

The Future of Learning

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Sugata Mitra, 2013 TED winner, believes schools must allow children to learn on their own with the help of internet



Sugata Mitra (picture credit Wikipedia)

Prof Sugata Mitra is a professor of Educational Technology at the School of Education, Communication and Language Sciences at Newcastle University, UK. He is drawn to self-organising systems, especially for primary education. He shot to the limelight with his Hole-in-the-Wall experiment (1999) at a slum in New Delhi, where a computer was installed and left for children at the slum to play with, and hopefully, learn something from. The results were startling and led to him being awarded the TED prize in 2013. What's more, this project inspired Vikas Swarup to write his debut novel that went on to become the Oscar winner in 2009 — Slumdog Millionaire. He is a PhD-holder in physics credited with more than 25 inventions in the area of cognitive science and educational technology and also chief scientist, Emeritus, at IIIT. With experience across many disciplines over 30 years, this 61-year-old is just getting started.

What is your view of our school system?

Data processing dates back to the middle of the twentieth century, when the only information and communication technology available were people. Therefore, data was written on paper, moved and processed by people, a system which was perfected by the Victorians in the British empire. This robust system — networks of identical human computers, sitting in identical buildings across the continents — worked and created most of the world we live in today. Identical people are the key here — ones who would fit into the right place in the machine, anywhere on the planet. Schools were designed to produce these people. With identical curricula, pedagogy and assessment systems, they were designed to be efficient engines that would convert children into identical people in about ten years.

With reading, writing and arithmetic as predominant skills, knowledge would be contained in books and stored in human brains. Schools, therefore, would ensure the storage and retrieval of information, the salient points for which would be decided by the government, major religions and the military. This very concept was mimicked to make the digital computer, which was later connected to telephones. The Internet emerged and spread so rapidly, there was no time to dismantle old machinery. Schools continued to churn out identical products, parts for a gigantic human computer that no longer exists and is not needed.

[Where are we now?](#)

Within a few decades of the Internet age, institutions began to dematerialise the banking sector, entertainment, money, etc, within the evolving Internet that is now called The Cloud — omnipresent and indestructible. In a few more decades, it will probably be sentient, non-material and, therefore, eternal.

[Your experience with the Cloud?](#)

In 1999, I accidentally glimpsed The Cloud through an experiment often called 'The Hole in the Wall'. I found that groups of Indian street children would learn to use computers and the Internet by themselves, with little or no knowledge of English and having never seen or used a computer before. My experiments ran for five years and I learned that groups of children can educate themselves with the use of the Internet, if you would let them be. By 2009, it was possible to 'beam' teachers to places where they could not or did not want to go. I made a 'granny cloud' of retired school teachers who would encourage children to learn by themselves. By 2012, teachers around the world were using SOLEs, 'self organised learning environments', where children would group around Internet connections to discuss big questions. The teacher would merge into the background and watch as learning happens.

My favourite question to them is, 'Why do we have five fingers and toes on each limb? What's so special about five?', which I once asked a group of 10-year-olds in the little town of Villa Mercedes in Argentina. The answer would surprise you. Now, ask a child, 'How do you multiply two numbers?' 'With my phone', he says.

What do you think is the next step?

We need a curriculum of Big Questions, a pedagogy of self-organised learning, examinations where children can talk, share and use the Internet, and new peer assessment systems. People don't need to be machines anymore. In the Age of The Cloud, schools have to become Schools of The Cloud. Governments may find this hard to execute, but teachers can, if they stand back and let the Cloud in. For more on the Hole-in-the-Wall project, visit www.hole-in-the-wall.com.

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Watch [Sugata Mitra](#) TED video about [how children teach themselves](#)