

**Newcastle University**

**School of Education Communication and Language Science**

**MA Education: International Perspectives**

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**Placement Research Project – Tiago Da Silva**

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**Essay on:**

**Is schooling the best way to give education in the developing world?**

**Focus on my Placement Location – Kolkata, West Bengal, India**

Supervisor: Dr. James Stanfield; Dr. Christopher John-Counihan; Dr. Sugata Mitra

Word count: 5402 words

From Capital of the British East India to extreme famine, extreme poverty and demographical shifts due to Wars... From and intellectual hub of India in the early 20<sup>th</sup> Century with Rabindranath Tagore at the centre to the Naxalites destroying much of the cities amenities followed by the world longest-serving democratically elected communist government (34 years), Kolkata is a city of contrasts, many of them still not easy to be fully understood.

Nevertheless, Kolkatians are very proud of their culture. They are tied to two of the major educational reformist of their time: Rabindranath Tagore (beginning of 20<sup>th</sup> Century), which mostly influenced the Kolkata culture and created his own theory of “subconscious learning” (<http://infed.org/mobi/rabindranath-tagore-on-education/>) and Sugata Mitra who with ICT is revolutionizing Education through SOLEs and SOMEs, and defends on the same lines that children learn intuitively in groups if involved in the process of discovery (Mitra & Dangwal, 2010).

However, one of the biggest challenges in India and Kolkata is Education, due to communist regime delayed progress. They removed English from primary schools for a while (<http://www.navhindtimes.in/opinion/jyoti-basu-and-unparalleled-political-stability>), and after refused the introduction of computers in the city due to unions’ pressure (<http://in.reuters.com/article/2010/01/18/idINIndia-45456120100118>). And besides the culture, art, poetry and music left from Tagore’s time, their education is pretty much based in rote-learning (i.e. Repetitive inputs to memorize technique), despite Tagore’s educational reforms in his time.

Now, the city holds 15 million people, in a complete chaotic, self-organized fashion, of tiny back alleys next to degrading former British buildings or new highly ‘Indian-style’ advertised skyscrapers. IT services sector is the main economic focus for growth, after many years of delay, and they start to look towards new ways of developing, just like the other Indian megacities.

Even though many other countries look at India as an example to follow specially in the Science, Maths and ICT, this is mostly because their selection system only rewards ‘the best of the best’ in grade-10 and 12 after an ‘excel-or-die’ group of national exams (<http://www.bbc.co.uk/news/education-24743439>). Over-competition and pressure skyrockets in an ‘overpopulated’ market such theirs. Some children every year are committing suicide (<http://www.emirates247.com/news/emirates/student-left-suicide-note-in-exam-paper-5-days-before-he-died-2014-03-05-1.540466>); many are cheating incredibly (<http://www.latimes.com/world/asia/la-fg-c1-india-cheating-20140416-m-story.html>). This feeling is widespread in schools and family (e.g. Dead Grandmother Syndrome (<http://www.math.toronto.edu/mpugh/DeadGrandmother.pdf>) and parents ([http://www.khaleejtimes.com/kt-article-display-1.asp?xfile=data/educationnation/2014/March/educationnation\\_March11.xml&section=educationnation](http://www.khaleejtimes.com/kt-article-display-1.asp?xfile=data/educationnation/2014/March/educationnation_March11.xml&section=educationnation))).

So those parents who can finance a more supportive education, tend to maintain their sons in the top group, while parents who cannot finance a comparable education, tend to stay with their children behind. In the end, ‘we’ still use the same system since colonial times, which was designed to create/sustain an elite and minimize ‘others’, which stereotypes groups and affects their performance (Banerjee & Duflo, 2011). Besides this, there are more concerns.

Despite governmental and international policies, the quality of education overall in India is incredibly poor. India holds 44% of the world's illiterates, and the rate of female literacy is higher than Sub-Saharan (Kingdon, 2007). According to the Annual Survey of Education Report [ASER], 46% of children that dropped out their moms have not been in school themselves. Plus from 2011, three out of four children do not learn what is considered enough to pass the year, and due to non-falling policies, they continue passing each year until grade-8 without being properly taught (Pratham, 2011). In West Bengal [WB] alone, children who are absent from school are more than 40%. In grade-5 50% of children from rural WB cannot read a paragraph in their own native tongue, plus almost 70% of children of grade-5 cannot do division. In this extent report, the quality of schooling from the government or private sector it is almost indifferent.

In this essay, I define schooling in the traditional Western sense, when it was developed more than 200 years ago: teacher-centred; year graded; individually assessed; inside a building (usually a 'school'); syllabus decided by an external group (i.e. national or local government/group); textbooks to deliver knowledge (i.e. formal education) and rote learning.

In this essay, I will essentially look at the current schooling system in India and compare with alternatives, developed in Kolkata and outside. I begin with how Indians would educate themselves before the colonization, and what occurred after. I continue with Tagore's pedagogy. In the next chapter, I focus on the impact of current policies and on the schooling education system, followed by current alternatives. I will be complementing my essay from experiences in my placement as well. I finish with my conclusion.

## Historical Indian Past in Education

### Pre- and Post-Colonization in India and implications on society

*"I say without fear of my figures being challenged successfully, that today India is more illiterate than it was fifty or a hundred years ago, and so is Burma, because the British administrators, when they came to India, instead of taking hold of things as they were, began to root them out. They scratched the soil and began to look at the root, and left the root like that, and the beautiful tree perished".*

Mahatma Gandhi, Chatham house, London, October 20, 1931 (Tooley, 2009, p. 212)

To understand if schooling is the best way to deliver education first, we should look at if schooling is 'natural' to Indians. A few years ago, scientists found a link between genes and environment, culture, behaviour of a person, as they all coevolve during time and life (Jablonka & Lamb, 2005). Although human action always is the main factor for development, scientists have proved indirectly that people from distant genetic heritages take more 'time' to adapt to another's genetic population innovations than similar (Spolaore & Wacziarg, 2013).

Before the colonization, the Indians were obviously very different from the British. They held a caste system, first developed in the religious scriptures known as Vedas (compiled between 1500-1000 BC). It worked in the same way as the medieval guild system in Europe, and it allowed the specialization of the society and people acknowledge their role, although hereditarily unfair (by family name). Unfortunately, Untouchability was a creation of society as they were not part of the Vedas scriptures (<https://www.mtholyoke.edu/~epandit/index.html>).

Nonetheless, historians argue the Indian social *stratum* was quite flexible. Between 1600s-1800s the Moghuls had the 'armed peasants' from different castes that would travel in search for an ally we would his trust in (i.e. a "co-sharer of the realm") across the empire, until his next generations or himself would not feel peaceful there (Heesterman, 2004).

Indians were also quite flexible when it came to their education. Before the colonization, education was mostly of the responsibility of a community's guru or teacher. This education would be given mostly to males and at least some districts education was even given to the Untouchables (Tooley, 2009). This system covered almost every village and the proportion of male children in 'school' was superior to Europe, with inclusion of Persian and English schools in some parts.

The system was quite informal. Parents, that did not have enough funds, would try to find other children to go to that school and from that get an allowance to pay tuition. Other hypothesis was tuition was paid accordingly to the parents' "circumstances" (Tooley, 2009). The 'schools' however, in terms of infrastructure did not have building schools. These were temples, trees, festivals, and in constant contact with their cultural reality. Also, their pedagogy was quite "economical" (p.226), as older scholars would support and teach the least advanced in groups, and these older students were under the master supervision. This now is called "peer-learning process combined with flexible performance-based grouping of students" (Tooley, 2009, p. 227). The main pedagogic idea is that more heads, despite each one memorized different things, together they would be able to recall it. The older students were also children, who could easily invent games or songs for the children's learning. This system ended up being imitated by Andrew Bell, who brought this system to England and called "Madras Method" (Tooley, 2009).

The "Beautiful Tree" method probably lacked however, a sense of 'bigger picture', as knowledge was passed within the community, and barely was connected to the outside, unlike the British system. The British did this quite well across their empire, although it was limited. They only passed the image of the empire.

Unfortunately, the 'true nature' of the Indian caste and education system were destroyed with the British colonization. The country became more "caste-conscious", with the British own set of inflexible norms and conventions of their own culture, as they valued more the elite and despise the peasants (Heesterman, 2004). With this, the Indian Elite took advantage of the situation as they won power by excluding and subjugating others from the country's wealth and so, perpetuated this system (<https://www.mtholyoke.edu/~epandit/index.html>). Additionally, in fear of an insurgency they demilitarised, disarmed and depoliticised the population (Heesterman, 2004), making in this process also, many of them lose their identity and possibility to change state.

The Indian Education system was transformed to a typical centralized system (i.e. schooling), mostly due to the perception of some politicians (e.g. Macaulay) that these 'backward' people could not

teach themselves an 'education', plus it did not reach every place (Tooley, 2009). The major problem was the Indians would learn the not their own 'history', but the British. Thus, British 'values' and 'history' as saviours of the nation were passed to them (Tooley, 2009). This destroyed the Indian's past, as it was devalued by the colonizer and replaced by the 'Empire version'. Hence, throughout time a myth of racial superiority was secured (Vakunta, 2008).

These factors still hold a major impact in India today in education. The education system is still the British, designed for their elite students. The remote rural regions consider themselves 'hereditarily dumb', and incapable of learning. Those parents who invest in education, many times only invest in one child (the 'smart' one) leaving the others behind. And despite changes in the law after independence to end caste 'segregation', children from low/non caste in school still perform significantly less next to high caste people when their names are called out loud before the test. However, they score the same when the names are not told. In addition, teachers by knowing their students name will be more critical to low-caste and high-caste, especially if the teacher is from low-caste himself/herself (Banerjee & Duflo, 2011). Education became trapped within the caste system, for some.

In India, I had an episode regarding the perception of racial superiority with an 11<sup>th</sup> grade student. I showed her our current perception of a plain world map (i.e. Mercator's Map) is wrong (<http://www.dailymail.co.uk/sciencetech/article-2596783/Why-world-map-youre-looking-WRONG-Africa-China-Mexico-distorted-despite-access-accurate-satellite-data.html>). We kept talking and I asked her 'Why do you think it was for the British and Europeans self-interest to make this the 'world map'?'". She replied: 'Because, as in almost everything, they are smarter than we'.

I was not expecting this answer and tried to explain her it was not being smart; it was mostly power and sense of superiority over others, plus the centre of the map could be anywhere else, but to no avail. For her, all those reasons just proved they are "smarter" than the Rest. These are unconscious 'intrinsic' feelings, which are hard to disappear with time.

In sum, the problem is not that the British education or governing system was bad; it was however 'unsuitable' to the Indian culture. And in many ways, the flexibility once known in the education system was decimated by the pursuit of power of the Indian 'Elite' and the British colonization. Tooley (2009) refers many other developing countries faced a similar situation. They may have not had exactly 'schools', but people/poor received an education. Their own education, for what they considered for their development.

Considering that before the colonization more Indians were more educated than the English overall, after independence was 9% for women and 27% for men (Kingdon, 2007), and the quality of education today, as referred in the introduction, remains extremely low... I wonder after more than 150 years, could Indians go back to its 'indigenous' system, or already culture and genes are adapted to this schooling.

Although not the only reason for low quality education now, these facts allow us to consider the consequences of imposing a 'schooling' system may have negative impacts in education of a population used to something else. However, if a sharing of thoughts occurred, as Andrew Bell and the Madras Method, in the Indian side, maybe their system by itself could have taken the next step, in its own flexible way. The other question is if the British and Indian Elite would accept it.

## Rabindranath Tagore and the theory of “subconscious learning”

*Don't limit a child to your own learning, for he was born in another time.*

Rabindranath Tagore,

[http://www.brainyquote.com/quotes/authors/r/rabindranath\\_tagore.html#Jd9ProcGgr2r43ly.99](http://www.brainyquote.com/quotes/authors/r/rabindranath_tagore.html#Jd9ProcGgr2r43ly.99)

*The highest education is that which does not merely give us information but makes our life in harmony with all existence. But we find that this education of sympathy is not only systematically ignored in schools, but it is severely repressed.*

Rabindranath Tagore, Personality, 1917 pp. 116-117)

Is a school's structure good to motivate children? What other factors should be taken in place? And how to connect cultures, without one dominating the other?

Despite colonialism, Tagore tried to develop that.

Kolkata, the East India capital, in the end of XIX century had a political, artistic, and educational renaissance. Tagore (1861-1941) was born around an influent extended family from all backgrounds. From them he reports he absorbed and learned subconsciously at his own rate. This childhood experience made him try to replicate it for others, in his own school for his last 40 years of life. Santiniketan was the result, a place which involved everyone from intellectual to illiterate people, surrounded in an atmosphere of art, culture and science. The ideal was to bring freedom of education to everyone, with no limits, even for those with lack of previous experience (<http://infed.org/mobi/rabindranath-tagore-on-education/>).

In his own theory of subconscious learning, Tagore was never condescending; instead he involved students in his own writing or composing, harder challenges to stimulate their learning. Also, he engaged them to write, dance, compose, paint or study their own ideas and take inspiration from others. The process he expected from his students was for them to look within their culture and expand to others; to find mutual “interconnectedness” in one's being and community. To enrich this, Tagore would invite artists and scholars from all over India and the world to live there and share their experiences (<http://infed.org/mobi/rabindranath-tagore-on-education/>).

His curriculum was not based on facts, it was instead in innovation: how does culture and history provoke social change for the better; how arts give the possibility to imagine what is not there yet, or what there is and it is beautiful; and how can science discover the mysteries of the universe between.

Besides all this, Tagore observed the huge access to culture gap between the poor's and elites, besides education. To solve part of the issue, he opened a rural reconstruction centre to develop cooperative schemes between the poor, students and teachers of the school; and give them literacy training.

In many ways, this curriculum looked into what the English and Indian system failed to manage: a sense of togetherness and actual contact with the individual reality and culture (from the English side), and sense of bigger picture (Indian side). This type of interaction between teacher and pupil

also created an atmosphere of lifelong learning, as both sides were involve. And for me, this interaction in schooling is still missing.

Tagore managed to connect multi-cultures to nature and science and elevate them all, in his 'poet' personality. Today, most dances, music and poetry composed are Tagore's last strong breath in that city, along with his books.

Sadly Santiniketan, Tagore's finest creation, is decaying, from government lack of funds and strong regulations. In the 1960s, Government transformed Santiniketan, from a global university, into a township. In charge of this transition they decided on the local Member of Parliament and disregarded the University's Vice-Chancellor say. From that moment on, politics and constant look for growth began slowly killing this place and hence, Tagore's educational ideology ([http://www.telegraphindia.com/1120624/jsp/calcutta/story\\_15650986.jsp#.U3TpbPmkoUM](http://www.telegraphindia.com/1120624/jsp/calcutta/story_15650986.jsp#.U3TpbPmkoUM)). And today, it looks most of the times education continues to be so, but in a wider scale.

That it is what I will be looking at the next chapter.

## **Present India – Private and Public Sector, Policies, Globalization and current alternatives**

### **Globalization of Education and Policies**

*"My greatest fear was that as we drifted towards this blandly amorphous generic world view not only would we see the entire range of human imagination reduced to a narrower modality of thought, but that we would wake from a dream one day and having forgotten there were even other possibilities."*

Wade Davis quoting Margaret Mead, in  
[http://www.ted.com/talks/wade\\_davis\\_on\\_endangered\\_cultures.html](http://www.ted.com/talks/wade_davis_on_endangered_cultures.html)

Over the last 50 years, schooling became the worldwide method to provide education. For most countries is still the only system accepted for employment in society. As referred before, schooling looks more a British cultural phenomenon that by dominance expanded to other countries, despite international organizations (e.g. UN, NGOs) and their government the results have not been what it was expected.

MDGs and Education For All (EFA) were such initiatives with a purpose to raise this right for education. Their focus was on free enrolment and gender equality rates in primary government schools, in which there was a meaningful increase (<http://www.un.org/millenniumgoals/education.shtml>; <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/>).

Additionally and to reinforce these measures, the Indian government in 2009 issued the Right for Education Act (RFE). It 'demanded', among other things: every teacher must finish the year syllabus; no teacher can fail a student until the 8<sup>th</sup> Grade (Banerjee & Duflo, 2011) or students must do the

10<sup>th</sup> Grade exam (<http://www.latimes.com/world/asia/la-fg-c1-india-cheating-20140416-m-story.html>) and students can only go to school during the day (<http://www.educationinnovations.org/program/barefoot-college-night-schools>). The main goals of these policies were, respectively: 'demanding' teachers to teach; elevating India's performance in education in both male and female and avoid drop-outs; no child labour.

The problem is not these ideas are good or bad; usually all of them have the best of intentions. However, the problem is the conceptual basis of universal policies themselves. According to E.G. West these policies tend to over-exaggerate the problem and not go for the cause. After this, the system becomes more "inherently inelastic" as posterior governments will likely have a hard time to change anything, due to people's lack of support or they accustom. (Tooley & Stanfield, 2003).

These initiatives looked at government numbers and excluded traditional education and low-cost private (LCPUS) unrecognized schools, i.e. any other choice in education. There might be a number of reasons for it, but the two most 'obvious' are: these policy-makers are not aware of them, or if they do, they do not consider the poor's solutions good enough. This only increases the sentiment of 'backwardness', as previously referred.

More specifically, due to this perception, MDG and EFA did not consider as government education became free, parents moved their children into it from LCPUS, which could explain part of the increase (Tooley, 2009). And RFE forgot that orphans or children of parents in extreme poverty, especially in rural areas, might actually need the money to sustain themselves. Hence working/helping by day and go to school at night, however awful it might be, it is the way best alternative for these children to get out of the poverty (<http://www.educationinnovations.org/program/barefoot-college-night-schools>). Additionally, these schools can even help improve the day school children.

But, as impressive it might sound, none of these measures regarded quality of schooling as vital. All regarded enrolment as necessary and sufficient condition to quality. But this was simply not true, as shown in the introduction. These numbers result in a culmination of factors.

Besides those mentioned in the previous chapter, first, high rates of teacher absenteeism and no-teaching (i.e. teacher not captivating children in some activity, while the reporter comes to the school) are tremendously high in government schools (Banerjee & Duflo, 2011), where government teachers are well paid without any kind of good regulation (Tooley, 2009). Second, if studies show that parents' literacy is important for the child's future literacy, I do not understand why there is no huge investment in literacy learning for adults. Third, with the increase of students in government schools being not accompanied with increase of teachers, the teacher-per-students ratio increased, which may only deteriorated the already difficult learning conditions (Tooley, 2009). Fourth, good teachers do not want to go to extremely remote places on their own. There is no monetary or psychological incentive (Mitra, 2008). Fifth, the pedagogy used, rote learning does not allow collaboration between students. If this was incentivized in Indian schools, despite the number of students per class, maybe it would be possible to achieve better results.

But, by far the most important, because it includes the public and private sector (recognized and unrecognized) is by pressuring teachers to finish the year syllabus and let students pass no matter what, the focus becomes the syllabus. Without any kind of examination until grade 8, teachers do not consider their duty to teach the weaker students, centralizing their teaching for those who



follow. Hence the weaker students, especially from lower backgrounds, until grade 8 get lost and nobody supports them to recover. Ultimately, the gap between the 'elite' students and 'non-elite' only gets wider (Banerjee & Duflo, 2011) as the years go by.

Another problem of these initiatives, syllabus and curriculum given to most children is its disregard for brighter students. In GEMS I met a brilliant student from 9<sup>th</sup> Grade who found his passion was Quantum physics. Since I know Quantum Physics I quickly realized the student knew way more than I did, and continued on an impressive pace. Unfortunately, his Physics teacher was an incredible stubborn teacher. She truly believed students needed the syllabus and its structure, otherwise they would not learn for themselves. "They need the certificate and structure", she would say to me (needless to say she did not believe in SOLEs, as many teachers). His Grade in Physics was 42/100 (in GEMS they were using a different curriculum, so 40 is pass), because he did not study for it.

So, in a country of 1.2 billion people to be able to provide a good education, with a single model, from a top-down approach it is impossible. And considering, the Indian main pedagogy is rote-learning; concentrating those who thrive from those who do not from a single exhaustive method it is extremely selective. This method requires more memory than understanding. And as government and organizations do not focus on quality of education, this ends up narrowing the range of possibilities to students to succeed and, thus excludes many talented young children, by forcing them to learn what they do not wish.

On the other hand, RFA explains why there are currently more students taking the grade-10 exam, likely with bigger expectations than they should, as there was no pressure in passing the years before (<http://www.latimes.com/world/asia/la-fg-c1-india-cheating-20140416-m-story.html>). Despair or cheating is the likely options, as Education/schooling is an evolving and nurturing process; one cannot expect children start working intensively, without prior practice.

Even if the Indian government made the syllabus of their curriculums more accessible to embrace more students, the exam would naturally have to be as accessible. This would even increase more the amount of top grades in an already congested system (<http://www.bbc.co.uk/news/education-24743439>), and, if they were no more changes made, would only increase this chaos.

But despite all this, my biggest concerns are for the indigenous and alternative education sectors. These initiatives plus a national curriculum/syllabus only destroy them, as the rest of the society and even the remaining community do not consider their way of living and/or educating as good. Languages disappear, cultures with them, as the young people the community leave to look for better opportunities and acceptance ([http://www.ted.com/talks/wade\\_davis\\_on\\_endangered\\_cultures.html](http://www.ted.com/talks/wade_davis_on_endangered_cultures.html)). It is, in many ways, a 'Colonizing Education 2.0'. This is what E.G. West feared, and it is horrifying its pace: more than half of the 6000 world languages are no longer taught to younger generations ([http://www.ted.com/talks/wade\\_davis\\_on\\_endangered\\_cultures.html](http://www.ted.com/talks/wade_davis_on_endangered_cultures.html)). These cultures will soon follow.

In retrospective, I believe if Tagore had lived now, it would have been impossible for him to have the same learning experience as he had during his childhood. Anyway, if he tried to implement today in Kolkata or anywhere his system, it would find much more resistance from many worldwide scholars, as 'subconscious learning' goes almost against what schooling represents.

So even though schooling is not an indigenous system for most these places, the most destructive part is the government universal policies to attain the situations, which they blame no one but try to save everything (Tooley & Stanfield, 2003). In the end, they only narrow ways of being and learning...

To fight this we should look at alternative ways of thinking, to include the 'excluded' ones of the system or allow new systems, instead of trying to keep forcing them.

### **Current Alternatives – Private Corporations and informal economy, Mindsets, Barefoot College, SOLEs, Frugal Digital, Pratham, lifelong learning**

*"The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift"*

Bob Samples thoughts on Einstein ideologies, 1976

The problem of schooling, especially in government schools, lies on the fact it is too dense in syllabus and people, who most of the times are not even related to the process of learning. And apparently, these managers (e.g. policy makers, bureaucrats, unions, administrators, regulators...) and teachers costs 77% of the Indian's education budget; 15% for infrastructure and the remaining for free provisions for children and help children out of school (Pratham, 2011). This is not to exclude in India the need for bribery to advance projects.

Hence, innovations and alternatives are a thorny subject in schooling. This 'industrial' education system has become static and almost insusceptible to change (Dolan, et al., 2013), as it focus more in managerial costs than the child's actual development, whether in business strategies, policy, teachers, unions, schooling. Fortunately, there are things already getting under way.

Regarding 'quick fixes' in literacy and numeracy, Pratham, the biggest educational NGO in India, just like the "Madras Method" started to use older local students, volunteers with little training, to help during the night children in difficulties with impressive results (Banerjee & Duflo, 2011). This proves that there is not a need for that much change and a normal teacher can teach them easily, if there is given to him more time, plus he/she recognizes that is his/her mission.

In access to information to remote locations, Frugal Digital in India has been taking a step further, by developing low-cost technology for local problems, which local electronic informal technicians can tinker, assembly and fix it. For education, they have developed for teachers in remote locations, a transportable projector with a battery rechargeable by solar and/or car batteries, with a USB connection and speakers. All this out a flashlight, mobile phone and a pico-projector, that the local electronic 'craftsman' can easily do ([http://www.ted.com/talks/vinay\\_venkatraman\\_technology\\_crafts\\_for\\_the\\_digitally\\_underserved/](http://www.ted.com/talks/vinay_venkatraman_technology_crafts_for_the_digitally_underserved/))

In access to remote schooling for children and empowering illiterate, Barefoot College in India may be the best option I know so far. Barefoot believes in Gandhi's ideal of education, that first the people from the village with their own skills, knowledge, and wisdom should try to resolve their problems before getting help from the outside. For that, sophisticated technology should be in the hands of the poor communities, for their own use and independency, despite being or not being formally educated (<http://www.barefootcollege.org/barefoot-approach/>).

In schooling, besides focusing in literacy in English, Hindi and the local language plus numeracy, their curriculum is based on regional and cultural relevant examples for the children's 'education'. Until before RFE, they focused on night schools for working children powered by solar energy, built and made by Solar Grandmothers (<http://www.barefootcollege.org/solutions/education-solutions/night-schools/>). Besides that, the children nominate a prime-minister to represent them every year. The Solar Grandmothers were basically illiterate women (and men) whom in 6 months in this college, through motivation, collaboration, a colour-system and body language become solar engineers and manage to empower and sustain their own village.

Unfortunately, with RFE we do not know if they night school program continues well.

And to prepare ourselves to the future with more technology, Sugata Mitra developed SOLEs. The central point of this pedagogy is that children can learn intuitively by themselves, anything, as long as they are in groups and computers with internet access (one computer per 4 children in average for better results). Plus, if the question is challenging, students hold the information learned for longer than anticipated (more details in (Dolan, et al., 2013); (Mitra, 2010); (Mitra & Quiroga, 2012); (Mitra & Dangwal, 2010)). Its concept is based on self-organizing systems, where learning is the phenomenon ([http://www.ted.com/talks/sugata\\_mitra\\_build\\_a\\_school\\_in\\_the\\_cloud.html](http://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud.html)).

What this means is that with SOLEs there is barely a need for a teacher to 'hand-out' knowledge, as that information and even more it is unfiltered online. Just as Tagore, its ideology is children can grasp way more knowledge than we intuitively predict, if they are supported and in groups than can mix together and copy information from each other, freely.

I did SOLEs from ages 7-17, but my focus was from 15-17 in my placement. In this age, students become to individualize more their learning and work more in fix groups and they like to discuss ideas. So instead, of a regular conference he would debates ideas. It was clear that this was the first time they were something like it, especially under the circumstances. There were always in average 20 students, from 4 different classes from grades 9 and 11. What impressed me most is how the concept SOLEs can be malleable to the group you are. I developed two techniques there, first off a debate, in which I divided students in 4 groups to discuss women's discrimination, with self-organized Internet research. The other was a 'SOLE Clash'. I divided the class in two groups that received the same input, but different questions to 'clash' in the end of the session.

Despite my inexperience might have caused some troubles in the beginning, and the room was difficult to work in (27 computers, when there was only a need for 5 per session; strong firewall) I learned in a lot in the process. As James Stanfield told me: "SOLEs are an ongoing experiment", for me as a facilitator and for the students, who have never done it before. And they overall enjoyed it.

Being able to connect SOLEs with Frugal Digital, to fix computers and Internet may help create sustainability of these computers for longer.

In sum, all these education strategies are complementary to one another, as to the education of oneself. They involve students in the tasks at hand and help reduce prejudice, either in the worst parts of megacities or in remote rural areas; between them and the 'elite'. Technology can empower and help students come up with answers to local problems in an accessible way. Some schools in India already began to do so with projects using computers and Internet. Unfortunately, these are still outside of the school's curriculum and schedule (e.g. water irrigation in an area suffering droughts in Gujarat (Light, 2009)).

Integrating these factors, regional, cultural and lifelong learning, lays the key to construct a more educated society by empowering the poor, in a decentralized way, just like the days before colonization. Also everywhere, Internet can provide communication between cultures on-time and bringing the world closer together, as Tagore tried to do, without having the need of travelling.

The underlining problem is if the emphasis schooling continues to rely on assessing and the future economic growth of nations, these alternative initiatives will unlikely take ground. Schooling as Education should rely on promoting human development and not satisfy the need of markets; this part would come naturally later, as we develop and grow old (Nussbaum, 2008).

## Conclusion

*Where the mind is without fear  
and the head is held high,  
Where knowledge is free.*

*Where the world has not been broken up into fragments by narrow domestic walls;  
Where words come out from the depth of truth;  
Where tireless striving stretches its arms towards perfection;  
Where the clear stream of reason has not lost its way  
into the dreary desert sand of dead habit;  
Where the mind is led forward by thee  
into ever-widening thought and action—  
Into that heaven of freedom, my Father,  
Let my country awake.*

Tagore, Gitanjali, 1910

Schooling was and still is for some locations, an unnatural education system for most Indians. The British colonization helped destroy the quite flexible system Indians used. However, I am not sure if all of the sudden, the centralized would change to a decentralized things would be natural for most

Indians. The truth is this system grew inside India, in a way that it is the only way if you succeed to get employed, and respect from the society. This 'monopoly' ends up destroying other possible ways of thinking and being. Plus, it is full of problems, no matter it is in the private or public sector.

Fortunately, in India there were (e.g. Tagore; Andrew Bell) and are (e.g. Barefoot College; SOLEs) that try to challenge this perception: that education is not schooling. No one denies the need to be literate and numerate, and maybe now computer-skilled. But there are things that complement this school, either science, technology, art, nature. Education is about human development and interconnectedness. Being able to look at your own identity and culture, and respect other ways of living, like Tagore did.

It is not that having schools is wrong. It is that the notion of a compulsory centralized system, schooling. It is not technology that makes indigenous cultures and education systems 'die'. It is power and dominance by others ([http://www.ted.com/talks/wade\\_davis\\_on\\_endangered\\_cultures.html](http://www.ted.com/talks/wade_davis_on_endangered_cultures.html)). In this case, a system and curriculum likely decided by the government/outsider and not by the region that ends up 'swallowing' communities and indigenous ways of living and educating; just like colonization.

The great problem is, schooling is the dominant system, spread all over the world. Governments and International organizations, with their own good intentions, continue to push towards this direction. As shown before, this is over-stressing society and 'our' children, from the 'lower scale' to the talented ones.

Schooling destroyed the natural systems of education; now let us look at the past of cultures, the present schooling and science and the technological future. Let our countries awake.

So is schooling the best way to give education in the developing world?

My answer is no, we know better now.

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