

Rethinking Education
Should We Replace Old With New?
A response to Sugata Mitra

BRENT SILBY

In his recent article *"Advent of Google means we must rethink our approach to education"*, Sugata Mitra argues that our education system needs to change. He suggests that the existence of modern technologies such as Google make the skills of the past obsolete. For Mitra, the only reason we continue to teach skills such as longhand multiplication is because we have some sort of romantic attachment to the past.

I worry that Mitra is downplaying the importance of the skills we teach in school. I'm also concerned that his views devalue knowledge. Mitra claims that:

"It took nature 100 million years to make the ape stand up and become Homo sapiens. It took us only 10,000 to make knowing obsolete" (Mitra 2013a)

In this series of posts I will break Mitra's Guardian article down and offer a critical response to each of his points. The first point I wish to address arises from this passage:

"Any standard room in a Holiday Inn is better than the best facilities in an emperor's room in the 15th century. Air conditioning, hot and cold running water, toilets that flush, TV and the internet. The middle class lives better today than any emperor ever did. Going back to horse-drawn vehicles is not the solution to our traffic problems and pollution. Beating children into submission will not solve the problem of educational disengagement." (Mitra 2013b)

On a first reading it looks like Mitra is making a non-sequitur argument that runs something like this: Modern hotel rooms are better than a 15th century emperor's room, therefore traditional forms of education are no good and need to change. This, of course, would be an overly simplistic and unfair reading of Mitra. After all, just because something is old, doesn't mean it has no value. Symphonies from the 18th century are old, but I don't think anyone would argue that simply in virtue of their place in history they no longer hold any value.

Perhaps a more accurate interpretation of his statement is that historical systems cannot not be used as solutions to modern problems. For example, he states that our problems of pollution and traffic cannot be solved by going back to horse-drawn vehicles. He may have a point, but I am not convinced that his example works. Over the past few years researchers have been looking at a return to village style living precisely as a means by which to solve traffic and pollution problems (see for example the Union of Concerned Scientist article, ["It takes an urban village to reduce carbon emissions"](#)). I don't think they go so far as to suggest horse-drawn vehicles, but the idea is that if we return to a village style organization of our population, people will be able to walk or cycle to their destinations rather than driving cars. So in this case, Mitra's example is not convincing.

What I do agree with is the final sentence in Mitra's statement. Beating children into submission is not going to help improve engagement in education. But is this the only alternative to Mitra's theory? Is this all that traditional styles of teaching have to offer? Here Mitra seems guilty of creating a *strawman* view of education - a sort of characterization of traditional education which is easy to knock over. No, we do not want a return to the old disciplinarian days of corporal punishment with teachers shouting facts directly into the ears of students who are dressed in demeaning standard issue charcoal grey uniforms. Of course we don't want this. But I think it is a mistake to conflate this with everything else that a traditional education

system has to offer. As far as the teaching and learning goes, we are looking at a contrast between Mitra's *constructivist* approach and an *intellectual traditionalist* approach (see Schubert 1996). Mitra is arguing that the modern world requires that we do away with the *intellectual traditionalist* approach in which students are presented with knowledge and fact, and replace it with a *constructivist* approach which sees students independently gathering information from the internet in order to construct their own understanding of the world.

For Mitra the constructivist approach could involve a teacher posing a focusing question and then allowing the students to work in small groups - with a computer - to uncover an answer to the question. Interestingly, according to Mitra, the answer to the question is not important. What is important is the process that students go through in finding an answer.

What Mitra is proposing is a sort of "top-down" approach to education. The idea is that students start with a focusing question and then work backwards to fill in the information they need in order to answer that question. One of the problems with this approach is that the answer to the question might not be adequately supported with foundation knowledge. Answering questions in this way is a bit like building a multistory skyscraper by starting at the top floor. We start with a big question at the top floor then build backwards towards the ground to fill in enough information to support an answer to that question, which then sits inside that top floor. A skyscraper built in this way might be standing on no more than a few wobbly foundations. It could even remain standing for quite some time if no-one tries to add additional levels. However, a problem arises when someone wants to build an additional level on top. That could misbalance the entire structure and result in it collapsing in a heap of ignorance.

The alternative is to take the "bottom-up" approach to learning. Here we start with solid foundations. We ensure that the composite building blocks of the foundations snap together like tight pieces of a jigsaw puzzle. From there we

build the first level of knowledge. With that firmly set in place we proceed to build additional levels until we reach the big questions currently facing our species. As we attempt to answer those big questions we might sometimes find it necessary to dismantle and reassemble parts of the level below in order to provide the best structure upon which to support the current leading ideas in the world. But this is okay. The entire building does not topple over in the process. By building an education from the bottom up we secure a solid structure of knowledge.

Mitra believes the intellectual traditionalist model of education from the past will not equip our students with what they need to face modern world problems. But I disagree. I worry that the top-down approach to learning provides students with knowledge that has insecure foundations and therefore cannot be easily built upon. While Mitra holds that ideas of the past cannot be used to solve current problems I think we ignore the past at our peril. The *intellectual traditionalist* model of education provides students with solid foundations upon which to build knowledge. This is crucial if we are to address novel problems. Without the solid base, any attempt at acquiring new knowledge risks failure. 21st century problems need to be addressed with the benefit of the expertise and knowledge of history - precisely that knowledge which enabled us to build this 21st century world.

Bibliography

Mitra, S. (2013a). Ted Talk - *Build a School in the Cloud*, retrieved from http://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud.html, accessed June 26, 2013

Mitra, S. (2013b). *Advent of Google means we must rethink our approach to education*, The Guardian|Observer, June 15, 2013, retrieved from <http://www.guardian.co.uk/education/2013/jun/15/schools-teaching-curriculum-education-google/>, accessed June 20, 2013.

Schubert, W. H. (1996, summer). "Perspectives on four curriculum traditions" in *Educational Horizons*, 169-176.

It takes an urban village to reduce carbon emissions, retrieved from http://www.ucsusa.org/global_warming/solutions/big_picture_solutions/urban-village.html, accessed June 27, 2013