Transcript of the film

“The School In The Cloud”

(Pink – Captions, Yellow – Subtitles)

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| 10:00:00:00 | Caption | Metfilm logo |
| 10:00:05:00 | Caption | TED and Sundance institute logos  A project of the Sundance Intittude Documentary Programme |
| 10:00:15:00 | Caption | The School In the Cloud |
| 10:00:28:00 | Caption | Do not limit children to your own learning… for they were born in another time.  Rabindranath Tagore |
| 10:00:47:00 | Caption | A MET FILM production |
| 10:01:04:00 | Caption | A film by JERRY ROTHWELL |
| 10:01:18:00 | Caption | Produced by AL MORROW & DAN DEMISSIE |
| 10:01:24:00 | Caption | Co-director RANU GHOSH |
| 10:01:30:00 | Nitish | The world is evolving, but the Sunderbans remains in darkness. |
| 10:01:36:00 | Nitish | Most kids here don't finish secondary education. |
| 10:01:39:00 | Nitish | The educated ones are migrating to the cities. |
| 10:01:43:00 | Nitish | But soon this is going to change. |
| 10:01:46:00 | Nitish | See, we're starting a school. |
| 10:01:50:00 | Nitish | They will be taught through a screen. |
| 10:01:53:00 | Nitish | Slowly we will not need teachers. |
| 10:01:57:00 | Nitish | This is unimaginable. |
| 10:02:00:00 | Nitish | A wise man is the one who is always ready to know more. |
| 10:02:09:00 | C aption | Composer VINCENT WATTS |
| 10:02:13:00 | Caption | Edited by JAMES SCOTT, ALAN MACKAY |
| 10:02:26:00 | Caption | Camera JERRY ROTHWELL & RANU GHOSH |
| 10:02:35:00 | Caption | Executive Producers TED DINTERSMITH & LYNDA WEINMAN |
| 10:02:55:00 | Caption | Executive Producers for Sundance Institute TABITHA JACKSON & RICHARD RAY PEREZ |
| 10:03:05:00 | Caption | Executive Producers STEWART LE MARECHAL & JONNY PERSEY |
| 10:03:35:00 | Teacher | The Harappan civilization had many forms of transport. |
| 10:03:39:00 | Teacher | Animals, boats and ships were the main ones. |
| 10:03:45:00 | Teacher | Signs of the Harappan civilization were found.. |
| 10:03:48:00 | Teacher | .in places as far away as Iran and Turkey |
| 10:03:57:00 | Sugata | Where did the kind of learning that we do in schools come from? |
| 10:04:03:00 | Sugata | It came from about three hundred years ago |
| 10:04:06:00 | Sugata | And it came from the last and the biggest of the empires on this planet |
| 10:04:13:00 | Sugata | Image trying to run the show without computers… |
| 10:04:16:00 | Caption | SUGATA MITRA  Professor of Education Newcastle University |
| 10:04:16:00 | Sugata | ...without telephones… |
| 10:04:18:00 | Sugata | ..with data handwritten on pieces of paper… |
| 10:04:21:00 | Sugata | and travelling by ship. |
| 10:04:25:00 | Sugata | The Victorians actually did it. |
| 10:04:28:00 | Sugata | What they did was… |
| 10:04:30:00 | Sugata | ..they created a global computer… |
| 10:04:33:00 | Sugata | ..made up of people. |
| 10:04:36:00 | Teacher | Look at your books. Pick out the odd word… |
| 10:04:40:00 | Sugata | It’s still with us today. |
| 10:04:42:00 | Sugata | It’s is called the bureaucratic administrative machine. |
| 10:04:47:00 | Sugata | In order to have that machine running… |
| 10:04:50:00 | Sugata | ..you need lots, lots of people. |
| 10:04:53:00 | Sugata | They made another machine… |
| 10:04:55:00 | Sugata | ..to produce those people: |
| 10:04:58:00 | Sugata | The School. |
| 10:05:04:00 | Sugata | The Empire has gone. |
| 10:05:06:00 | Sugata | So what are we doing with this design that produces identical people? |
| 10:05:13:00 | Sugata | And what are we going to do next? |
| 10:05:17:00 | Caption | 2016  THE EDGE OF CHAOS |
| 10:05:24:00 | Caption | KORAKATI  Sunderbans region, India |
| 10:05:52:00 | Sugata | So this is the shape of the room. |
| 10:05:58:00 | Sugata | This is where the stairs will be. |
| 10:06:02:00 | Sugata | And another set of stairs here. |
| 10:06:04:00 | Sugata | We're getting land measuring 25 by 50. |
| 10:06:07:00 | Sugata | So here it will be higher and there'll be the entrance. |
| 10:06:13:00 | Sugata | I think I should go in and measure the other side. |
| 10:06:16:00 | Sugata | Yes, go in and measure it. |
| 10:06:19:00 | Sugata | The idea is to have a complete glass front to a building here. |
| 10:06:23:00 | Sugata | It’ll probably have about six or seven computers so… |
| 10:06:27:00 | Sugata | ..so it should accommodate about 25 children at a time. |
| 10:06:30:00 | Sugata | Where I am standing is actually the main road of the village. |
| 10:06:35:00 | Sugata | So you can imagine as you walk by… |
| 10:06:40:00 | Sugata | ..you can see children working on computers… |
| 10:06:42:00 | Sugata | ..and you can see a mediator possibly from… I don’t know… from England or from France… |
| 10:06:48:00 | Sugata | ..looking at what they are doing. |
| 10:06:52:00 | Nitish | Thank you so much for coming out... |
| 10:06:55:00 | Nitish | We're very proud that this is happening for the first time ever in Korakati village. |
| 10:06:58:00 | Nitish | And Sugata sir knows how I struggled to contact him. |
| 10:07:03:00 | Nitish | I will feel truly blessed if this effort succeeds. |
| 10:07:10:00 | Villagers | We do want our kids to learn. |
| 10:07:12:00 | Villagers | We have no facilities in this village. |
| 10:07:14:00 | Villagers | No development at all. |
| 10:07:16:00 | Villagers | We can't make progress by only learning Bengali. |
| 10:07:22:00 | Sugata | Even in our country, you need English to get a decent job. |
| 10:07:26:00 | Sugata | The first thing you get asked in an interview is if you're good in English. |
| 10:07:32:00 | Villagers | - When will our houses get developed? |
| 10:07:34:00 | Nitish | With time, but let this school happen first. |
| 10:07:36:00 | Villagers | - But houses are the main priority. |
| 10:07:38:00 | Nitish | You can dream even when you're living in the streets. |
| 10:07:52:00 | Nitish | From what I understand, given my little knowledge, he said it is like a seed. |
| 10:07:58:00 | Nitish | No-one knows if it will grow and have leaves, or how many branches it will have. |
| 10:08:03:00 | Nitish | Not even the gardener can say that. |
| 10:08:08:00 | Nitish | I imagine I will die around 2030.. |
| 10:08:11:00. | Nitish | .so before that I want to contribute as much possible.. |
| 10:08:15:00 | Nitish | ..and spread knowledge. |
| 10:08:19:00 | Nitish | Sugata Mitra asked if I could give land. I told him I would give as much as I could. |
| 10:08:32:00 | Nitish | As a human being I have many flaws... |
| 10:08:38:00 | Nitish | ..but this is a ray of truth, a symbol of greatness... |
| 10:08:41:00 | Nitish | ..a jewel of the Sunderbans, this 'School In the Cloud’. |
| 10:08:45:00 | Nitish | Ignorance is the greatest curse of the Sunderbans. |
| 10:08:50:00 | Nitish | It is a call for people to awaken, to rise up. |
| 10:08:53:00 | Translator | You can be normal... this is only a documentary. |
| 10:08:58:00 | Translator | Just be normal |
| 10:09:00:00 | Nitish | I am always normal. |
| 10:09:02:00 | Ranu | You don't have to give a public speech. |
| 10:09:03:00 | Nitish | Yes I know that. Look at how I am dressed! |
| 10:09:05:00 | Caption | NITISH MONDAL  Landowner |
| 10:09:13:00 | Krishanu | (reading): ‘*After humans learned to write, and calculate time...* |
| 10:09:18:00 | Krishanu | *..they began to record present and past events...* |
| 10:09:23:00 | Krishanu | *..and so calendars started.’* |
| 10:09:28:00 | Translator | Why are you reading the same book so many times? |
| 10:09:32:00 | Krishanu | I won't be able to remember it if I read it just once. |
| 10:09:35:00 | Krishanu | I memorise it by reading it over and over. |
| 10:09:38:00 | Caption | KRISHANU  AGED 11 |
| 10:09:46:00 | Krishanu’s mother | He is very intelligent and I worry whether I can properly support him. |
| 10:09:50:00 | Krishanu’s mother | Village schools don't teach good English... or good anything. |
| 10:09:59:00 | Krishanu’s mother | I have ambitions but what good are ambitions in this place? |
| 10:10:05:00 | Krishanu’s father | If we take him to the city, we have to rent a place and pay for tuition. |
| 10:10:09:00 | Krishanu’s father | It's expensive. |
| 10:10:12:00 | Krishanu’s father | I've heard that Nitish is starting this 'cloud school’. |
| 10:10:18:00 | Krishanu’s father | But I don't know much about the internet. I only heard about it recently. |
| 10:10:23:00 | Krishanu | About the internet, I heard they'll teach us from England, and we'll be able to see them here. |
| 10:10:30:00 | Krishanu | I find that weird. How is it possible? |
| 10:10:35:00 | Krishanu | How could something so strange be true? |
| 10:10:50:00 | Sugata | The Internet is absorbing the whole of humanity inside it. |
| 10:10:57:00 | Sugata | It’s a world that we are not at all used to. |
| 10:10:06:00 | Sugata | The future seems to be forming itself faster than the past can catch up. |
| 10:11:18:00 | Child | (reading) “*We'll labour, we'll cut down forests. We will not sit and bury our heads.* |
| 10:11:22:00 | Child | *We'll dig soil, we'll cultivate land. We will not be careless about our work.* |
| 10:11:27:00 | Child | *We will love and leave sorrow behind. We will never judge people as high or low.* |
| 10:11:32:00 | Child | *We won't forget the poor, even when we become rich.”* |
| 10:11:41:00 | Sugata | What do we keep inside our heads… |
| 10:11:44:00 | Sugata | ..in a world where the child will face an eventuality that you can’t imagine at all? |
| 10:12:03:00 | Caption | Chandrakona  West Bengal, India |
| 10:12:08:00 | Sugata | Many places I have seen kids... |
| 10:12:10:00 | Sugata | ..I mean younger than you... |
| 10:12:13:00 | Sugata | ..who learn to operate computers on their own. |
| 10:12:17:00 | Sugata | They do hit random buttons and keys, but it finally works. |
| 10:12:21:00 | Sugata | So we are trying to experiment with that. |
| 10:12:24:00 | Sugata | Have you ever operated a computer? |
| 10:12:27:00 | Sugata | No? |
| 10:12:29:00 | Sugata | Taking care of this place will be your responsibility. |
| 10:12:31:00 | Sugata | So you have to do everything on your own. |
| 10:12:35:00 | Sugata | Understood? ... Will it work? |
| 10:12:37:00 | Priya | Suppose I click and something gets deleted... |
| 10:12:41:00 | Priya | ..suppose something gets replaced or deleted... |
| 10:12:44:00 | Priya | ..will no-one scold us? |
| 10:12:46:00 | Sugata | Not at all. |
| 10:12:47:00 | Sugata | There's nobody there to tell you what to do. |
| 10:12:50:00 | Sugata | She's not scared any more. |
| 10:13:03:00 | Priya | Mum! |
| 10:13:04:00 | Priya | Where are my pants? |
| 10:13:09:00 | Priya | I need to change my clothes. |
| 10:13:17:00 | Caption | PRIYA  Aged 12 |
| 10:13:22:00 | Priya’s mother | I want my daughter to be educated. |
| 10:13:26:00 | Priya’s mother | I got married when I was in 8th grade |
| 10:13:31:00 | Priya’s mother | I was 14 or 15 I think. |
| 10:13:37:00 | Priya’s mother | I have to scold her a lot. She doesn't study. Only wants to watch TV. |
| 10:13:42:00 | Priya’s mother | She's not afraid of me - only of her father. |
| 10:13:46:00 | Priya | He's got very strong hands because he drives a truck. He slaps so hard! |
| 10:13:51:00 | Priya | He even hit me with a belt once. |
| 10:13:54:00 | Priya’s mother | Because she did not study... |
| 10:13:56:00 | Family friend | She must have done something to deserve it! |
| 10:13:59:00 | Priya’s mother | If her father wasn't strict, she wouldn't study at all. |
| 10:14:03:00 | Priya | How much more do you want me to study? |
| 10:14:05:00 | Priya | I'm ranked second in class. |
| 10:14:09:00 | Priya | I'm trying to be first. First! |
| 10:14:12:00 | Priya | I don't know if I can do it. |
| 10:14:15:00 | Priya | At least I'm trying. |
| 10:14:19:00 | Sugata | We don’t want to be spare parts for a great human computer do we? |
| 10:14:22:00 | Sugata | So we need to design a future for learning. |
| 10:14:29:00 | Sugata | What is now called the School In The Cloud is, I think, a culmination of a lot of surprises… |
| 10:14:33:00 | Sugata | ..which have come from experiments in the last 15 years |
| 10:14:39:00 | Caption | THE ‘HOLE IN THE WALL’ EXPERIMENT  1999 |
| 10:14:42:00 | Sugata | The Hole In The Wall experiment was an accident. |
| 10:14:46:00 | Sugata | I was doing this job, teaching people how to write computer programs. |
| 10:14:50:00 | Sugata | One day I decided that I wanted to give a computer to some children |
| 10:14:55:00 | Sugata | Mainly because I was feeling a little irritated about the fact that I was in a nice job in a nice place… |
| 10:15:01:00 | Sugata | ..and there were all these kids who didn’t have anything at all. |
| 10:15:07:00 | Sugata | I made a hole in the boundary wall of the slum next to my office and stuck a computer inside it just to see what would happen |
| 10:15:16:00 | Sugata | I connected high speed internet to it, it’s about 3 feet off the ground, turned it on and left it there. |
| 10:15:20:00 | Sugata | Came back after a couple of months, found kids playing games on it. When they saw me they saw we want a faster processor and a better mouse! |
| 10:15:32:00 | Sugata | The results were that groups of children without any adult supervision, could figure out how to use a computer. |
| 10:15:39:00 | Sugata | It’s not a big deal today but it was a big deal in 1999. |
| 10:15:43:00 | Sugata | And that they do this quite rapidly. |
| 10:15:46:00 | Sugata | It’s not as though each child is learning everything. |
| 10:15:49:00 | Sugata | They are grouping. And they are succeeding in groups. |
| 10:15:55:00 | Sugata | The first thing that came into my mind was insects. |
| 10:15:59:00 | Sugata | Because insects do the same thing. I mean… |
| 10:16:02:00 | Sugata | ..bees can build hexagons together… |
| 10:16:04:00 | Sugata | ..but no individual bee could build a hive. |
| 10:16:07:00 | Sugata | I had no background in education at all. |
| 10:16:12:00 | Sugata | So I had no option left but to use the only subject I knew, which was physics, to try and explain what was happening here. |
| 10:16:22:00 | Sugata | So I started to read up on chaotic systems, systems which don’t have any order in them. |
| 10:16:30:00 | Sugata | And under certain circumstances they form patterns. |
| 10:16:39:00 | Sugata | If you have a completely ordered condition… |
| 10:16:42:00 | Sugata | ..then nothing much happens there: |
| 10:16:44:00 | Sugata | what in physics we would call a static equilibrium . |
| 10:16:50:00 | Sugata | And then you can have a completely chaotic situation and things happen totally at random. |
| 10:16:58:00 | Sugata | In a way that is also not very interesting. |
| 10:17:01:00 | Sugata | But, in-between the two, there is a border line which physicists call the edge of chaos. |
| 10:17:09:00 | Sugata | And at the edge of chaos everything happens. |
| 10:17:12:00 | Sugata | You get spontaneous order, you’ve got turbulence, you’ve got flow, you’ve got forces coming in, structures appearing. |
| 10:17:20:00 | Sugata | I had no hesitation then in saying ‘but I’ve seen that in the hole in the wall’. |
| 10:17:28:00 | Sugata | It was utterly chaotic on day one… |
| 10:17:32:00 | Sugata | ..and then the spontaneous orders starts to appear with different children doing different things. |
| 10:17:39:00 | Sugata | These kids, without supervision, left alone with an unknown machine in an unknown ocean of information… |
| 10:17:46:00 | Sugata | ..are behaving like a hive, or like a thunderstorm. |
| 10:17:52:00 | Sugata | Could it be that leaning is something that happens to people when they’re at the edge of chaos. |
| 10:18:06:00 | Sugata | The Hole In The Wall was sufficiently unexpected that I needed to drop whatever else I was doing… |
| 10:18:13:00 | Sugata | ..because there was no way to continue being a nice satisfied computer programmer. I had to find out how they were doing that. |
| 10:18:20:00 | Sugata | That lead to a whole series of experiments and finally all the way from New Delhi to Newcastle. |
| 10:18:29:00 | Sugata | My wish really was to make a facility for children where they can learn in groups… |
| 10:18:35:00 | Sugata | ..and a facility which would not look like a classroom. |
| 10:18:40:00 | Sugata | It’s a facility which is practically unmanned, and it would be called The School In The Cloud. |
| 10:18:48:00 | Sugata | The TED Talks, like most things in my life I guess, were accidental. |
| 10:18:52:00 | Sugata | When it came online, it got an enormous amount of views. |
| 10:18:56:00 | Sugata | And then in 2013 they gave me this Prize. |
| 10:19:03:00 | Sugata | This is going to enable me to do a much larger scale experiment that I could have done on my own and in a much shorter span of time. |
| 10:19:13:00 | Caption | THE 2013 TED PRIZE FUNDS SEVEN ‘SCHOOLS IN THE CLOUD’ IN INDIA AND ENGLAND.  THE EXPERIMENT WILL LAST THREE YEARS. |
| 10:19:22:00 | Amy-Leigh | OK, Year 10, this is your first lesson in Product Design. |
| 10:19:25:00 | Caption | KILLINGWORTH, ENGLAND  GEORGE STEPHENSON HIGH SCHOOL |
| 10:19:27:00 | Amy-Leigh | I’m really pleased that you’ve chosen to do this as an option choice for your GCSEs. |
| 10:19:31:00 | Amy-Leigh | In today’s lesson, I’m going to tell you a bit about the Exam Board that you are going to do because it is important that you understand that. |
| 10:19:39:00 | Sally | In the context of secondary education today, where there is an increasingly prescriptive list of content that students have to cover… |
| 10:19:47:00 | Sally | ..I don’t think that schools have an answer yet as to how they use the internet in a meaningful way. |
| 10:19:54:00 | Sally | We are actually moving away from something like the internet being a useful resource. |
| 10:20:00:00 | Amy-Leigh | The best way to prepare them for the exams is just constantly going over the content, practice, practice, practice. |
| 10:20:08:00 | Amy-Leigh | It seems a bit relentless . |
| 10:20:10:00 | Amy-Leigh | I believe very strongly that my responsibility is to make lifelong learners. |
| 10:20:17:00 | Amy-Leigh | I contacted Sugata and said how interested I was in the Hole In The Wall project… |
| 10:20:21:00 | Amy-Leigh | ..where they were engaged in learning, they were excited about it. I wanted that. |
| 10:20:30:00 | Sugata | I don’t know how to build a School In The Cloud because I’ve never built one. |
| 10:20:40:00 | Jude | I didn’t quite know who he was so I went away and researched and I found out who he was and I was really surprised that he would come to our school. |
| 10:20:51:00 | Sugata | So this is the basic hardware. We’ve got 6 computers, we’ve got one screen with skype and one big screen with the Connect and an Xbox |
| 10:20:59:00 | Sugata | So I’m trying to figure out a design where it would be easy to cluster around computers… |
| 10:21:06:00 | Sugata | ..a single place which really speaking belongs to children and is run by children. |
| 10:21:10:00 | Sugata | And then we’ll see where it goes. |
| 10:21:12:00 | Sugata | So that is what is going on, it’s a great big experiment. |
| 10:21:20:00 | Sugata | The thing is what should the place look like? |
| 10:21:24 00 | Sugata | That’s what we’ve got to discuss. |
| 10:21:26 00 | Students | Bright and colourful. |
| 10:21:28 00 | Sugata | Bright |
| 10:21:30 00 | Students | * Warm * You could have like cushions * Squishy chairs like that * Sun and grass on the walls   And maybe white boards or chalk boards, something that you can almost interact with them |
| 10:21:41:00 | Student | * Circular tables because the table layout in some departments is pretty rubbish for group work. |
| 10:21:48 00 | Amy-Leigh | It was just a very old, tired classroom, and we took the children in there and I said “Alright if you had to design a room for learning, what would you want?” |
| 10:21:58 00 | Jude | It is just really cool knowing that something you’ve designed is going to be put up. I’m really looking forward to it because I just want to see how it works and runs when it’s all up and running. |
| 10:22:18:00 | Student | They’re all kind of ‘Oooo’ |
| 10:22:20:00 | Amy-Leigh | Oh it is heavy. |
| 10:22:22:00 | Amy-Leigh | Here we go. |
| 10:22:25:00 | Sugata | Gosh, fantastic! |
| 10:22:27:00 | Sugata | I mean, this is it! |
| 10:22:31:00 | Amy-Leigh | I just heard them say ‘That room’s mint!’ |
| 10:22:32:00 | Sugata | Mint! |
| 10:22:34:00 | Amy-Leigh | That’s a nice Newcastle term. |
| 10:22:37:00 | Sugata | Mint! Yeah I’m just dying to see the children in here. |
| 10:22:44:00 | Jude | Oh my god! I just want to go and do something on the computers now. |
| 10:22:50:00 | Jude | The urge to just run up to one and start doing something is just so bad. |
| 10:23:00:00 | Sugata | I know there are a lot of people that are suggesting a lot of things that they could do…. |
| 10:23:04:00 | Sugata | ..but if you suggest something to a child, it always precludes things that that child could have done if you had not suggested. |
| 10:23:22:00 | Caption | KORAKATI |
| 10:23:34:00 | Mridul | They're putting solar panels on the roof. |
| 10:23:37:00 | Mridul | We don't have electricity - that's why they've brought solar. |
| 10:23:37:00 | Caption | MRIDUL  AGED 12 |
| 10:23:44:00 | Mridul | I've heard from my uncle that this school is being built by Sugata Mitra. |
| 10:23:50:00 | Mridul | He has earned some money by giving a speech. |
| 10:23:58:00 | Sugata | The biggest challenge I think will be explaining to people what it is… |
| 10:24:02:00 | Sugata | ..because they are all expecting that it is a school, and it isn’t. |
| 10:24:11:00 | Sugata | If it looks as futuristic as possible, it has a different psychological meaning I think for the local population and for the children. |
| 10:24:18:00 | Sugata | A spaceship that just dropped out of the sky. |
| 10:24:30:00 | Donald | You know, the proposition that if you just give kids a piece of technology they will learn, is attractive… |
| 10:24:35:00 | Caption | DONALD CLARK  Digital Educator |
| 10:24:39:00 | Donald | ..but it’s not born out in either the developed work or the developing world |
| 10:24:43:00 | Donald | I’ve seen Sugata talk at many conferences and I was quite impressed with the idea because it was bold… |
| 10:24:48:00 | Donald | ..if not a bit utopian |
| 10:24:51:00 | Donald | But with all these ideas you’ve really got to test them on the ground. |
| 10:24:56:00 | Caption | GURJALA  One of the earlier hole in the wall sites |
| 10:24:58:00 | TV presenter | This is Gurjala… |
| 10:24:59:00 | TV presenter | ..a tiny village in West Bengal, India |
| 10:25:03:00 | TV presenter | Suraj and his friends are excited because today the whole village got it’s first computer. |
| 10:25:08:00 | Donald | What you have here is a high profile viral phenomenon, not really research. |
| 10:25:18:00 | Donald | By the time we left, the children taught themselves how to use the program paint. |
| 10:25:23:00 | Sugata | Now they are on their way I think |
| 10:25:31 :00 | Caption | GURJALA  Three years after Installation |
| 10:25:31:00 | Donald | There is a big differential between theory and practice here |
| 10:25:38:00 | Suraj | On the first day there were a few people, so I explored a bit, played games. |
| 10:25:42:00 | Suraj | We couldn't progress much. |
| 10:25:46:00 | Suraj | We didn't know how to switch a computer on. |
| 10:25:47:00 | Caption | SURAJ  Now aged 12 |
| 10:25:49:00 | Suraj | We did something wrong and it stopped working. |
| 10:25:53:00 | Villager | We all liked the idea that kids in our village would learn. |
| 10:25:58:00 | Villager | But then I realized I don't know enough. |
| 10:26:03:00 | Villager | If we really wanted them to learn, we needed a teacher. |
| 10:26:10:00 | Villager | It ran for a few months |
| 10:26:12:00 | Villager | Then the computer broke down |
| 10:26:16:00 | Villager | So we sent it for repair, but it never came back. |
| 10:26:21:00 | Donald | Unlike most academics I actually went to see a Hole In The Wall project… |
| 10:26:24:00 | Donald | ..and was shocked at what I saw because there were literally holes in the walls. There were no computers in those walls. |
| 10:26:31:00 | Donald | It had lasted 3months and the people in the school were quite bitter. |
| 10:26:34:00 | Donald | You know, a team had arrived, drilled four holes in the walls on the school, the internet connection was barely, if ever, worked. The kids just played games on them and the whole thing dropped off after 3 months. |
| 10:26:48:00 | Donald | This may actually result in a form of educational colonialism, where we just parachute shiny objects into these countries and hope for the best. |
| 10:27:05:00 | Sugata | It’s not as though I love criticism. |
| 10:27:08:00 | Sugata | I mean it makes my blood boil! |
| 10:27:10:00 | Sugata | But I’ve learned that it’s a good idea to let it boil and then simmer down a bit. |
| 10:27:17:00 | Sugata | And then. when the rational mind does kick in, the first question I ask is ‘Well what if he is right?’ |
| 10:27:23:00 | Sugata | I mean that would be devastating. |
| 10:27:28:00 | Sugata | (reading) *“After project completion, it’s been observed that in all sites the community has not been able to take it forward.”* |
| 10:27:38:00 | Sugata | If you look for one of the old Hole In The Wall sites in India… |
| 10:27:44:00 | Sugata | ..it would not be working. |
| 10:27:46:00 | Sugata | Maybe the structure is still there. But an empty hole with no computer in it. |
| 10:27:50:00 | Sugata | It wasn’t sustainable. |
| 10:27:55:00 | Sugata | But the Hole In The Wall as a concept.. |
| 10:27:57:00 | Sugata | ..the fact that children can self-organize their learning around the internet… |
| 10:28:02:00 | Sugata | ..that was established by the original experiment |
| 10:28:05:00 | Sugata | With the Hole In The Wall model, physically maintaining the machine is difficult. |
| 10:28:10:00 | Sugata | Now you could either say therefore it could never work or you could say some new method has to be tried so that it can work . |
| 10:28:16:00 | Sugata | Can we make whatever we are making, work for 3 years and continue to work after that? |
| 10:28:28:00 | Sugata | There were mistakes in equipment, mistakes in positioning… |
| 10:28:32:00 | Sugata | ..we collected each one of those. |
| 10:28:35:00 | Sugata | But have we got the right educational, pedagogic model? I don’t think we are anywhere close to that. |
| 10:28:40:00 | Sugata | We’re only seeing the tip of an iceberg I think. |
| 10:28:46:00 | Caption | 2014  SELF-ORGANISATION |
| 10:28:52:00 | Sugata | The experiments in the English schools, they really explained a lot to me which I perhaps would not have learned in India. |
| 10:29:02:00 | Sugata | What we were trying to do was to repeat those experiments done in very wild places inside a classroom. |
| 10:29:09:00 | Sugata | When I saw in the Hole In The Wall that children, having learned how to operate a computer… |
| 10:29:16:00 | Sugata | ..can find out things for themselves… |
| 10:29:19:00 | Sugata | ..the first thought that came into my mind is that ‘Could I not drive this process with questions?’ |
| 10:29:29:00 | Sugata | We called it SOLE, S-O-L-E, the Self Organised Learning Environment. |
| 10:29:34:00 | Caption | ‘SOLE’ EXPERIMENT  NEWTON AYCLIFFE, ENGLAND |
| 10:29:38:00 | Sugata | You make your own groups, you can change your groups. |
| 10:29:42:00 | Sugata | You can walk around, you can look at other peoples’ work. |
| 10:29:46:00 | Sugata | It’s anything but a classroom, right? |
| 10:29:48:00 | Sugata | Instead of somebody teaching something, is it possible for me to take something… |
| 10:29:56:00 | Sugata | ..that I cannot teach and ask you if you can learn it by yourself? |
| 10:30:01:00 | Sugata | Do you see what I mean? It’s the opposite of teaching. |
| 10:30:05:00 | Sugata | Once you’ve introduced the concept of the SOLE, then you have to raise a question… |
| 10:30:09:00 | Sugata | ..generally, in the form of ‘I wonder why’ or ‘I wonder what’. |
| 10:30:13:00 | Sugata | If you design the question right, the question will do the job for you. |
| 10:30:18:00 | Sugata | You’ve all seen a teardrop, right? |
| 10:30:22:00 | Sugata | So, my question is, why are those drops pointy at the top and roundish at the bottom? |
| 10:30:33:00 | Sugata | OK, off you go then. |
| 10:30:43:00 | Students | So then it must be all like one… And then like, as it comes down… Because if you imagine the teardrops down your face… Yeah. |
| 10:34:00:00 | Sugata | The real answer involves two concepts, gravity and surface tension. |
| 10:30:55:00 | Student | (reading*) “As a result of speeding through the atmosphere, because of gravity, raindrops have a more flattened bottom and a rounded top until they are ripped apart.”* Ripped apart. |
| 10: 31:07:00 | Student | The velocity increases the pressure on the bottom, and resistance is the pointy bit. |
| 10:31:13:00 | Sugata | It’s really hard to describe how the question arrives in your own mind. |
| 10:31:16:00 | Sugata | But I take the topic that I’m supposed to teach and ask myself why that topic is there in the first place. |
| 10:31:23:00 | Sugata | If I had to teach trigonometry then I would say, well ‘Why is it important for them to learn trigonometry?’ |
| 10:31:30:00 | Sugata | Well, because it’s a subject which allows you to do certain kinds of measurements. |
| 10:31:34:00 | Sugata | So, what is so important about those kinds of measurements? |
| 10:31:38:00 | Sugata | Those measurements allow you to calculate heights and distances without actually going up to an object. |
| 10:31:46:00 | Sugata | This is more or less what a five-year-old does actually with their parents, they keep asking why. Until you hit almost a metaphysical point. |
| 10:31:54:00 | Sugata | ‘How do you measure a mountain?’ Now that’s a much better question than ‘how does trigonometry work?’. |
| 10:32:09:00 | Jude | It’s really hard to start off with because sometimes you just don’t get it. |
| 10:32:13:00 | Caption | JUDE |
| 10:32:13:00 | Jude | You almost resemble a fish that’s been thrown into a beach. You’re flopping around aimlessly for about half an hour and then you finally get into the water. |
| 10:32:25:00 | Jude | I really like it because it’s independent. Sometimes your friends can teach you more than your teacher can in a certain way. |
| 10:32:34:00 | Sugata | If I can get the basic principle accepted that given the presence of the internet, if children are allowed to wander in a chaotic fashion, they will crystalize around big ideas. |
| 10:32:49:00 | Student | But how do you know any of these websites are reliable, and not just lying to you? |
| 10:32:54:00 | Student | That looks like a website you can trust. |
| 10:32:58:00 | Sally | I think teachers do feel threatened by it. As though Sugata’s saying, ‘we don’t need teachers any more’. And that’s not how I see SOLE at all. I think the role of the teacher in a SOLE is vital. |
| 10:33:12:00 | Sally | Not to help them find an answer but to help them understand how to construct an answer to a really big question. |
| 10:33:22:00 | Amy-Leigh | Right. This is my big question for you. Just imagine what would life be like in the future: could robots ever replace humans? That’s your big question. You’re going to work together as a group and at the end of the lesson each of the groups is going to tell me what they found out. |
| 10:34:11:00 | Student | Sean, how do you spell robots? |
| 10:34:19:00 | Sugata | The wrong kinds of intervention are to go up to a group and say, ‘why don’t you try this key word?’ Or, ‘what have you found?’. |
| 10:34:28:00 | Student | Sean, do you know how to get back? |
| 10:34:32:00 | Student | Double click. |
| 10:34:33:00 | Sugata | The child could hear that sentence as ‘do not try any other’, so you’re actually restricting rather than guiding. |
| 10:34:42:00 | Amy-Leigh | I’ve been teaching fifteen years now, and that confidence to step back from the relationship that you have normally as a teacher in front of the classroom and be a part of the learning on the sidelines, has changed the way I teach. |
| 10:34:57:00 | Amy-Leigh | You don’t pigeonhole children into what you think they should know because they have the skills to be able to find that information out. |
| 10:35:08:00 | Sally | People sometimes question whether there’s anything new about it. Asking questions is something that teachers do all the time, collaborative work is something that teachers do all the time. |
| 10:35:17:00 | Sally | But actually when you talk to teachers, this combination of ‘big question’ and collaborative work, and the internet and fewer computers than students so that they have to collaborate, this is something that feels different to teachers. |
| 10:35:35:00 | Student | Probably we can get took over by robots, because we’re using a robot right now. |
| 10:35:40:00 | Student | How do they know what to do with a laptop, how do they know what something smells like? |
| 10:35:47:00 | Student | There’s lots of smart robots, robots can be programmed to do anything. |
| 10:35:59:00 | Sugata | In a SOLE, it’s the interaction between the children which is causing all of this to happen. |
| 10:36:04:00 | Sugata | It’s the conversations amongst themselves that really generates the learning that they do. |
| 10:36:11:00 | Amy-Leigh | Right, OK guys. Do you want to collect around the middle again and let’s see what you’ve come up with. |
| 10:36:15:00 | Amy-Leigh | OK who wants to start it off? Do you want to put it in the middle, so we can all see it? |
| 10:36:21:00 | Amy-Leigh | What information have you got in there? |
| 10:36::23:00 | Student | Robots, they can think up to two times as fast. |
| 10:36:28:00 | Student | If robots run everything, there will be no jobs in the world. |
| 10:36:35:00 | Student | If we’re not going to work, we’re not getting any money. If we’re not getting any money. we’re not getting any food. And if we’re not getting any food, we’re going to die! |
| 10:36:40:00 | Student | There’ll be loads of jobs – like window cleaning. All you need is a bucket. |
| 10:36:44:00 | Student | Robots could never take over from us. Because you can only live on a battery for so long, so they’re going to need batteries. |
| 10:36:52:00 | Amy-Leigh | What happens if another robot is taught how to do it? |
| 10:36:55:00 | Student | Ah, but that’s the thing. |
| 10:36:57:00 | Amy-Leigh | Right. Last point. Go on, Kieran. What was your last point? |
| 10:37:01:00 | Student | If the robots look after a baby, the baby would start to talk like a robot and that. |
| 10:37:11:00 | Sugata | A lot of my work gets interpreted as “Oh, he doesn’t want any teachers anywhere and he thinks that schools are obsolete and therefore should be done away with.” |
| 10:37:24:00 | Comment | I wonder whether the kids were learning anything or whether they were regurgitating things that they were finding on Wikipedia |
| 10:37:31:00 | Comment | By the time he finishes with us, we don’t have to read, we don’t have to write, we don’t have to think. |
| 10:37:38:00 | Comment | What you’re saying, there’s nothing wrong fundamentally. What is wrong in it is most of us are quite bad. All we want in the classrooms, especially with the young kids, is order. |
| 10:37:49:00 | Comment | The pressure on teachers to be, not only educators but also minders, caretakers, role models – can you replace the teachers? |
| 10:37:57:00 | Comment | There’s going to have to be intervention at some point isn’t there, but it’s not ‘goodbye teacher’? |
| 10:38:01:00 | Sugata | No, of course not. |
| 10:38:03:00 | Sugata | This misunderstanding persists that I am trying to say teachers are not required, which is completely wrong. That’s not what I’m saying at all. |
| 10:38:13:00 | Sugata | What I’m saying is that the teacher has to do something different, the teacher has to convert the content into a question that would enable the learner to derive that content. |
| 10:28:25:00 | Sugata | If there is no teacher, how do you make this method continue to work and produce results? |
| 10:38:35:00 | Caption | KORAKATI |
| 10:39:06:00 | Woman | Teachers are not comfortable with open-endedness in India at all. They want a concrete end products, which is an answer. |
| 10:39:14:00 | Sugata | So why should that make it not possible to have successful SOLEs? |
|  | Woman | Because SOLE is about asking questions. Like, how do you do it, you ask them open-ended questions. so you have a freedom of choice to choose your answers . |
| 10:39:28:00 | Woman | Over here there’s only one right answer and everything else is wrong. That’s how India teaches. |
| 10:39:36:00 | Caption | TWO DAYS TO SCHOOLS IN THE CLOUD LAUNCH IN INDIA |
| 10:39:53:00 | Sugata | In the remotest of the locations, Korakati, getting the infrastructure up and running obviously is going to take more than I thought it would. |
| 10:40:01:00 | Technician | Whenever I try the Wi-Fi, the internet keeps disconnecting. |
| 10:40:08:00 | Suneeta | A stabilizer is being acquired from somewhere. The generator is going to be connected to the stabilizer and that is then going to be connected to the systems – and then hopefully we’ll be able to get everything running. Keep your fingers crossed! |
| 10:40:23:00 | Nitish | Every problem will be solved... |
| 10:40:15:00 | Nitish | because I know an angel is on our side. |
| 10:40:30:00 | Nitish | This angel has come to our aid... |
| 10:40:33:00 | Nitish | ...and we will be enlightened by his light. |
| 10:40:43:00 | Aditi | I don't know any functions of the computer... So, what will I do? |
| 10:40:51:00 | Translator | What if they tell you 'Here's the computer, do whatever you wish, you can even break it if you want to'? |
| 10:40:55:00 | Caption | ADITI |
| 10:40:58:00 | Aditi | Then I'll do whatever I want to. |
| 10:41:02:00 | Aditi | I'll press everything. |
| 10:41:07:00 | Aditi | And if I want to see everything in the world? |
| 10:41:14:00 | Aditi | Everything that's happening everywhere? |
| 10:41:18:00 | Aditi | Mountains, waterfalls - will I be able to see them all? |
| 10:41:27:00 | Suneeta | Hi. I’m going to turn it around. There you go |
| 10:41:31:00 | Ritu | We’ve got the internet! |
| 10:41:33:00 | Suneeta | No distortions. Very nice. This is such a relief. |
| 10:41:37:00 | Suneeta | Let me introduce you to Nitish. |
| 10:41:40:00 | Nitish | Mondal. |
| 10:41:41:00 | Suneeta | Nitish in the person who’s in charge of the school over here. It’s on his land that this being built. |
| 10:41:49:00 | Angele | I wish you luck with everything. |
| 10:41:50:00 | Nitish | Thankyou so much. |
| 10:41:53:00 | Suneeta | And thanks for coming on. |
| 10:41:56:00 | Nitish | Whereabouts is she now? |
| 10:41:57:00 | Suneeta | Germany. She was talking from Germany. |
| 10:42.02.00 | Nitish | I'm astonished to see this. |
| 10:42:04:00 | Nitish | A lady is talking to me from Germany and I can see her! |
| 10:42:08:00 | Nitish | That you can go to Germany like that, within a second! |
| 10:42:11:00 | Nitish | We inhabitants of Sunderbans didn't know this was possible. |
| 10:42:18:00 | Caption | LAUNCH DAY  CHANDRAKONA |
| 10:42:27:00 | Sugata | Many places in the world are in need of this model of education. |
| 10:42:32:00 | Sugata | So I have to build a system that isn't dependent on anybody. |
| 10:42:35:00 | Teachers | - Education without a teacher?  - Like a robot? |
| 10:42:38:00 | Sugata | No, no. Not at all like a robot. |
| 10:42:40:00 | Sugata | If I allow the influence of a teacher everybody will say… |
| 10:42:44:00 | Sugata | … “It worked because they had a teacher”. |
| 10:42:47:00 | Teacher | That's all fine and good. But this is a village, so we have to see whether it works. |
| 10:42:52:00 | Sugata | You watch what will happen in half an hour |
| 10:42:51:00 | Caption | PRIYA |
| 10:42:57:00 | Priya | I think I will be able to learn a lot here. |
| 10:43:00:00 | Priya | Nobody will say that I'm an illiterate village girl. |
| 10:43:03:00 | Priya | Everyone thinks that we villagers are stupid. |
| 10:43:08:00 | Sugata | If you need something, who will you ask? |
| 10:43:11:00 | Sugata | The clouds! |
| 10:43:23:00 | Priya | You have to switch this on. |
| 10:43:26:00 | Priya | Should I click 'End'? |
| 10:43:29:00 | Priya | Yes. do that. This one. |
| 10:43:31:00 | Priya’s friend | End this. |
| 10:43:23:00 | Priya | I did click 'End’. |
| 10:43:39:00 | Sugata | When they first start, then you have this spontaneous group formation and then after a while you find this kind of flocking. Everybody’s on to one group. |
| 10:43:52:00 | Sugata | Presumably because that group has found something interesting. |
| 10:43:57:00 | Sugata | And then they de-flock, and then you find new groups have formed. |
| 10:44:23:00 | Priya | It worked! |
| 10:44:32:00 | Priya | It's my birthday dress. |
| 10:44:34:00 | Priya | It will look good on fair skin, not on dark. |
| 10:44:36:00 | Priya’s friend | Ah... Don't make such a fuss! |
| 10:44:40:00 | Priya | Oh no... it sounds like father has come. |
| 10:44:43:00 | Priya | Let's put all these away. |
| 10:44:46:00 | Priya’s friend | I'm scared! |
| 10:45:06:00 | Priya’s father | See here, everyone thinks their child will study, go to school and be something big when they grow up. |
| 10:45:14:00 | Priya’s father | But we don't have good schools here. Good schools are far away. |
| 10:45:18:00 | Priya’s father | After high school, most of the girls get married. |
| 10:45:23:00 | Priya’s father | The boys start drinking and waste their lives. What can you do? |
| 10:45:26:00 | Priya’s father | We don't have enough money to send my daughters to the city so they can study at a good school. |
| 10:45:32:00 | Priya’s father | I will see what she is doing and then decide about marriage. |
| 10:45:39:00 | Priya’s father | Suppose I send her to Medinipore to study, and then I find out she is just loitering around? |
| 10:45:46:00 | Priya’s father | I will get her married. |
| 10:45:49:00 | Priya’s father | It totally depends on my daughter's behaviour. |
| 10:45:52:00 | Priya’s father | But if she gets into bad company and is spoilt then we'll have to bring her home to get married. |
| 10:46:05:00 | Caption | Korakati |
| 10:46:16:00 | Liz | Hello children! Hello children! Hi! |
| 10:46:23:00 | Liz | Your name, can you tell me your name? |
| 10:46:27:00 | Krishanu | My name is Krishanu Gayen. |
| 10:46:34:00 | Liz | Thank you, that’s wonderful! I am very pleased to meet you. That’s great. |
| 10:46:41:00 | Caption | HACKNEY LONDON, ENGLAND |
| 10:46:46:00 | Liz | I saw an article on Sugata, and he wanted retired teachers to chat to children in India |
| 10:46:52:00 | Caption | LIZ FEWINGS |
| 10:46:52:00 | Liz | And before I knew it, I was talking to children in Goa. |
| 10:47:00:00 | Caption | SUGATA BEGAN USING MEDIATORS IN 2006 TO SUPPORT THE HOLES IN THE WALL IN INDIA. |
| 10:47:02:00 | Caption | THEY BECAME KNOWN AS ‘THE GRANNY CLOUD’ |
| 10:47:05:00 | Sugata | I wanted to test the limits of this system. Can Tamil speaking children in a South Indian village teach themselves biotechnology in English on their own? |
| 10:47:19:00 | Sugata | I put in ‘Hole In The Wall’ computers there, downloaded all kinds of stuff from the internet about DNA replication. |
| 10:47:27:00 | Sugata | I came back after two months and gave them a test. Their scores had gone up from 0 to 30% |
| 10:47:33:00 | Child | Neurons, these are neurons. |
| 10:47:37:00 | Sugata | But 30% is a fail. How do I get them to pass? |
| 10:47:45:00 | Sugata | Encouragement seems to be the key |
| 10:47:48:00 | Sugata | I couldn’t find a teacher. What I did find was a friend that they had. A 22-year-old who was an accountant. I said use the method of the grandmother. |
| 10:47:58:00 | Sugata | So stand behind them, whenever they do anything just say, “Well wow how did you do that? What’s the next page? Gosh when I was your age I could have never done that.” You know, what Grannies do. |
| 10:48:11:00 | Sugata | So she did that for two more months. |
| 10:48:13:00 | Sugata | The scores jumped to 50%, which is what the posh schools of New Delhi with the trained biotechnology teacher were getting. |
| 10:48:25:00 | Sugata | For an adult to say to a child, “I know a very interesting question, I don’t know the answer”, does something to a child who thinks there is a possibility to make a real contribution to the consciousness of an adult. |
| 10:48:40:00 | Liz | This is a jelly fish, jelly fish, but does a jelly fish really look like that? |
| 10:48:51:00 | Sugata | There’ll be the granny who will come from the cloud, to instigate the SOLE in India and there’ll be the cloud itself of which the children will experiment. |
| 10:48:58:00 | Liz | Look what I made, can you see what this is? |
| 10:49:04:00 | Liz | You help a child to the point where, if he wants to know something he knows where to look for it and how to look for it. |
| 10:49:11:00 | Liz | And they have to decide well is this important, or is that important, or is this true? |
| 10:49:17:00 | Liz | Look up when I’ve gone and see what jelly fish is. |
| 10:49:23:00 | Liz | When the session is going well, those children are leaning in, totally engaged. |
| 10:49:30:00 | Moumita | You tell me, how many eyes you have? |
| 10:49:36:00 | Child | Two! |
| 10:49:40:00 | Suneeta | The media kind of caught on to the word ‘granny cloud’ and it’s kind of stuck. |
| 10:49:46:00 | Caption | SUNEETA KULKARNI DIRECTOR, ‘GRANNY CLOUD’ |
| 10:49:47:00 | Suneeta | But it doesn’t just include grandmothers, not by age, nor by gender. |
| 10:49:50:00 | Roger | This one you might know. |
| 10:49:54:00 | Roger | That’s a kangaroo! |
| 10:49:59:00 | Priya | Should I write OK again? |
| 10:50:02:00 | Suneeta | The Granny Cloud still focuses quite a bit on language . |
| 10:50:05:00 | Granny Cloud | It’s as tall as a man. |
| 10:50:09:00 | Priya | It jumps from one tree to another. |
| 10:50:12:00 | Suneeta | They need to be able to understand English, to be able to search, to read, to be able to handle the Big Questions. |
| 10:50:14:00 | Roger | Here’s an eagle, a wedged tailed eagle. |
| 10:50:20:00 | Boy | What is this? |
| 10:50:22:00 | Boy | A hawk! A hawk! |
| 10:50:26:00 | Boy | See, see, it's on my shirt!! |
| 10:50:40:00 | Caption | TWO MONTHS AFTER  SCHOOL IN THE CLOUD LAUNCH |
| 10:50:55:00 | Boy | Aren't there any Bengali songs? |
| 10:50:58:00 | Boy | I’ll search for one next time. |
| 10:51:01:00 | Boy | Click here |
| 10:51:04:00 | Boy | Yes, this one is done. |
| 10:51:06:00 | Boy | Done. Pull it in. Drag and put it here. |
| 10:51:10:00 | Boy | Keep it here and delete the other file. |
| 10:51:12:00 | Boy | Minimise that window |
| 10:51:14:00 | Boy | Minimise it! |
| 10:51:16:00 | Boy | I can't remember how I did it last time. |
| 10:51:19:00 | Joydev | They're using a DJ mixer. |
| 10:51:21:00 | Joydev | First they checked videos of how to download the Youtube Downloader |
| 10:51:26:00 | Joydev | Then they installed the Youtube downloader and started downloading the videos. |
| 10:51:31:00 | Ranbir | So they are cracking software? |
| 10:51:34:00 | Boy | Hey! Don't do anything, wait! |
| 10:51:36:00 | Boy | Don't restart. Wait. |
| 10:51:39:00 | Boy | Now this one, no wait this one. |
| 10:51:59:00 | Boy | Please play a Bengali song! |
| 10:52:07:00 | Caption | KORAKATI |
| 10:52:22:00 | Girl | This is fabulous. |
| 10:52:32:00 | Translator | Do you catch a fish every time you cast your net? |
| 10:52:34:00 | Aditi’s Mother | Yes, always! |
| 10:52:50:00 | Girl | Please let me play now. |
| 10:52:52:00 | Girl | I told you already, I'm playing till 2 o'clock. |
| 10:52:56:00 | Ashis | The internet is not working properly and we need it all the time. |
| 10:53:01:00 | Ashis | And now it's showing 0 Kbps. |
| 10:53:05:00 | Ashis | We can't work like this. |
| 10:53:07:00 | Caption | ASHIS BISWAS  PROJECT MANAGER |
| 10:53:08:00 | Ashis | Solving this is not in our hands. It has to be solved by the service provider. |
| 10:53:14:00 | Sugata | They’ll get tired of doing the same things over and over again very quickly. |
| 10:53:19:00 | Sugata | The internet is absolutely vital to the whole process of self-organized learning. |
| 10:53:25:00 | Sugata | Without the internet, there’s a lot of repetitive activity. |
| 10:53:30:00 | Sugata | They learn how to save files, they work collaboratively with each other. |
| 10:53:36:00 | Sugata | But the Granny Cloud of course depends entirely on the internet and on good quality bandwidth. |
| 10:53:46:00 | Sugata | With the internet you can ask them things. |
| 10:53:50:00 | Sugata | Right now I can ask them anything. |
| 10:53:52:00 | Sugata | So there’s absolutely no role.. |
| 10:53:54:00 | Sugata | Could you do anything? |
| 10:53:58:00 | Sugata | He ran away. |
| 10:54:10:00 | Nitish | Even if we pay millions, they won't give us internet. |
| 10:54:14:00 | Nitish | If it doesn't work because the internet is unavailable… |
| 10:54:19:00 | Nitish | ...it will be really sad and shameful. |
| 10:54:24:00 | Sugata | We've come this far, so we'll work this out too. |
| 10:54:27:00 | Sugata | There's nothing like this centre in the whole of the Sunderbans. |
| 10:54:47:00 | Boy | Hey where's my gun? |
| 10:54:49:00 | Boys | - I've killed many. I'll be the winner!  - Count again how many have you killed? |
| 10:54:53:00 | Boy | - Three, I guess.  - Three?! What?! I killed seven. Ask him! |
| 10:54:57:00 | Boy | It's my turn, I'll select a massive gun this time. |
| 10:55:08:00 | Caption | MRIDUL |
| 10:55:12:00 | Mridul | I thought that foreigners would teach in this school, like the grannies. |
| 10:55:18:00 | Mridul | I would be able to speak to people around the world. I would learn English. |
| 10:55:34:00 | Sugata | I don’t feel frustrated about this clash between the pure idea and its implementation. |
| 10:55:40:00 | Sugata | I feel dissatisfied about the fact that the current level of technology cannot make that happen at a reasonable cost. |
| 10:55:56:00 | Sugata | At the moment the School in the Cloud in Korakati is dysfunctional. |
| 10:56:00:00 | Sugata | Will it sink and disappear, or not? |
| 10:56:04:00 | Sugata | Is it an example of what will happen to the others? |
| 10:56:07:00 | Sugata | Or will it resurface in some other form? |
| 10:56:27:00 | Sugata | When I was eighteen or nineteen years old I had gone up to a mountain in the Himalayas. |
| 10:56:33:00 | Sugata | So it’s a steep climb, and there I was climbing up this thing and in front of me there was this old man. |
| 10:56:39:00 | Sugata | He had a refrigerator strapped to his back. |
| 10:56:44:00 | Sugata | He was walking up and smoking a little Indian cigar. |
| 10:56:51:00 | Sugata | And I, you know my heart is racing by that time and I get close to him and kind of asked him. |
| 10:56:57:00 | Sugata | How can you climb smoking that thing? |
| 10:57:02:00 | Sugata | ‘You know what the trick is?’ he says, |
| 10:57:04:00 | Sugata | ‘Don’t look up at where you’re going, you just take the next step’. |
| 10:57:13:00 | Sugata | We are talking about chaos, and the edge of chaos. |
| 10:57:16:00 | Sugata | So when it comes to the School in the Cloud, depending which way it is going… |
| 10:57:22:00 | Sugata | ..like the old man with the refrigerator, I’ll take the next step. |
| 10:57:31:00 | Caption | 2015  THE HUMAN FACTOR |
| 10:57:39:00 | Caption | KORAKATI  NINE MONTHS AFTER LAUNCH |
| 10:57:44:00 | Sugata | Without the internet, Korakati became dead. |
| 10:57:49:00 | Sugata | A few children listlessly playing the same games over and over again. |
| 10:57:56:00 | Sugata | Then we got it back up. |
| 10:58:05:00 | Sugata | Using VSAT, I think 20 mb/s speed which is unheard of in that area. |
| 10:58:13:00 | Sugata | And Korakati woke up from the dead. |
| 10:58:40:00 | Mridul | I think it's a new film. I haven't seen it before. |
| 10:58:43:00 | Mridul | It was a comedy. He was doing tricks with his hands and punching. |
| 10:58:48:00 | Caption | MRIDUL |
| 10:58:54:00 | Hemlata | When the internet started working... |
| 10:58:57:00 | Hemlata | I saw Mridul and other kids searching for books and films. |
| 10:59:01:00 | Hemlata | He also found out the weight of a newborn elephant. |
| 10:59:05:00 | Caption | HEMLATA MONDAL MRIDUL’S MOTHER |
| 10:59:09:00 | Hemlata | Our farm is far away but he could see it on a map. |
| 10:59:18:00 | Hemlata | In the village only very learned people can do this... |
| 10:59:21:00 | Hemlata | ..those who have studied in universities. |
| 10:59:23:00 | Hemlata | But he knows it already. |
| 10:59:31:00 | Mridul | My village folks, they don't discuss these things. |
| 10:59:39:00 | Mridul | They think that because we live in a village we should farm for our livelihood. |
| 11:00:07:00 | Boy | Ma'am, can you hear us? |
| 11:00:12:00 | Child | How are you ma’am |
| 11:00:13:00 | Denise | I’m very well, how are you? |
| 11:00:15:00 | Child | I am fine. |
| 11:00:17:00 | Denise | Can we all come to the computer? |
| 11:00:19:00 | Denise | Shall we do some words of the alphabet so everybody can join in? |
| 11:00:27:00 | Jackie | How many children are there today? |
| 11:00:30:00 | Student | 23 |
| 11:00:34:00 | Denise | Yes, Ok. Brilliant. Let’s have ‘D’ |
| 11:00:37:00 | Granny | Have any of you seen the sea. |
| 11:00:39:00 | Mridul | No Ma’am. |
| 11:00:43:00 | Granny | I’ve got another little job for you now, another task |
| 11:00:47:00 | Child | It's not that easy. |
| 11:00:50:00 | Child | Ask her to give us another puzzle like that. |
| 11:00:55:00 | Krishanu | Where do you live? |
| 11:00:58:00 | Jackie | Manchester |
| 11:01:05:00 | Denise | Now then, who can tell me what can we recycle? |
| 11:01:10:00 | Liz | Maybe you could look online to see why people like to sing. |
| 11:01:15:00 | Suneeta | The grannies do find Big Questions over skype a lot harder to do, partly because you usually can’t see the entire group that’s involved… |
| 11:01:24:00 | Suneeta | ..but what that has led to is the emergence of what the children refer to as mini SOLE sessions. |
| 11:01:31:00 | Suneeta | Relatively small search questions, getting them to think critically, are you sure?, check, or what else did you find, did somebody else find something else? |
| 11:01:44:00 | Moumita | If you can't answer, I will not scold anyone. |
| 11:01:47:00 | Child | Open that. |
| 11:01:50:00 | Suneeta | What we’re seeing is they can’t necessarily read everything that is on a particular link… |
| 11:01:54:00 | Suneeta | ..but they are able to draw the gist of it out |
| 11:02:02:00 | Mridul | At the beginning, I couldn't converse in English. |
| 11:02:07:00 | Mridul | But now we talk every day so we are much more fluent. |
| 11:02:14:00 | Mridul | We're confident about answering even if we might be wrong... |
| 11:02:18:00 | Mridul | ..because we know they can't hit us. |
| 11:02:29:00 | Sugata | When I started out I had a utopian idea. |
| 11:02:30:00 | Sugata | The School in the Cloud would be a bit like an automatically controlled spaceship… |
| 11:02:38:00 | Sugata | ..with the Granny Cloud turning the lights on and off, and opening and closing things automatically. |
| 11:02:45:00 | Sugata | Nothing could be further from the truth. |
| 11:02:51:00 | Sugata | In order to have the reliability that I need, remote controlled technology would be exorbitantly expensive. |
| 11:03:05:00 | Sugata | So I started to get coordinators to open and close the place… |
| 11:03:09:00 | Sugata | ..set up sessions with the grannies, do all those things which I thought would happen automatically. |
| 11:03:15:00 | Sugata | But there was something I could have not expected at all. |
| 11:03:24:00 | Aniket | 'Mother, brother, daughter' they belong where? |
| 11:03:27:00 | Child | - Home |
| 11:03:28:00 | Aniket | What is English for 'home'? |
| 11:03:30:00 | Aniket | What is English for 'family'? |
| 11:03:35:00 | Sugata | People with no background in education put into a School in the Cloud environment… |
| 11:03:39:00 | Sugata | ..with an interest in children become experts at minimally invasive education. |
| 11:03:46:00 | Sugata | They have become my biggest practitioners. |
| 11:03:47:14 | Aniket | I don't want them to think of me as a teacher. |
| 11:03:52:10 | Aniket | Otherwise they will stop coming... if they feel it's like school. |
| 11:03:56:21 | Aniket | But I need to communicate with them. |
| 11:04:08:00 | Aniket | Generally we give a question more or less every day, and when I’m going to give a question to the children… |
| 11:04:14:00 | Caption | ANIKET MONDAL CO-ORDINATOR, KORAKATI |
| 11:04:15:00 | Aniket | ..and they are not getting the interest to search the question they will not search the proper answer for that. |
| 11:04:22:00 | Aniket | You need to build a story. |
| 11:04:27:00 | Sugata | He started giving questions to the children to solve. |
| 11:04:30:00 | Sugata | The one I remember was, ‘Does tomorrow exist?’ |
| 11:04:38:00 | Sugata | And the children used a combination of Bengali to English translators… |
| 11:04:44:00 | Sugata | ..and the answer they gave was that tomorrow does not exist because it cannot be experienced |
| 11:05:00:00 | Joydev | Can insects see in colour? |
| 11:05:08:00 | Joydev | I had no expectations from these kids. |
| 11:05:12:00 | Joydev | They are village kids. I was one too. I used to roam around and play. |
| 11:05:14:00 | Caption | JOYDEV GOSWAMI CO-ORDINATOR, CHANDRAKONA |
| 11:05:19:00 | Sonia | Oh no, we haven't typed it right. |
| 11:05:22:00 | Sonia | Type, 'I', ‘N’ |
| 11:05:26:00 | Joydev | If they have a question in Bengali, they begin by translating it into English |
| 11:05:32:00 | Joydev | They read it. Some say it's right, some say it isn’t |
| 11:05:37:00 | Joydev | They look at images to check whether they have found what they mean |
| 11:05:46:00 | Priya | So many things have come up |
| 11:05:50:00 | Joydev | Once they find a satisfactory answer, they have to write it down. |
| 11:06:03:00 | Priya | People in the village ask us, Why do you go there? To have fun? |
| 11:06:09:00 | Priya | Nobody is interested. |
| 11:06:15:00 | Priya | They don't understand the meaning and importance of this centre. |
| 11:06:21:00 | Priya | I want to show everyone that I am really learning. |
| 11:06:49:00 | Priya | I want to be a cop but my father doesn’t want it. |
| 11:06:54:00 | Priya | I was inspired by this woman who lived nearby. |
| 11:07:01:00 | Priya | Once I saw her in police uniform. |
| 11:07:04:00 | Priya | She is free to be herself even after marriage. |
| 11:07:11:00 | Priya | Mum! |
| 11:07:12:00 | Priya | I'm hungry. |
| 11:07:17:00 | Priya | I won't cook after marriage. |
| 11:07:21:00 | Priya | I'll hire a cook. |
| 11:07:27:00 | Priya’s mother | Why will you have a cook? |
| 11:07:30:00 | Priya | I'll be working, that's why. |
| 11:07:32:00 | Priya’s mother | Oh, OK, and how will you afford a cook?. |
| 11:07:37:18 | Priya | I will have money. |
| 11:07:38:00 | Priya’s mother | How? You don't even study hard. |
| 11:07:41:00 | Priya | So what am I doing if not studying? |
| 11:07:50:00 | Sugata | It’s not a question of whether children need the internet… |
| 11:07:53:00 | Sugata | ..but it’s a question of whether children need to know how to learn |
| 11:07:58:00 | Sugata | More affluent children have people who will help them anyway… |
| 11:08:03:00 | Sugata | ..but it’s children in desolate areas who really desperately need to know how to learn. |
| 11:08:09:00 | Sugata | And I know that the internet does that. |
| 11:08:12:00 | Sugata | I’m willing to take a bet that the evil influences of the internet which will of course be there… |
| 11:08:17:00 | Sugata | ..will be considerably less than the good it does. |
| 11:08:27:00 | Caption | KORAKATI |
| 11:08:31:00 | Caption | KRISHANU |
| 11:08:35:00 | Krishanu’s mother | Since he started going to the School In The Cloud, he would often say |
| 11:08:42:00 | Krishanu’s mother | ..’If I pass my exams with a first, then buy me a computer.” |
| 11:08:50:00 | Krishanu’s mother | Where will I get the money? His father is not able to work. |
| 11:08:57:00 | Krishanu’s mother | How come you entered the kitchen without washing your feet? |
| 11:09:03:00 | Krishanu’s mother | Go and wash your hands and feet. |
| 11:09:11:00 | Krishanu’s mother | Recently, his father got a fever. |
| 11:09:16:00 | Krishanu’s mother | Then I noticed he had a rash on his neck. |
| 11:09:23:00 | Krishanu’s mother | I took him to a doctor. |
| 11:09:27:00 | Krishanu’s mother | The glands in the neck and throat are swollen. |
| 11:09:37:00 | Krishanu’s mother | Lympho, lympho cancer, I think they said. |
| 11:09:45:00 | Krishanu’s mother | Somehow we were managing through our work as labourers... |
| 11:09:48:00 | Krishanu’s mother | ..but God doesn't even support that. He isn't kind. |
| 11:09:56:00 | Krishanu’s father | Our situation is bad. He is good in his studies. |
| 11:10:00:00 | Krishanu’s father | So I wonder if I am spoiling his life. |
| 11:10:09:00 | Nitish | People here face many troubles... |
| 11:10:14:00 | Nitish | ..rains, storms, accidents. |
| 11:10:20:00 | Nitish | In this area we see a lot of families struggle... |
| 11:10:27:00 | Nitish | ..and amidst these troubles, education gets lost. |
| 11:10:37:00 | Mridul | Krishanu could not continue studying here because his father is very sick. |
| 11:10:44:00 | Mridul | So he moved to the city to live with his cousin. |
| 11:10:53:00 | Mridul | It makes me sad, remembering how we used to spend every day together. |
| 11:10:59:00 | Caption | MRIDUL |
| 11:11:01:00 | Mridul | I think of visiting his house then realise he is not there. |
| 11:11:11:00 | Mridul | He lives in Murshidibad now. |
| 11:11:17:00 | Mridul | I wonder how he is. |
| 11:11:29:00 | Caption | 2016  CHILDHOOD’S END |
| 11:11:36:00 | Caption | TWO YEARS AFTER LAUNCH |
| 11:11:48:00 | Villager | You're still holding that camera. |
| 11:11:52:00 | Villager | One needs patience for everything. |
| 11:11:59:00 | Translator | Do you know what this school is all about? |
| 11:12:04:00 | Villager | We stay at home, so how would we know? |
| 11:12:17:00 | Angele | Yesterday it was horribly cold, it was minus ten point five degrees centigrade |
| 11:12:25:00 | Caption | MRIDUL |
| 11:12:30:00 | Angele | When I went outside I had a thick jacket with fur around my face. And boots. Here you can see outside. |
| 11:12:47:00 | Mridul | How do you go from your home to another place? |
| 11:12:50:00 | Angele | I drive my car. If I want to travel a long way, I take a train. |
| 11:13:02:00 | Angele | You can look on Google Maps how I get to Frankfurt airport. Can you screen share it? |
| 11:13:15:00 | Angele | Ooh. You’ve got a map of where I live. That is showing the motorway. |
| 11:13:21:00 | Piu | From here she takes... |
| 11:13:24:00 | Piu | Are you going to Mam's house? |
| 11:13:26:00 | Piu | This is airport. From here you take this road to reach her house. |
| 11:13:32:00 | Piu | You want to go? |
| 11:13:33:00 | Piu | I'll take you. |
| 11:13:39:00 | Mridul | I used to be so scared to talk to Madam. |
| 11:13:44:00 | Mridul | I didn't speak much. |
| 11:13:46:00 | Piu | Ma'am, what is the first letter? |
| 11:13:52:00 | Angele | If I tell you the first letter it’ll be too easy. |
| 11:13: 54:00 | Angele | But it’s an animal with long ears. It’s not dangerous. |
| 11:14:02:00 | Mridul | A rabbit? |
| 11:14:06:00 | Angele | Yes! You got it too quickly |
| 11:14:14:00 | Aniket | There are some children quite busy with their own work |
| 11:14:19:00 | Aniket | Language is not a barrier |
| 11:14:21:00 | Aniket | It’s only become possible for the School in the Cloud for the Granny session especially |
| 11:14:21:00 | Mridul | Yes, ma’am I is a very beautiful bird. |
| 11:14:30:00 | Angele | What colour is it? |
| 11:14:31:00 | Mridul | Red, green, yellow and white. |
| 11:14:32:12 | Aniket | Mridul comes to the lab with various questions in his head. |
| 11:14:45:00 | Aniket | At night I’m here, and suddenly he comes inside, ‘do you know what this is?’ And I tell him ‘Search it on internet tomorrow’. |
| 11:15:18:00 | Suneeta | If you look at a child who has had absolutely no exposure to any of this technology… |
| 11:15:24:00 | Suneeta | ..they’ve already demonstrated where they can go with this so I am very optimistic. |
| 11:15:30:00 | Suneeta | What does concern me however is that ten years down the line of twenty years down the line…. |
| 11:15:35:00 | Suneeta | ..having gained access to other opportunities will they still be able to hold on to their roots in some meaningful manner? |
| 11:15:56:00 | Nitish | Our minds are like a theatre... |
| 11:15:58:00 | Nitish | ..like a stage. |
| 11:16:02:00 | Nitish | Whatever we perceive is given its form there. |
| 11:16:09:00 | Nitish | Each child has a unique imagination. |
| 11:16:15:00 | Nitish | That is what I believe is stirred by the School In The Cloud. |
| 11:16:22:00 | Mridul | When I'm on the computer I forget all about dancing. |
| 11:16:26:00 | Mridul | But dancing makes me completely forget about computers. |
| 11:16:40:00 | Caption | PRIYA |
| 11:16:51:00 | Priya | I am really missing the School in the Cloud. |
| 11:16:53:00 | Priya | Everything we learned there we remember because we had fun. |
| 11:17:02:00 | Priya | My father doesn't like me going out much. |
| 11:17:07:00 | Priya | He tells me to come straight home after school. |
| 11:17:19:00 | Priya | We don't have a son, only her. She is everything to us. |
| 11:17:23:00 | Priya | She has to get educated |
| 11:17:27:00 | Priya | She is very intelligent. My hopes are pinned on her. |
| 11:17:35:00 | Priya | It's not that I have stopped going altogether, but it is much less frequent now. |
| 11:17:39:00 | Priya | I go once in a while. |
| 11:17:47:00 | Priya’s mother | Her father doesn't like her going there. He doesn't want her to go anywhere. |
| 11:17:52:00 | Priya’s mother | He just wants her to stay at home and study. |
| 11:18:02:00 | Priya’s mother | She goes when he is away. I don't object. |
| 11:18:13:00 | Translator | What if Priya doesn't do well in exams? |
| 11:18:16:00 | Priya’s mother | Then we will get her married. |
| 11:18:18:00 | Priya’s mother | Her father says if she doesn't do well in her exams, we'll get her married. |
| 11:18:22:00 | Priya | I will not marry. |
| 11:18:24:00 | Priya | He can't force me. |
| 11:18:27:00 | Priya | He won't do it. |
| 11:18:28:00 | Priya’s mother | Then you have to study hard. You have to do well. |
| 11:18:31:00 | Priya | I am studying. |
| 11:18:40:00 | Caption | FINAL YEAR EXAMS GEORGE STEPHENSON HIGH SCHOOL |
| 11:18:46:00 | Caption | “IF YOU FAIL TO PREPARE YOU’RE PREPARED TO FAIL” |
| 11:18:50:00 | Sally | Sugata would say that it’s the assessment system that creates the whole of the rest of schooling. |
| 11:18:56:00 | Sally | And that changing that system is the thing that will ultimately change how we do education. |
| 11:19:06:00 | Sugata | The system looks for rote memorization of facts. |
| 11:19:12:00 | Sugata | You’re supposed to sit alone… |
| 11:19:14:00 | Sugata | ..you’re not supposed to use any assistive technology… |
| 11:19:17:00 | Sugata | ..you’ll be asked a question and be expected to produce an answer from your head. |
| 11:19:24:00 | Sugata | Why? Why any of this? |
| 11:19:27:00 | Sugata | In life we use the internet and we talk to each other and we look at how somebody else does it… |
| 11:19:33:00 | Sugata | ..in life it’s called best practice |
| 11:19:47:00 | Sugata | It seems to me as though as you are asking me to tell the time of day. without looking at my watch. |
| 11:19:51:00 | Sugata | What for? |
| 11:19:56:00 | Sugata | It’s a kind of Robinson Crusoe examination. |
| 11:20:00:00 | Sugata | If you were stuck in a deserted island, and in order to figure out how many coconuts you can get, you needed to solve a quadratic equation… |
| 11:20:09:00 | Sugata | ..then your Victorian education will save the day. |
| 11:20:17:00 | Caption | HOW COULD WE SURVIVE ON MARS? |
| 11:20:19:00 | Caption | CAN YOU BE RELIGIOUS AND A SCIENTIST? |
| 11:20:22:00 | Caption | WHY DON’T SHEEP SHRINK WHEN IT RAINS? |
| 11:20:28:00 | Sugata | If we could change the assessment system, if accessing the internet becomes a part of examination… |
| 11:20:34:00 | Sugata | ..the School in the Cloud will have come of age. |
| 11:20:42:00 | Amy-Leigh | The culture of learning here has changed and shifted massively, because teachers think differently about how we teach and about how children learn. |
| 11:20:52:00 | Amy-Leigh | We’ve got three years now of data and everyday we’re trying new things out, sharing ideas. |
| 11:21:00:00 | Amy-Leigh | I think it’s just the beginning. |
| 11:21:11:00 | Sugata | One would have thought that at the end of thirteen years… |
| 11:21:13:00 | Sugata | ..the School in the Cloud would just illustrate everything that I could predict anyway . |
| 11:21:21:00 | Sugata | Well, it was anything but that. |
| 11:21:24:00 | Sugata | It disproved many things that I knew. |
| 11:21:28:00 | Sugata | It brought in new questions. |
| 11:21:31:00 | Sugata | That’s the best thing that a research project can do… |
| 11:21:34:00 | Sugata | is not so much produce the answers as produce the next set of questions . |
| 11:21:49:00 | Sugata | What is that list of things that a child today may encounter in the next 80 or 100 years? |
| 11:21:59:00 | Sugata | I think it’s no longer possible to assemble that list at all. |
| 11:22:07:00 | Sugata | The future is rushing at us, and we need to prepare our children for the new world that we are going towards |
| 11:22:38:00 | Caption | How to become police officer in India |
| 11:22:49:00 | Priya | Why should I care about what other people think? |
| 11:22:52:00 | Priya | I will not quit. |
| 11:22:58:00 | Mridul | If this school hadn't appeared, I would have stayed the same as I was before. |
| 11:23:03:00 | Mridul | It was beyond my imagination |
| 11:23:16:00 | Mridul | I want to be an engineer. |
| 11:23:22:00 | Mridul | But to become an engineer, I will have to leave the village. |
| 11:23:34:00 | Mridul | Now I am no longer afraid. |

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| Featuring | SUGATA MITRA  KRISHANU GAYEN  MRIDUL MONDAL  PRIYA PAL ADITI GAYEN  PAPIYA GAYEN  NITISH MONDAL  AMY DICKINSON  SALLY RIX  HEMLATA MONDAL  JUDE DUCK  SUNEETA KULKARNI  MILAN MONDAL  DONALD CLARK  SURAJ BAULDAS  LIZ FEWINGS  ASHIS BISWAS  ANIKET MONDAL  JOYDEV GOSWAMI |

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| --- | --- |
| Directed by  JERRY ROTHWELL | |
| Produced by  AL MORROW  DAN DEMISSIE | |
|  | |
| Co-Director  RANU GHOSH | |
|  | |
| Composer  VINCENT WATTS | |
|  | |
| Editors  JAMES SCOTT  ALAN MACKAY | |
|  | |
| Camera  JERRY ROTHWELL & RANU GHOSH | |
| Executive Producers  TED DINTERSMITH  LYNDA WEINMAN | |
| Executive Producers for Sundance Institute  TABITHA JACKSON  RICHARD RAY PEREZ | |
| Executive Producers  STEWART LE MARECHAL  JONNY PERSEY | |
| Executive Producer for TED | ANNA VERGHESE |
| Associate Producer | RANU GHOSH |
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| Production Managers | VARSHA CHAUHAN  ULLA STREIB  LAURA DIXON |
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| Additional Camera | TOBY ROBSON  RYAN GEDDIS |
| Camera Assistants | SMRITI SHEKHER MONDAL  GOPAL BARMAN |
| Production Assistants | SUMIT DAS  SAIRA ARIAN  MANNY DONALDSON  GOPAL BARMAN  SARAH SAIFI  GUY HORLOCK  RALUCA IONESCU  JACOB HEATON  EMMA WILKINSON  EUGENIA CAPULA  KAREN SIMON  ROBERT PANNERS  VICTORIA FISTES  IBRAHIM KAMEL |
| Assistant Producer | HATT REISS |
| Translator | TRIPARNA BANERJEE |
| Additional Translation | KAZI AREFIN AHMED  SOHAN HAIDER |
| Edit Assistant | BEATRIZ AMARAL TEIXEIRA  SAM ROTHWELL |
| Legal for Met Film Production | LEE STONE AND MARK STAFFORD, LEE AND THOMPSON |
| US Legal Counsel | KAREN SHATZKIN, SHATZKIN AND MAYER, PC |
| Post Production Services | CREATIVITY MEDIA |
| Picture Post Production Manager | JENNIFER ERIKSSON |
| Picture Post Production Co-ordinator | BIANCA DE LUCA |
| Colourist | MATTHEW TROUGHTON |
| Online Editors | JAMES HARDING  COLIN J HUGHES |
| Graphic Design | HUGE DESIGNS |
| Audio Post-Production by SONIC WATTS | |
| Supervising Sound Designer and Re-recording Mixer | VINCENT WATTS |
| Dialogue Editor | RAOUL BRAND |
| Additional Sound Effects Editor | VINCENT HAZARD |
|  |  |
| ARCHIVE COURTESY OF | |
| SUGATA MITRA | |
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