

# Using Technology to Adapt to Enforced Quarantine

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We are entering uncharted territory with the imminent possibility of wide-scale school closures. During this time it will be more important than ever that the Montessori community fall back on a forward-looking propensity that goes back to Dr Montessori herself.

Even while it was still an emerging technology, Montessori had produced a “moving picture” about her method, and much of S. S. McClure’s motivation in sponsoring her early visit to the US was in the profits he would realise from gaining exclusive rights to her film.<sup>1</sup> Especially while in India Dr Montessori was fascinated by 16mm films that showed news, cities, natural phenomena, mechanical or scientific apparatus, or attempted to portray history. She supposedly imagined a day when elementary children could load and view film themselves from a library of images and sound.<sup>2</sup>

It’s a fairly safe bet that if Maria Montessori were alive today she would own—and know how to use—a smartphone and a tablet.<sup>3</sup> It’s also more than likely that she would want to use the Internet to remain engaged with students while face-to-face contact is not possible. Among our trademarks have always been her hands-on manipulatives and the respectful nurturing that comes from face-to-face contact with children. School closures will necessitate a change in our toolkit and a return to Dr Montessori’s unique experimental approach that gave rise to her revolutionary methods.

Digital technologies and the Internet offer ways of keeping the flaming imaginations of our students alive during this global pandemic. However these technologies were not available during Montessori’s lifetime and the Montessori movement as a whole has been somewhat reluctant to address the question of how best to use ICT to complement our programs. Now that we have to, the question is how do we use these new tools while staying true to Dr Montessori’s guiding principles?

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<sup>1</sup> Povell, Phyllis. *Montessori Comes to America: The Leadership of Maria Montessori and Nancy McCormick Rambusch*. (New York: University Press of America, 2010), p. 31.

<sup>2</sup> This anecdote was related by Tim Seldin, President of the *Montessori Foundation* and later corroborated by Elena Dompè of the *Opera Nazionale Montessori* in Rome. According to her, the importance of educational films was dealt with in the July-August 1932 issue of the *Montessori: Rivista bimestrale dell'Opera Montessori* (pp. 235-238), a bimonthly magazine of which Dr. Montessori was director. The magazine even suggested that teachers themselves should make these kinds of films for their students!

<sup>3</sup> A 2010 AMI position paper on digital technology concurs, at least in principle: “It would be safe to say that Maria Montessori would view the iPad as a tool for tomorrow’s mind. She said, “Give the world to the young child,” and this new technology has the potential to do this.” Virtual vs. Reality: Montessori Education and Today’s Technology, in *AMI/USA News*, Vol. 23, No. 4 (Fall 2010). Perhaps a more interesting question is whether she would prefer the centralised quality control of the *Apple* ecosystem, or the more open invitation to uninhibited (and sometimes less reliable) innovation allowed *Android* developers. If she were to act privately with the same scientific mind that she exhibited publicly, she would surely have tried out both to see which platform best suited her needs.

There are four key attributes that have always been important for inspiring learners of all ages. They can motivate separately or in tandem in different learning activities. Their appearance changes as children get older, but they can be seen in quality Montessori classrooms at all levels:

1. *Autonomy*: All human beings thrive when allowed some control over their own activities, especially when their attention is not compromised by distractions. Young children are not shy about demanding the freedom to choose.
2. *Authenticity*: All human beings want to feel that their work counts, and all children want to do things that matter, things that their parents do.
3. *Connection*: All children crave interaction and connection with their parents, but as children get older they increasingly value connection with their peers over parents and teachers.
4. *Inquiry*: Learning is inherently interesting when it involves a higher order problem or question posed in a way that is compelling or relevant to children of a certain age, or when it arises from their own experience.

Digital technology can be used to engage learners of all ages in activities that have one or more of these four attributes, even in Montessori classrooms. Just as digital learning tools can be used in ways that don't engage students or encourage critical thinking skills, so can traditional Montessori materials. What follows are a few examples of ways that digital technology that can bridge the isolation of the coming quarantine without compromising Montessori principles.

**Video conferencing tools** are essential to staying connected with students during enforced isolation. Many video conferencing companies such as Zoom [are suspending some of their usual restrictions](#) during the pandemic to allow teachers to make use of this technology. If students or their parents have access to this technology at home, teachers can schedule lessons with various groups throughout the day just as they would be "called to the rug" for a lesson. Whole class meetings may also be scheduled to help isolated students feel connected and to help give parents at home an opportunity to tend to their own online needs. Other online collaboration platforms include [Skype](#), [Teams](#), [Hangouts Meet](#), [Lark](#) and [Dingtalk](#).

**Digital learning management systems** such as [Google Classroom](#), [Moodle](#), [Schoolology](#), [Edmodo](#) or [ClassDojo](#) are especially useful for older students who have their own devices and email accounts. These tools help classes connect remotely and deploy the power of digital tools to keep things organised and highly productive.

**Self-paced online learning sites**, such as [Khan Academy](#), [OneCourse](#), [Duolingo](#), [Quizlet](#), [Discovery Education](#), [Study.com](#) and [YouTube](#), among many others, offer ways for students who have mastered reading to engage in self-paced learning or follow-up suggested by their teachers. Many offer large repositories of educational resources tailored for different learning levels.

The Coronavirus pandemic also offers Montessorians an opportunity to explore aspects of learning that we don't traditionally focus on in our classrooms. **Video as a reference resource** is perhaps the most underutilized low-hanging digital fruit

available to Montessori elementary classrooms. A well-chosen video can bring alive topics that are too ancient, too far or too small to be experienced directly. Of course, watching a video is not as effective as experiencing something directly, but watching a video about Aboriginal History (such as [First Footprints](#)) for example, is a richer experience than listening to someone try to describe it!

Many educational videos are inappropriate for Montessori classrooms because they are either too passive or too distracting, however there are a few gems out there. Some of my favourites include [Families of the World](#) and [Microcosmos](#). Appropriate videos let the viewer witness their topic audio-visually with minimal background music or distracting voiceovers that try to force conclusions on them. We can also teach students to take **bullet point notes** while watching videos to get the most out of them. It may help younger students to be given pre-written notes that are missing keywords which they need to fill in while watching.

**Reading** can also become more of a focus during this time. [Literature Circles](#) are well-served by some of the video conferencing apps listed above. Students might select books in online meetings and teachers can send home copies by mail. Students in each book group choose to read a passage of 20-30 pages each week and take on roles such as *Discussion Director*, *Connector*, *Passage Picker* or *Word Wizard* that facilitate discussion of the passage when the group meets.

Although for younger readers there's nothing quite like turning the pages of a beautifully illustrated picture book, the Internet has many collections of digital books and stories accessible from mobile devices, including [StoryWeaver](#), [Worldreader](#), and the [Global Digital Library](#). Younger emergent readers might also record themselves reading using iOS apps available on any Smartphone. Students can listen to themselves reading, or their recordings can be used by teachers for diagnostic purposes. With a few more steps, these recordings can be downloaded into a folder on *iTunes* and later synced with a classroom iPod where they are available for peers to use as homemade audiobooks.

During this time away from the classroom students in Years 3 and up might also focus on learning to [keyboard](#), a skill that has become increasingly important but which is often given short shrift in Montessori classrooms. Those students who can already touch type can use their bullet point notes to work together on **collaborative essays and projects** using [Google Docs](#). Students might also use tools such as [blogs](#) to keep a diary of their lives during this very unusual time in human history.

Although it won't be possible for students to continue use of Montessori classroom maths materials during the pandemic, Montessori teachers might instead increase our focus on aspects of mathematics which we normally don't focus on. This might include [pattern recognition](#), which can be done visually rather than with hands-on manipulatives.

Younger students or those who are less able to access digital technologies can be served by sending their parents activities that involve simple hands-on manipulatives that can be created from items found at home. The [Family Math series](#) by [Marilyn Burns](#) offers great activities for younger children that approximate the learning

experiences they might have in Montessori classrooms. They are also great ways for parents to engage with their younger children in learning mathematics.

The Internet also offers a smorgasbord of **collaborative inquiry-oriented projects** such as [WebQuests](#), which allow students around the world the opportunity to work together toward a single goal. They emphasise higher-order thinking skills, rather than just acquiring information, and may include writing projects, creating travel guides, building databases of information for experiments, or creating polls or surveys.

In the Information Age, **programming** is increasingly becoming part of what it means to be “literate” and yet coding is rarely seen in Montessori classrooms. Freeware programs like [Scratch](#) allow children to learn programming concepts by building computer games of their own design without having to learn a coding language, then share them online with others who are free to tinker with programs written by others. There are also [drones that can be programmed using Scratch](#), a fun activity for playtime in the 21<sup>st</sup> Century!

Some teachers may find that once the quarantine is over they want to continue using ICT in some of the ways they experimented with during the pandemic. Bringing digital experiences thoughtfully into the Montessori elementary classroom brings our students’ classroom experience in line with their experience of the world outside. It gives the world to the child—in Dr. Montessori’s words, it fits our students to take part in a civilisation that is increasingly dependent on machines.