

Primary and secondary education reform should be the top priority for India

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In 1947, the year of independence, there were only 20 universities and 500 colleges in the Indian subcontinent (including Bangladesh and Pakistan). Now, there are about 567 universities and 18,064 colleges in India alone. Many new institutes and universities are coming up on a regular basis. India now aspires to have at least 1,000 universities and 50,000 colleges by 2020 to meet the pressing demand from growing number of students, association of industries and to fulfil its ambition to have a knowledge-based economy. India is the eleventh largest and second fastest growing economy in the world. It is also the third largest economy in Asia with huge budget for education and research. Today, India's higher education system is the second largest in the world, only after the United States. Unfortunately, such impressive achievements do not reflect in the quality and potential of our education and research sector, which has a close relationship with overall health and long-term prosperity of the country.

The only Nobel Prize for India in science for C. V. Raman (1930, University of Calcutta) came during the British era. The last medicine, Ureastibamine (against visceral leishmaniasis, also known as Kala azar, black fever and Dumdum fever), was invented in India in the early 1920s by UN Brahmachari, who was a nominee for the Nobel Prize in 1929 in the category of physiology and medicine. India had many scientists such as Satyen Bose whose work in India paved the path for many Noble prizes, although he himself did not receive the coveted prize. India's rise in few high-tech areas such as atomic and space research also became possible mainly due to a handful of talented Indian scientists in that era. Later, such successful areas of research also could not maintain its momentum. It will not be unfair to say that now India does not have any world class scientist working in India who has the slightest probability to receive Nobel Prize in science. No wonder that India is among the least innovative nations in the world¹.

There was a huge uproar when the previous government wanted to introduce

accountability in some elite institutes for their huge spending of public money. We never see a fraction of that excitement and public debate among educated middle class people or political elites to reform primary and secondary education. Indians, in general, seem to be obsessed with higher education and research. Even the poor and middle class, who cannot afford to send their children to elite institutions in India or abroad unlike our socio-political elites, have not helped or inspired any meaningful reform in the primary and secondary education sector since independence.

We fail to understand that whatever money we spend on higher education and research will not give us any novel knowledge or technological edge unless we have suitable people behind the costly machines we bought in our glittering institutes using tax payers' money at the cost of many developmental projects that include basic infrastructure such as blackboards and toilets in our schools. We tend to feel proud to export human resources to manpower-starved developed countries or to power our mighty Business Process Outsourcing (BPO)/ Knowledge Process Outsourcing (KPO) industries. Economic success of our industries (including BPO/KPO), which is primarily based on everything cheaper (i.e. cheaper raw material, cheaper manpower, cheaper ways to break laws and lack of effective laws and/or law enforcement) cannot sustain our economic competitiveness for long. Many other countries do have the ability to offer the same advantages to potential investors once they learn the game. It has started in the form of increasing competition from other countries in Asia and beyond.

The current education system selectively discards talented students with inquisitiveness, ability and courage to ask questions and passion to do something challenging, something better for the society. The rot in Indian schools is passed on to higher education and almost everywhere else, in all other professions. Now we only produce private tuition and coaching-enabled, mugging-up grade technicians. They may be capable of per-

forming routine jobs or imitating others, mostly the western countries, but not capable of doing original research, despite having at least few world class facilities, relatively huge budget – of course not enough to satisfy many who are habituated to demand 'more of everything'². The trend to emphasize on rote memorization, quiz type information and fascination with techniques (not science, *per se*) is still highly prevalent. Now only 15% of Indian graduates, out of three million, are suitable to be employed in blue-chip companies³.

Knowing what is wrong is as important as knowing what is right. Critical analysis, rational scepticism, ability to argue and engage in collaborative debate are few basic qualities required not only in science, but also to contribute to public policy and corporate strategy. But, that is virtually absent from the education systems in most of the countries, including many developed countries^{4,5}. The test score culture in most of the Asian countries⁶, including India, helped the rot penetrate much deeper. It reduces creativity and innovative thinking, helps increasing the dominance of mediocrity, discourages students (even professionals) to ask questions particularly if that implies asking question against higher and/or political authority. Such education, rather lack of it, does help perpetuation, if not strengthening, the feudal nature of Indian society and has much bigger implications on the country and its future.

A study by the National University of Educational Planning and Administration has found that about half the 4.7 million elementary school teachers in India have themselves not studied beyond the higher secondary level (class twelve). The only state which comes close to Gujarat, one of the most economically prosperous states in India, in terms of the low quality of teachers is Karnataka, another highly prosperous state, with about three-fourths of its teachers having studied only up to the higher secondary level^{7,8}. The situation is so desperate that one of India's central government ministers admits that 'both the central and state

governments have failed to get access to high quality people in teaching profession to build the future of India⁹. It shows that economic prosperity of a country or a state does not guarantee higher human development index, including ensuring basic and quality education.

The quality of education being imparted in Indian schools has proved to be far below average in an international rating system for schools from 74 countries. The Programme for International Student Assessment (PISA), introduced by the Organization for Economic Cooperation and Development (OECD), is an internationally standardized test that tests 15-year-olds in the domains of reading, mathematical science and science literacy¹⁰. India's debut at the PISA included about 16,000 15-year-olds from schools in Himachal Pradesh and Tamil Nadu. Tamil Nadu, often lauded for its work in the education sector, has done only marginally better than Himachal Pradesh and ranks way below the average OECD score on all counts. Himachal Pradesh was at the very bottom of the list whereas Tamil Nadu ranked near the bottom in all categories, outscoring only Kyrgyzstan and Himachal Pradesh¹⁰. The Annual Status of Education Report for 2009, compiled by Delhi-based non-governmental organization (NGO), Pratham Foundation, has revealed that nearly 65% of class five students in rural areas of Tamil Nadu cannot read even a class II textbook in their mother tongue, 45% do not know subtraction and nearly 81% cannot read simple English sentences^{8,11}. The situation deteriorated even further in 2011. Another rather surprising trend in the same survey indicates that government schools perform better than expensive private schools, at least in rural India⁸. Here we need to keep in mind that about 72.1% of Indian students attend government schools, whereas 25.6% go to private schools⁸.

With a literacy rate of 75.6%, India compares poorly with not just industrialized nations, but also several much poorer economies such as Iraq (78.1%), Congo (81.1%), Kenya (84.2%), Vietnam (92.8%), Sri Lanka (94.2%) and Mongolia (97.5%). India now ranks 78th out of 123 countries, in terms of literacy, according to UNDP report (2011)^{12,13}. India's human development index is now ranked 134th out of 187 countries¹². We need to remember that there are clear differences among the terminology –

literacy, education, knowledge and wisdom. Though some Indian policymakers wish to create a knowledge-based economy, in reality, India is stuck at the first phase itself, i.e. literacy.

The deteriorating state of internal security clubbed with increasing political interference affecting school education is alarming. India figures among the four countries that have seen a marked increase in systematic attacks on schools, students and teachers between 2006 and 2009. The other three countries where such attacks have increased are Afghanistan, Pakistan and Thailand¹⁴. Political interference in almost every stage; starting from electing local governing bodies of schools, recruitment of teachers and other staff, even selection of students, are widespread. It is no more a secret that licenses to set up schools and colleges are so liberally distributed to influential people and politicians that one prominent Indian journalist mentioned in her article – 'it is hard to find a major political leader these days who is not running some educational institution'¹⁵. Such incidences are as common and seems to be socially accepted in the Indian society today as any other corruption. It is almost impossible for a teacher who is appointed by paying bribes and/or through caste-based reservation to build character, fight against social and religious superstitions, and infuse professional ethics among students.

In many states such as Gujarat, Maharashtra and Karnataka, parents spend more money on private coaching for their children that all other items including school fees, transport, books, stationary and uniforms¹⁶. Many teachers are known to run private tuition and well-organized business of coaching schools neglecting their teaching duties in schools/colleges/universities. Such coaching schools and private tuition businesses by influential teachers and administrators are involved in almost every examination in India, including entrance/screening tests. They seemingly have mysterious ability to make highly successful 'suggestions' (probable questions in the examinations), influence mark scoring ability and ensuring that students perform well in entrance examinations without even covering the syllabus. Scoring high marks in examinations, getting scholarships/fellowships and other awards are not correlated to academic excellence of the student. Such a development not only reduces efficacy of

our education system, but also widens the gap between the rich and poor. It reduces social mobility. Now, India is among the worst affected of the emerging economies in terms of growing income inequality and social discrimination since globalization¹⁷.

The recently passed 'right to education' (RTE) Bill is a step towards the right direction. Last year, the Supreme Court finally cleared the way for 25% seat reservation in all private and government schools for children from economically weaker sections, with some exception for religious schools. Here again we need to remember that many such great intentions behind passing such policies, including many other 'right to' laws, hardly achieve much. They remain within government files and most of the money ends up in the seemingly bottomless pit of corruption. On October 2011, the Supreme Court ordered the government to build permanent toilets, particularly for girls, by the end of the year. But, a report published on April 2012 by the World Health Organization and UNICEF's Water, Sanitation, Hygiene (WASH) programme revealed that about 25% of government schools do not have any toilet and about 40% of schools do not have any girls' toilet^{18,19}. Absence of girls' toilet is a major deterrent for girls to attend schools. RTE Bill also mandated separate toilets for boys and girls in every school. Such examples strengthen the cynicism about our government's ability and, more importantly, sincerity to enforce such a law to guarantee quality universal basic education in India.

Many of the foresaid problems in education are not restricted to India, but present almost all over the world, even in developed countries such as the USA²⁰. But, the situation in India is alarming! Education, mainly basic education, is considered to be the silver bullet when it comes to social mobility, sustainable socio-political reform and long-term economic prosperity. Einstein once said 'everybody is a genius. But, if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid'. We need to ensure that we do not judge fishes by their ability to climb trees. India needs to fix priorities and overhaul its basic education system. It will not only help achieving better quality in higher education and research, but also can contribute immensely in solving

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many of the socio-economic problems. It is useless to cut the roots and then water the top.

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