

Met Film Production  
presents

# THE SCHOOL IN THE CLOUD

A feature documentary by Jerry Rothwell



Running Time: 85 mins

## **PRESS KIT**

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## **SHORT SYNOPSIS**

What is the future of education in a networked world? Indian professor Sugata Mitra calls for a revolution in how and what we learn. With a global network of information a few clicks away, Mitra argues that the Victorian model on which our school systems are based is obsolete.

*School In The Cloud* follows a three year experiment as Mitra installs unmanned internet kiosks in locations ranging from remote villages in West Bengal to a school in north east England, to enable children to self-organise their learning.

Jerry Rothwell's film explores the impact of Sugata's work, predominantly through the experience of children in the remote Indian village of Korakati in the Ganges Delta. As children encounter the internet for the first time, will they be able to use it to transform their futures?

## **DIRECTOR'S STATEMENT: Jerry Rothwell**

I first came across Sugata Mitra's work through his viral [TED talk](#), a provocative and engaging dissection of the flaws in traditional education in the internet age. "Is knowing obsolete?" he asked, proposing a different, less prescriptive and more child-centred approach, focused on critical thinking and group achievement, rather than our current obsession with curricula, exams and measurement.

Mitra had just won the \$1 million Ted Prize, which was to fund a three year experiment putting his ideas into practice by building seven 'Self Organized Learning Environments' (SOLEs) in India and the UK.

With a grant from the Sundance Documentary Fund, I wanted to record that experiment as it unfolded. I was interested in how Mitra's ideas might be translated into unforgiving reality, in which social, economic and cultural factors play as big a role as technology and theory. Much is said about disruptive innovation, but less of those whose lives are being disrupted.

The film interweaves Sugata's idea about 'minimally invasive' education - which draw on chaos theory, physics, psychology and social theory - with the experience of children in rural West Bengal, many of whom had never encountered computers or the internet before, and those in the UK, for whom the internet is seamlessly woven throughout their daily lives. What happens to a remote Indian village when its children get connected to the internet for the first time? What happens in a Western-style school, when a lab gets built which allows children more freedom to discover?

Mitra is often accused of naivety about the way children learn, but in my view the power of his ideas – even if utopian – is in their challenge to education systems that have failed to appreciate how the internet has changed the world. During the film we see both the difficulties of implementing his ideas of self-organised learning in remote locations and their potential for children itching to explore the world.

The film asks broader questions about the impact of technology in education and the conflict between tradition and modernity. The children's activities on the screen – games, searches, skype calls – gradually open up a universe beyond the familiar confines of the village. Their discoveries parallel those of Sugata Mitra, as he reworks his core ideas based on events in the pilot labs – which after all, is what experiments are for.

## **STORY**

The film begins in Korakati, a remote community in India's Ganges Delta, a place without internet or electricity, where most families survive through subsistence farming. There is no primary school in the village so parents come together to teach the younger children, who spend their classes learning rote phrases in English they don't understand. A landowner in the village, Nitish Mondal, has heard about the plans of a professor, Sugata Mitra, to pioneer remote education in rural areas and persuades him to bring his 'School In The Cloud' to the village.

Mitra is an educationalist whose TED talks have gone viral. He argues that the internet enables children to determine their own learning. He has recently won the \$1 million TED Prize, which will help him scale his ideas worldwide, beginning with seven centres, or 'Self Organised Learning Environments' (SOLES), in locations in India and the UK. He agrees to bring one his pilot projects to Korakati, despite the difficult location.

Mitra's theories originated in an experiment in the late 1990s, when he placed an unmanned computer in a slum in Delhi, the 'Hole In the Wall'. Children who didn't go to school or know what the internet was, started to learn to use the computer, without instruction. Sugata's conclusion was that learning emerges from children's desire to discover, that the learning is deeper with minimal intervention and that education in the modern world needs to allow self-organisation to use the internet to learn. A physicist by training, he draws on chaos theory: groups of children, without a teacher, operate like a hive or a thunderstorm to learn collectively. *"Is learning something that happens at the edge of chaos?"* he asks.

In a school in a deprived area of North East England, Sugata works with Year 8 students to plan what a 'School In The Cloud' might look like. They come up with a design and the school helps him to build and test it. For some teachers, the prospect of children directing their own learning is challenging, but for others the SOLE begins to change the way they teach, and the assumptions they make about their students.

As Mitra starts to build more 'Schools in The Cloud' in West Bengal, Priya, Mridul and Krishanu, three young people expected to follow in their parents' footsteps, watch its progress excitedly. Priya looks on as the building takes shape in her village, Chandakona: *"This will turn me from a village girl into a modern girl"* she hopes. But building in Korakati is difficult, with each brick and pane of glass needing to be transported from truck to boat to motorcycle before it reaches the village.

Not far away, in Gurjola, one of the original 'Hole In the Wall' experiments now lies derelict. In fact, nearly all of the initial Hole In the Wall projects are no longer working, plagued by maintenance problems, the disenchantment of local parents and opposition from local educators. In Gurjola, adults remember foreign media coming when it was installed, but after a few months, the computer broke down and nobody fixed it. Unsustainability is only one of the criticisms aimed at Mitra by his detractors. His work is controversial because it argues for the dismantling of the education system as we know it, changing the role of teachers, and getting away from a set curriculum. Sugata is well aware of his critics, even publishing their attacks on his own facebook page.

Despite its problems, for Mitra, the Hole In the Wall proved a fundamental concept about children's ability to learn unsupervised as a group. As his ideas evolved and he began a series of experiments in UK schools, creating 'self-organized environments' (SOLES) where children would research 'big questions' which drove their learning with minimal intervention from a teacher. The latest iteration of these ideas is 'the School In The Cloud'. Approaching retirement, the validity of his life's work is at stake and he is determined to gather the data to prove his theories.

In Newcastle, the School In The Cloud has been open for a year and is beginning to transform the school. We see SOLE sessions in action. Mitra's methods involve the posing of an apparently simple question that leads to complex research on the part of the children. "How Do You Measure A Mountain?" leads to an exploration of trigonometry. 'Why Is A Teardrop Round at the Bottom and Pointy at the Top?' invites discovery of gravity and resistance.

At the same time in India he begins to recruit e-mediators to help children learn English over skype, because so much of the internet is in English. As his technical team are try to overcome the problems of maintaining internet connectivity to the village, the Korakati SOLE finally opens in an excited and optimistic celebration.

In her home in Hackney, Liz Fewings stirs a cup of tea and starts up her ipad. Soon she is talking to a group of children 4000 miles away, reading them stories and helping them with their English. At the end of her teaching career, she still felt she had much to give, but no setting in which her skills seemed to be needed. She answered Sugata's newspaper advert and project has given her a new focus in retirement. Sugata's project now has the support over 200 'grannies' - a group that has become known as 'the Granny Cloud'.

But in Korakati, the internet fails frequently and the children become more preoccupied in pre-loaded computer games. One consequence of this is that boys start to dominate the labs. In nearby Chandrakona, Priya's parents forbid their daughter from going. If this is the future of education, perhaps girls will continue to be left out.

A fast broadband connection fixes the problem and the appointment of co-ordinators to manage the labs helps them function again. But just as he is beginning to learn English from the lab, Krishanu's father falls terminally ill and cannot work. The family need the medical expenses to treat him and Krishanu, still only 14, decides to leave the village to join his brother in a distant city, Murshidabad. There he will try and find a new school, and a job through which he can support his family.

Mitra meanwhile is beginning to see how change in the education system requires a rethink of the way assessment is rooted in exams. The passing of exams has become the organizing principle of schools throughout the world. If we are to embrace the potential of the internet in education, we need also to rethink what knowledge needs 'to reside in your head'

In Korakati, Mridul remains able to commit to the lab. Through it he learns both English and computing, spending hours on Google Earth discovering global megacities, and discovering what it might mean to become a computer engineer. Priya begins both to learn English and to explore the career she is interested in - as a policewoman. It's an ambition that will take her far from the future her family has mapped out for her. As the experiment draws to a close, Mridul prepares to leave the village, to build his future elsewhere, an opportunity he would not have had without the School In The Cloud, but one which perhaps will deprive the village of another of its young.

## CHARACTERS



**SUGATA MITRA** is a Professor of Education at Newcastle University, who started his academic career as a physicist, working on subjects as diverse as battery technologies, neural networks in Alzheimers and developing the 'Yellow Pages' industry in India.

In 1999, he conducted his first 'Hole In The Wall' experiment, when he carved open a wall in the research facility where he worked in New Delhi and installed a computer that could be accessed by children from the adjacent slum. Without instruction, children who barely went to school and didn't know what the internet was, started to use the computer to discover solutions to the problems it presented them. The Hole in the Wall experiment inspired Indian diplomat Vikras Swarup to write his debut novel 'Q&A', which later became the movie *Slumdog Millionaire*.

Over the next ten years he refined and developed the ideas initiated by the Hole In The Wall into a theory of Minimally Invasive Education, enabling children to self-organize their learning in groups around a 'big question', using the internet. He argues that in the internet age, our conventional modes of schooling are outdated

Building on this research and on viral TED talks he gave about in 2010 and 2013, Mitra embarked on a much more advanced experiment - the 'School In The Cloud': standalone, unmanned physical labs in locations ranging from rural West Bengal to Gateshead in the UK.



**MRIDUL** is 12 when he watches Sugata's lab gradually taking shape, wondering what it will mean for him. When the room gets the internet he quickly finds it's a place to explore maps, cricket scores, watch Charlie Chaplin films. His English rapidly improves and he becomes an organizer of the other children in the

village, helping them when they take part in Skype sessions with the English-

speaking mediators. A studious child, the lab offers him something that school doesn't... opening up a new world.



**KRISHANU** is a 12 year old boy whose father is a fisherman and whose mother has high hopes for her son's education. *"But what use are dreams"* she says at the start of the film *"in this place where there are no opportunities."* Krishanu is optimistic he can learn and, through his skyped conversations with retired primary

schoolteachers, he begins to learn English. But when his father falls ill, Krishanu has to leave his home village and travel to the city where he can continue his education and hopefully earn a wage to support the family.



**PRIYA** is 13, the daughter of a truck driver who is away from home for long periods. When the SOLE arrives close to Priya's family home she is excited. *"This place "will turn me from a village girl into a modern girl."* The threat of an early marriage hangs over her if she fails to achieve highly in school. Her ambition is to become a policewoman,

which would take her far from the future her family has mapped out for her.



**NITISH MONDAL** has donated the land in his village, Korakati, on which the School In The Cloud will be built. An enthusiastic supporter of Sugata, he sees the lab as a tool to take his village into a different future, providing an education its young cannot access at present.

## **BIOGRAPHIES**

### **JERRY ROTHWELL - DIRECTOR**

Jerry Rothwell is a filmmaker whose work includes the award-winning feature documentaries: *How To Change The World*, about the founders of Greenpeace; *Sour Grapes* (co-directed with Reuben Atlas) a film about a wine counterfeiter; *Town of Runners*, about two girls in an Ethiopian village who aspire to be athletes; *Donor Unknown*, about a sperm donor and his many offspring; *Heavy Load*, about a group of people with learning disabilities who form a punk band, and *Deep Water* (co-directed with Louise Osmond), about Donald Crowhurst's ill-fated voyage in the 1968 round the world yacht race. His latest film is *School In The Cloud*, about Ted Prizewinner, Sugata Mitra. His work has won numerous accolades including two Grierson Awards, a Sundance Festival Special Jury Prize, an RTS Award, the IDA Pare Lorentz Award and a BAFTA nomination.

At Met Film Production, he has exec produced and worked as an editor on numerous feature docs including Dylan Williams' *Men Who Swim* (now a fiction feature starring Rob Brydon), Sarah Gavron's *The Village At The End Of The World* and Giovanni Buccomino's forthcoming *After A Revolution*.

### **AL MORROW - PRODUCER**

Al Morrow is Head of Documentary at Met Film Production. Her latest film is *Sour Grapes* directed by Jerry Rothwell and Reuben Atlas for Netflix, Arte, VPRO SVT, DR, NRK and YLE. She produced the 2016 Grierson Award-winning *How To Change The World* directed by Jerry Rothwell (Sky Atlantic/BFI/Impact Partners/CTV), which premiered at the Sundance Film Festival 2015, where it won a World Cinema Special Jury Award, the IDA Pare Lorentz Award for 2015, and was the Winner of the Sheffield Doc Fest 2015 Environmental Award. Previous films include Jeanie Finlay's films *Pantomime* (BBC Storyville), and the BIFA-nominated *The Great Hip Hop Hoax* (BBC/Creative Scotland); BAFTA-winning director Sarah Gavron's *Village At The End Of The World*, which premiered at the 2012 BFI London Film Festival and was released through Dogwoof; Jerry Rothwell's *Town of Runners* (ITVS/Britdoc C4), which premiered at the 2012 Tribeca FF, and was also released through Dogwoof Distribution; the Grierson-nominated films *Donor Unknown* (More4/ITVS/Arte), winner of the Audience Award (online) at Tribeca Film Festival 2011; and *Men Who Swim* (BBC Storyville/Arte/SVT/VPRO), winner of the Audience Award at Silverdocs 2010; *Heavy Load* (BBC Storyville, IFctv, ITVS); and *Deep Water* (Pathe/UKFC/FilmFour), winner of the Grierson Award for Best Cinema Documentary.



## **DANIEL DEMISSIE - PRODUCER**

Daniel Demissie is a British Ethiopian producer who co-produced Jerry's theatrical documentary *Town of Runners* (Britdoc C4 Film Fund, PBS, Arte) which premiered at Tribeca Film Festival. Dan is a graduate of the prestigious producing course at the National Film and Television School in London and prior to that of the producing course at Met Film School. His producing credits include short films *The Evening Was Long*, CGI animation *Robomax*, and *Cocoons* which premiered at Edinburgh Film Festival in 2014.

## **RANU GHOSH - CO-DIRECTOR**

Ranu Ghosh is a cinematographer and documentary director who has 15 years' experience of working with broadcasters such as the BBC, National Geographic and with government agencies in India. With an academic background in Physics, she now focuses on issues of environment and politics. Her documentary *Quarter Number 4/11*, portrays a common man's struggle to survive against the forces of the state as a residential area of Kolkata is developed as a shopping mall.

## **JAMES SCOTT - EDITOR**

James Scott is an award-winning editor based in Brighton, England, originally from Canada. He won the Special Jury Award for Editing at the 2015 Sundance Film Festival for Jerry Rothwell's *How to Change the World*. His feature-length documentary credits include critically acclaimed *Man Whose Mind Exploded*, nominated for Grierson Award and licensed to Netflix; Jeanie Finlay's *The Great Hip Hop Hoax*, winner of the Nigel Moore Award for Youth Programming at DOXA 2013, and the Grierson Award Nominee, *Sour Grapes* by Jerry Rothwell and Reuben Atlas, and Sophie Robinson's Netflix Originals doc *My Beautiful Broken Brain*, which received its World Premiere at IDFA 2014, won the IDFA DOCU Award, as well as a Special Mention Award for Best Female Directed Documentary.

## **CREDITS**

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