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When tablet turns teacher

By Gillian Tett

'Aid groups might do better just to give out mobile phones and laptops with self-teaching games'

A couple of years ago, I took an iPad home for the first time. It was a humbling experience. Within minutes, my two young daughters had seized on the device, and were handling it with far more dexterity than me. So much so, in fact, that whenever I am flummoxed by a tablet or phone today, I give it straight to my kids to sort out. And if we are ever trapped in a car, train, queue or anything else, I am apt to hand over my phone, BlackBerry or iPad, and let them play games, take pictures or simply explore. It is the fastest way to buy peace.

But does their dexterity arise because my children are "digital natives" – kids who have grown up in a world surrounded by mobile phones and keypads? Or is the ability to decode an electronic gadget innate to all young human brains, irrespective of where they live?

These are the fascinating questions which a group of Boston researchers are currently exploring in the unlikely setting of Ethiopia. A few years ago, Nicholas Negroponte, a former luminary of MIT, cofounded a group known as One Laptop per Child, which (as I noted in an earlier column) has been distributing ultra-cheap computers to the world's poor as part of an educational campaign. This has boomed in places such as Uruguay. But now Negroponte and Matt Keller, a fellow researcher who previously worked with the World Food Programme, have launched an experiment so bold it might be science fiction.

Six months ago, they dropped dozens of boxed iPads into two extremely remote villages in Ethiopia, where the population was completely illiterate, dirt poor and had no prior exposure to electronics. They did not leave any instructions, aside from telling the village elders that the iPads were designed for kids aged four to 11. They also showed one adult how to charge the iPads with a solar-powered device. Then the researchers vanished and monitored what happened next by making occasional visits and tracking the behaviour of the children via Sim cards, USB sticks and cameras installed in the iPads.

The results, which will be unveiled in Boston later this month, are thought-provoking, particularly for anyone involved in the education business. Within minutes of the iPads

landing among the mud huts, the kids had unpacked the boxes and worked out how to turn them on.

Then, in both villages, activity coalesced around a couple of child leaders, who made the mental leap to explore those tablets – and taught the others what to do. In one village, this leader turned out to be a partly disabled child: although he had never been a dominant personality before, he was a natural explorer, so became the teacher.

The discovery process then became intense. When the children used the iPads, they did not behave like western adults might, namely sitting with a machine each on their laps in isolation. Instead they huddled together, touching and watching each other's machines, constantly swapping knowledge. Within days, they were using the pre-installed apps, with games, movies and educational lessons. After a couple of months, some were singing the American "alphabet song" and recognising letters (at the request of the Ethiopian government, the machines were all in English). More startling still, one gang of kids even worked out how to disable a block that the Boston-based researchers had installed into the machines, which was supposed to stop them taking pictures of themselves. And all of this apparently happened without any adult supervision – and anyone in those mud huts having handled text before.

This experiment still has much further to run, and has not been independently audited. But the researchers have already drawn three tentative conclusions. The first is that, "no matter how remote children are, or how illiterate their community, they have the ability to figure out sophisticated technology," as Keller says. Second, and leading from that first point, technology can potentially be a potent self-learning tool. And third – and more controversially – Keller concludes that "getting kids access to technology may be much more important than giving them schools." Instead of pouring money into shiny buildings and teacher training, in other words, aid groups might do better just to distribute mobile phones and laptops with those self-teaching games.

Many people would dispute that. After all, the technology world is full of hype; and some economists and development experts such as C.K. Prahalad have questioned whether poor communities can truly derive the benefits of modern technology without help. Singing an "alphabet song" is one thing; reading calculus is quite another.

But at the very least, Negroponte and Keller's experiments raise two further questions in my mind. First, what is all this technology doing to our kids' neural networks and the way future societies will conceive of the world? Second, and more practically, could these lessons about self-learning be applied to the west? Should someone who worries about the failures of the US education system to reach the American poor, for example, be looking to iPads – and not just teachers' unions – for a possible solution?

The answers are not clear. But the next time my kids grab my own devices, I may not feel quite so much parental guilt. Those devices may now be unleashing an evolutionary leap – with consequences that my (tech-challenged) generation can barely decode.

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