds like another public policy speech about tablets and wifi in schools, right? In fact, this was a statement by Benjamin Darrow in the early 1920s when radio (!) was being introduced to some of New York City’s high schools for the first time. It seems that every new technology is going to save the day for education – completely change the way children learn, how well they learn and truly come to engage them. Radio, then television in the 1970s and 80s, then computers, then having all schools ‘wired’ for internet access were all championed as the thing that would finally fix/improve education. None of it has been a game changer. None of it has affected test scores or actual student learning or engagement. Today educators and parents are as worried as ever about the state of our schools. And they still go on thinking that computers/technology is the source of the solution. As a culture we are fascinated by the ‘faster, brighter’ of just about anything.

Educational psychologist Jane Healy shares what William Ruckeyser (with the non-profit organisation Learning in the Real World) told her about people’s clinging to this view despite any evidence: ‘the nearest thing I can draw a parallel to is a theological discussion. There’s so much an element of faith here that demanding evidence is almost a sign of heresy.’ Healy spent many years as a teacher in conventional schools, then as a principal, before turning to psychology. As she learned more about how the human brain develops and how children, people, actually learn, she came to see that the world of education

needed serious transformation: ‘Do I risk being stoned in the public marketplace if I suggest that the purpose of education is not to make kids economically valuable, but rather to enable them to develop intellectual and personal worth as well as practical skills?’

Healy understands what Dr. Montessori understood: that an education is about serving life, about guiding a child’s development so that the outcomes serve to prepare and empower the child to make a life for themselves, to find success in the world. Healy made her point some 90 years after the first Montessori school was established.



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Yet, because Dr. Montessori’s work comes from a very different age there are some who question its relevance today, given the very different culture of the early century. The chant goes like this, ‘Ours is a fast-paced, interconnected world. We need an education model that will ready children to live and

succeed in this world.’ This view was discussed recently by Mark Powell in ‘Modernizing Montessori,’ published in *Montessori Leadership* in January 2015. He makes the case for thoughtful integration of technology into Montessori environments as a way of preparing children for life. For the most part he details applications for above age 6, but he sees some limited usefulness in the Children’s House environment. There’s an undertone in his piece that it’s a given that we need to introduce technology, and more of it, into Montessori environments. I’m not so sure I’m ready to jump on that bandwagon as a ‘need’ in Montessori classrooms, and Healy would be equally cautious.

Like many others before, Powell suggests that because Dr. Montessori was (i) a scientist and (ii) a non-conformist visionary (my words), he feels confident speculating that: surely she would have embraced the new technologies of our time.

Dr. Montessori herself once wrote: ‘Times have changed, and science has made great progress, and so has our work; but our principles have only been confirmed, and along with them our conviction that mankind can hope for a solution to its problems, among which the most urgent are those of peace and unity, only by turning its attention and energies to the discovery of the child and to the development of the great potentialities of the human personality in the course of its formation.’

‘Our Principles have been confirmed’. Principles have the wonderful benefit of being general: you don’t have to have every imaginable example available to be able to formulate one; and the principle, once formed, then has the merit of applying to a wide range of specific situations not imagined or even imaginable at the time. Take theft, for example. Once we have the principle that we don’t take other people’s things, we don’t need to enumerate all the things. We do not say that we want to prepare a school for the [child]; we wish to prepare an environment for life...’ Her concern was clearly about ‘preparation for life’ and not merely how to succeed at school. She shared the view of people today that education must be ‘relevant’ and ready children for adult life.

How is Montessori education in the 21st century doing with this? Are Montessori children not only adequately prepared for today’s world, but incredibly prepared?

Dr. Montessori spent a significant amount of time writing about the development of the human being. Her work amounted to laying out the principles of human development. She went into thorough detail about

the actual needs of human development across the span from birth to maturity. Her perspective is much broader than that of most educators and policy makers. In truly looking at *'what is education for?'*, she famously railed against 'the passing on of information' and against 'the mere transmission of a greater amount of information', which were, and sadly remain, the perspective of conventional education.

Dr. Montessori didn't focus on a specific media or device as being essential to education. She said that we need to use what is part of our time and culture because that is our world. But we do so at the developmentally appropriate time. It is not a lack of understanding about technology that keeps most technologies out of Montessori environments, especially at the younger ages; it is an understanding of what is truly essential to human development that does. The typewriter was relevant through much of the 20th century, though most Montessori schools didn't bother teaching that, and neither did most conventional schools prior to high school. This was not a disadvantage to anyone. Typing was a skill required by some and was acquired if and when it became necessary. Using a computer today, a tablet, voice-controlled devices and so on are not challenging things for adults or adolescents to learn and they don't assist in the learning process. Our time with children is better spent helping them learn how to think and to develop the lifelong skills that Healy and Dr. Montessori mention, skills, which today are also being discussed significantly.

The American Montessori Society's position statement on technology inclusion lists the skills/competencies as: digital-age literacy, inventive thinking skills, effective communication skills, and high productivity skills. These are indeed necessary for success in today's world. In fact, these skills have been much talked about in recent years as the real focus of transforming education. Fortunately, though not surprisingly, three out of four of these are exactly what Montessori environments support and produce. They are perfect examples of 'Montessori outcomes': the ability to think critically and divergently, excellent written and oral communication skills and efficient time management with quality work. This is not surprising because when you set out to 'prepare a child for life' you would need to concern yourself with these skills – they are just what success in the world requires.

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Of course, few Montessorians list 'digital-age literacy' as a Montessori outcome, but that is because it comes later, like typing would have 40 years ago. The state of technology today is such that the learning curve is extremely short. Give an adolescent a computer today and they will have it mastered in under a week. The innovators in technology over the past 40 years were not 'digital natives and seem to have moved the rest of us forward quite nicely. My own experience with a computer wasn't until my junior year in a private high school, circa 1980, and that was cutting-edge (public schools didn't have any computers). My point is that learning how to use technology is not a challenge today, and it wasn't in the past.

Let's say a word about this, since children today are being handed phones and tablets from infancy. 'So easy even an infant can master it!' should be the sales pitch. And it's true: a tap here, a swipe there... the human brain is so powerful that these simple gestures are easily absorbed by the youngest child. And today they are doing just this. And that's the shame.

Jane Healy spent significant amount of time researching technology use by children of all ages and wrote

her book *Failure to Connect* as a result. There she discusses not only what the interaction with technology does to the developing brain, emotional life and psychology of a child, but also what experiences are not being seen, and the effect of this loss. There is no shortage of writing of this question. The glazed, blank stare of a child into a screen is too familiar far too often. But, what is operating below the surface, unseen, is where the real danger lies. The passive activities that children are engaging with in the games that they play on these devices leads them towards a lack of emotion regulation, poor inhibitory control (driven by the instant gratification of the games), and a lack of control with the actual world. If we are aiming to help children live healthy, productive lives, these experiences are just the opposite of what we need to offer the developing child.



Washing Cloths

So, returning to the questions: How is Montessori doing with preparing children for today's world and culture? Are Montessori children not only adequately prepared for today's world, but incredibly prepared? There has been significant research over the past fifteen years on these questions, and the summaries are available. The bottom line is that Montessori schools do exceedingly well on all fronts. Research shows not just academic prowess, but things like 'justice' and 'fairness' have been considered. One research undertaking looked at the levels of 'flow' that children in Montessori experience and the results were incredibly flattering. So the data is coming in and it will be heaped on top of the personal, anecdotal evidence that has piled up since 1907. There are more Montessori schools in 2015 than ever before and more growing at both the younger, 0-3 years, level as well as the primary and secondary school levels. Why? Parents want more. Why? Because they know it works.

What is the full list of desired outcomes or competencies for success today? There are numerous lists and sources, and they seem to converge on a list like this: adaptability, intrinsically motivated, leadership skills, excellent communication skills, resourcefulness, problem-solving skills, empathetic, and creativity. There are others, but this is the core.

The amazing thing that occurred when these lists began to be generate and discussed was that they ended up looking like what Montessori schools were already promoting as their outcomes. NOT on the list of 21st century competencies is 'high SAT scores', 'straight-A student' or anything academic at all. It turns out that the world is coming to realise that to be successful in life you need a whole lot more than reading, writing and arithmetic. Dr. Montessori had this figured out in 1907. This is why Montessori education is growing faster than it ever has in the 21st century. It is not old, tired or outdated because it continues to meet the developmental needs of human beings and provides a guided structure to support the development of life-serving, success-building competencies.