You Say You Want an Education

Using technology and curiosity to educate the world

Maren Larsen

The world youth literacy rate has reached an impressive 90 percent, according to UNESCO. The adult literacy rate is tails close behind, at 86 percent. But in a world with a population of 7 billion people and growing, that leaves more than 700 million with drastically limited access to the eponymous resource of the information age.

As one would expect, illiteracy is disproportionately concentrated in developing countries. Education is hindered by unreliable access to electricity, underdeveloped resources, the inability to properly train or retain teachers, and other social and cultural factors. Inevitably, the lack of education stifles development, perpetuating a vicious cycle many countries are having trouble escaping. While up-to-date literacy statistics are not available for every country, UNESCO reports that sub-Saharan Africa consistently has the lowest youth literacy rate in the world: It hovers around 70 percent and has improved less than that of the two next lowest regions – South and West Africa and the Arab states, respectively – over the past decade.

In 2000, UNESCO’s Education for All movement set global goals regarding early childhood care and education, primary education, adult literacy, educational access, and gender equality. In 2015, the year the goals were set to be accomplished, UNESCO reported that sub-Saharan Africa did not meet its educational goals, though significant government commitments and some gains were made.

In that same timespan, the developed world has made technological leaps and bounds in internet speed and content, 3D printing technology, wearable devices, and transportation, all while the literacy rate in these regions creeps towards 100 percent. These literate people with access to technology are contributing to and drawing from the internet, deepening their global knowledge every day. So the question remains: What can we do to bring education the people who need it most and include them in the information age?

The two most effective tools in the fight against illiteracy are technology and the curious and collaborative nature of the human mind. Let’s use them.

Sugata Mitra, a professor and education researcher, was the winner of the 2013 TED Prize for [his talks about minimally invasive education](http://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud), a practice he developed that involved placing computers in remote locations – and just leaving them be. These computers, which began as part of his 1999 Hole in the Wall Experiment, resulted in measurable self-education by the children who had access to them.

Mitra’s claim is a bold one: give a group of children content, technology and encouragement, and they will teach themselves. Children involved in his research were able to teach themselves how to browse, how a computer works, basic English, and even the complexities of DNA replication by simply working with a computer and each other.

The move towards self-education and experiential learning through the use of technology can be seen in countries with established educational systems as well. The prosperity of the TED organization as a whole points to a human desire to learn outside of the standard classroom environment. Many people opt to teach themselves to code through online forums, programs and experimentation rather than in traditional classroom environments. MOOCs, too, are an example of this, though the measures of their success differ greatly depending on who’s doing the measuring and what we consider learning to be.

Of course, there are criticisms of Mitra’s approach. Many current problems with education in remote or developing areas can be attributed to a lack of infrastructure and resources like electricity and internet access, which makes placing computers like those used in the Hole in the Wall Experiment difficult. But that was 15 years ago. Technological improvements made since Mitra’s original experiment, particularly in areas like solar energy, wireless internet, and computer efficiency and cost, could lower these barriers.

Some seem to be in disbelief that poor, uneducated children could achieve such milestones on their own, saying anecdotally that the children were motivated by a desire to be entertained, not to learn. But Mitra’s research in rural India shows real promise. Children’s curiosity about the informational capabilities and, yes, the entertainment capabilities of the computers led to accelerated learning of computing skills.

Is a hatred of learning really so deeply embedded in our culture that we begrudge kids who have fun while doing it? Education is a necessity, and if motivating children through entertainment is more effective than explaining the long-term personal, national, and global impacts of illiteracy, then so be it. The beauty of the internet is that it can be both educational and entertaining.

Others have likened Mitra’s vision to that of One Laptop Per Child (OLPC), which was criticized for an approach characterized as “dump hardware in schools, hope for magic to happen.” OLPC’s extensive efforts in Peru were evaluated by the Inter-American Development Bank, which found no improvement in Math and Language test scores but some positive effects on cognitive skills. Some deem these results damning for the success of the program, but an improvement in cognitive skills, regardless of its impact on test scores (which are constantly called into question as markers of academic achievement even in countries with developed educational systems) is still an improvement.

Additionally, though Mitra’s original experiment did simply drop computers in remote areas, his approach has expanded in recent years to incorporate a supportive learning community. His new project, the School in the Cloud, uses self-organized learning environments (SOLEs), which combine groups of children working together on computers with encouragement and guidance from teachers (sometimes based remotely). “It’s not about making learning happen; it’s about letting it happen,” Mitra says of the project.

This goes beyond dumping technology on children and expecting a miracle by incorporating a creative and open-ended teaching method to help guide students’ efforts. The teacher is still there, but his or her role has changed. The School in the Cloud has an online presence that is accessible worldwide, but most of its work has been focused in the U.K. and India.

If we want to help developing countries around the world, particularly those in sub-Saharan Africa, to reach their educational goals in the coming years, we need to build on the technological resources humans have created, our innate curiosity, and our desire to collaborate. Sub-Saharan Africa has its own unique set of circumstances, and there is no doubt that the models which have worked in India will run into new roadblocks in a new environment. But each time we introduce and evaluate a new educational solution, it improves. Projects have evolved from a focus on technology (with the Hole in the Walls and OLPC) to a focus on learning (with the School in the Cloud), and they’re on the right track.

It’s 2016. Though UNESCO’s goals weren’t met in the first 15 years of this century, we must continue to tackle them in the coming ones. By focusing technological and creative efforts on the issue of education, we can increase literacy rates and bring people in developing countries online, into the interconnected, creative, and free world of the web. An online education transcends national borders and widens the scope beyond the viewpoint of just one teacher or one nation. This is our best opportunity to break the education-development catch-22, bringing the world and all of its citizens into the global information age.