Enhancing Child Development
Instead of Replacing It
I want to focus on three largely ignored issues (among many) that grow out of a fundamental examination of the human-technology relationship.

We might call the first problem one of ‘dead symbols’. Digital technology can provide enormous amounts of information for learning. But there is a huge qualitative difference between learning about something by consuming and manipulating symbolic information (what digital technology traffics in), and learning from something, which requires entering into a potentially rich and complex relationship. A computer can inundate children with mountains of information about trees, for example. But children learn from a tree by peeling its bark, climbing its branches, jumping into its piled-up leaves. These first-hand experiences are enveloped by feelings and associations—muscles being used, sun warming the skin, blossoms scenting the air.

Immersion in screens from birth is the reality, but that doesn’t mean that the discussion should end. We asked Professor Lowell Monke, co-author of Breaking Down the Digital Walls, to share his thoughts about what kind of education is really needed to prepare students for the world they will face in the future.
Without these physical and emotional associations, the symbolic representations, no matter how vivid, are merely disconnected pieces of data. As cultural anthropologist Gregory Bateson put it, consuming symbols without knowledge of what they symbolise ‘is like eating the menu instead of the meal’. It is true that we protect what we love. And it is nearly impossible to love something we have never ‘tasted’.

But what about all of the technical skills children need to learn? Here we need to consider what I call the substitution problem: the tendency for a tool to replace rather than enhance human skills when relied upon too early. We have already seen examples of this problem: children who learned to use a calculator but couldn’t add, a spellchecker but never learned to spell. We are only beginning to witness the more serious consequences of young people who learned to use social media without first learning how to appropriately socialise.

This points to the third issue: the problem of maturation. For centuries, children became grown ups by being immersed in a grown-up world, learning through imitation and attention from caring adults. Schools were invented, in part, to compensate for the lack of exposure and instruction in the use of symbols. That has changed dramatically in the last 70 years. In the U.S., children of all ages spend over 9 hours a day engaged with symbols on screens and very little time with more mature people. Communicating with adults through social media is clearly no substitute. In fact, the difference between learning about and learning from is even more stark here, where non-verbal cues, tone of voice, on-going personal relationships and community context are so crucial to modeling appropriate behavior and attitudes.

Thirty years ago the U.S. actually began putting technology at the centre of education. Billions of
educational dollars were reallocated to that end. It was sold through the promise that our children would become better prepared for a global, high-tech society. How did that experiment turn out? Soaring test scores? Zooming up the educational rankings of nations? Exporting thousands of tech workers? None of that has happened.

Meanwhile, civility in the U.S. hovers on the edge of extinction as racism and bigotry are charging out of the shadows. In my state of Colorado, schools filled with expensive technology have so little money to pay teachers that many rural schools only operate four days a week. The most remarkable characteristic of the millennial generation is how difficult it is to get them to move out of their parents’ homes. And we elected a president who dismisses the scientific evidence of climate change and routinely employs social media to insult and bully both his opponents and his allies. Our grand experiment seems to be producing a populace stuck in perpetual adolescence.

I am convinced there is a connection between all of this and the fact that children are no longer immersed in a society filled with people, nature and simple devices that lend themselves to exploration by curious minds. Instead, they are surrounded with indecipherable machines that traffic only in symbols of a world with which they have little connection and less interest.

It would do us well to once again invoke the compensatory function of our schools, this time in reverse, creating a school environment saturated with all that is missing from that world of screens. It would also help if we shifted the debate from whether technology should be at the center of education to when. I actually think that technology should gradually become a central focus for high school youth (ages 14-18). But preparation for that requires a long gestation period. Childhood should be a time for learning to be human, immersed in the real world of objects, nature, caring adults and communities. If we do that for our children, perhaps they will be able to stop asking how to prepare their children for a technological world and start asking how to prepare technology for their children.

Professor Lowell Monke has been teaching young people with and about technology for nearly 30 years. He is co-author of Breaking Down the Digital Walls: Learning to Teach in a Post-Modem World.