

The case for educational reform in India

Samar J. Singh, PhD

July 9, 2009

Contents

1	Introduction	2
2	Educational opportunity in India - what is good!	2
3	What appears to be right with Indian education - but isn't	2
4	What's wrong?	3
4.1	The examination system	3
4.2	The curriculum	3
4.3	High stakes examinations vs performance profiles	4
4.4	The capacity of our teachers vs the needs of the future	4
4.5	The need for excitement	4
4.6	The nature of our school systems	4
4.7	The historical dearth of opportunity	5
4.8	The dearth of research	5
4.9	Einstein - a warning	5
4.10	Quality assurance	5
5	Conclusions	6

1 Introduction

HRD Minister Sibal's announcement of the need for educational reform will stir debate. This debate is essential not only for the process of evolving a solution but more importantly for creating the understanding needed for the necessary compromises to be understood so they can be effectively implemented. This article joins that debate.

2 Educational opportunity in India - what is good!

There is much that is right with Indian education that needs to be preserved and enhanced. The dominance of women in the teaching profession means the insinuation of a nurturing environment to dilute the impact of a fiercely competitive system. In similar vein the prevailing level of tolerance for children in general in our society offers hope, providing we can create the systems that allow tolerance to become a productive force in our schools.

At a fundamental level, human decision making is done in basically two ways. We either have a model of the problem under consideration (or think we have one) through prior experience or knowledge, or we need to develop a model. In developed cultures where education is codified and transmitted more efficiently, the opportunities for building new models outside school may become rarer for school children when everything is well organized. However, it is these opportunities that stimulate intellectual capacity and possibly creativity. In many ways, India provides its people with many such opportunities due to its diversity of cultures, languages, religions, "argumentation" and sheer uncertainty. Where else are you worried about dropping into a manhole as a young child, which makes us consciously look for obstructions when walking down a primary road. These opportunities provide us the promise of a vivacious zestful population with tremendous creative capacity - and it does not only have to be in software. We just need to complement these opportunities with meaningful education.

There is much else that is genuinely right with Indian education, although some of it - such as our predilection for English - is a circumstance of history. We have benefited from the accrued advantage with the recent success of the BPO industry where our young people (increasingly sourced from second tier towns) have trained themselves to speak like Americans, Germans or whatever, and delivered sterling performance against clearly defined measures of performance like Service Level Agreements (SLAs). The training systems that these companies brought in worked with our basic background in English to allow these hard working young people to taste success.

Finally, India and particularly young India, has shown a passion for technology whether it be in the area of cell phones or netbooks. If we have a digital divide it is only because of limited access to computing resources. The concerted pursuit of 'open source' can drastically reduce the problem. In simple terms, "If the mind is not constrained by walls and fences, where is the need for Windows and Gates."

3 What appears to be right with Indian education - but isn't

As we look at Nobel Laureates like Amartya Sen, and the successes of Indian entrepreneurs in Silicon Valley we are tempted to believe that our education system has a silver lining. Another perspective may offer a reality check.

Our people often go off to foreign shores and do exceedingly well, including our Prime Minister who went there on a merit scholarship and the Ambani brothers who could afford it. It would be fair to say that in general those who have gone overseas are largely those who are a subset of the intellectual cream of India. This subset had the opportunity to be educated under a more supportive system through venturing out. However, they studied and often worked in a professional and social environment which was representative of the average population of the host country. Simply put, we would expect this subset to be above average within that milieu.

We could also argue that the success of our overseas Indians can also be attributed in some measure to the facilitation that the host society provided. It is possible that with the same level of facilitation, including education institutions and an empowered entrepreneurial environment, they would not have seen the need to go overseas. After all, the percentage of Americans coming to India to study or work as entrepreneurs is relatively small.

4 What's wrong?

This could be the subject of a book - or several books. However, in the context of the Minister's statement, I will restrict myself to a few.

4.1 The examination system

This affects us in a very simple way. The examinations are the arbiters of success. Hence, the priority of teaching and of schools is understandably examination results. The difficulty with this is that the conventional examination system can only test a limited amount of the curriculum given the constraints of written and practical exams. Our examination boards like to pose questions that are easily marked. This of course further constrains the curriculum that needs to be studied, into a set of discrete facts in the main. Hence the mugging mindset prevails even in an age when the problem is not access to information but what to do with it. The problem is not what is currently being taught but the time it takes away from what would constitute meaningful education.

Therefore, is our curriculum appropriate?

4.2 The curriculum

There are several issues that impact curricula.

Firstly, much meaningful learning takes place prior to the Class 9-12 stage which is the province of the examination boards. Often, there may be no curriculum for these stages or it may be based on certain textbooks that have been written for the purpose. Certainly, no massive evaluation exercise engaging stakeholders that preceded the UK's development of the National Curriculum or the United States development of State curricula, has been undertaken here.

Secondly, in a country as diverse as India, we have to ask ourselves if it is possible to derive a curriculum that will serve the needs of societies as troubled as Kashmir, as urban as Mumbai and as isolated as the Laccadives. To a significant extent, education must serve the needs of the industry and academic institutions that those students will aspire to.

In Thailand, a school may dictate 25% of its own curriculum. In some villages this has come to include the design and creation of local garments e.g. the Hijab. A solution such as this may allow our own religious schools to become secular institutions through constraining the religious element to 25% (or whatever the consensus may be) of the time.

Thirdly, while there must be a common foundation in the arts, mathematics, English, vocational skills and the sciences, say up to grade 8, there must be greater flexibility of choice of subjects for the student in the last four years of school including vocational subjects. The Cambridge IGCSE, for instance, puts no constraints on the choice of examination subjects or indeed on the need to attend school. These choices should increasingly include areas like media, design, entrepreneurial skills like basic accounts, and carpentry using computerized design tools. It is hard to see why a student should not be allowed to choose the precise subjects he wishes to take for his examinations. Logically, s/he will make that choice in the context of what resources or constraints, the environment offers. The budding adult must be allowed to take his/her own decisions for that is what adulthood is all about.

4.3 High stakes examinations vs performance profiles

The current decision processes for selection for higher education appear to ignore the confidence interval inherent in statistical considerations of sampled measurements, let alone the large number of factors that can influence the results of a set of examinations taken inside of a few weeks at the end of a school year spent mugging for that exam. In point of fact, we need to have better measurements of performance across the school years and these need to be analyzed to determine the “gift” of the child, for each child has one.

While one can score high marks in a single examination taken once, it can often distort the process of learning towards selecting discrete answers rather than acquiring skills in gray area decisions within an uncertain dataset. These gray area decisions involve the development of skills to meet real world problems.

Today technology provides us the means to extract reliable profiles of performance across the years. Such profiles make examinations possibly desirable as a motivational tool but unnecessary as a development or selection tool. They can be retained as one instrument which contributes to a performance profile. It is the single minded devotion to high stakes examination success as a performance statement that seems to have energised - and very rightly too - Minister Sibal.

We cannot forget that when examination results are declared within a class or put into the public space, given the current state of providing rankings and percentages, only the top few percent will be motivated. For the larger majority, examinations are stressful things with little or no redeeming purpose. More than 5000 students commit suicide every year (how many more are rendered to despair?) as a result of examination outcomes. Do we really need this tragedy or does it de-humanize us?

4.4 The capacity of our teachers vs the needs of the future

Technology, communications, media and a host of other areas of business are growing at a maddening pace. It is possible to devise a curriculum but it is moot if our teachers can in the main execute such a curriculum.

Transition periods in curricula are difficult periods for staff as they struggle to pursue the dying stages of the old process and develop a new process. In anything we do we will need to ensure that the transition does not overwhelm those who are required to deliver at the frontline.

4.5 The need for excitement

I have spent ten years conducting occasional short sessions for school children across the country and about 3 years visiting international schools for validating systems with the odd interaction with our prestigious institutes of higher education. The numbers of schools offering international qualifications like A Levels or IB have multiplied many times in those years. There has to be a lesson in that for us, as most charge fees well above the prevailing levels.

My most abiding memory from this decade of discovery is of boredom in our classrooms. Yet, these are the same children who can converse excitedly on cricket and reveal a level of analysis that is impressive.

Clearly the child is not responsible for this boredom.

The other abiding memory is of teachers repeatedly saying, “Keep quiet” across the country and citing their most urgent task to be to “maintain discipline”. This means our children have little opportunity to formulate questions or debate issues.

In contrast, the same children play basketball and football in the same premises without requiring monitoring. They largely police themselves and follow the rules of the game.

In summary, the teachers are responding to an age old phenomenon; the children demonstrate regularly they can behave responsibly and take mature decisions on the sports field. It is time for the system to do its bit. Our classrooms are - by and large - dreadfully boring.

4.6 The nature of our school systems

Historically, our schools have been some form of not for profit organization. As demand grew exponentially, profit making opportunities became apparent.

From small schools in rural UP to companies such as Educomp, education has become a business whether we like it or not. Demand continues to exceed supply and this will inevitably continue.

The challenge is to regulate quality so that any evolution in education - which will inevitably involve some investment - will be accepted by the neo-education providers, with the accompanying short term dilution of profit.

In practice, many such institutions maintain tight control over expenditure and over the running of the institution. Focus on examination results makes the school popular and is actively encouraged while revenue sapping measures to generate learning may be discouraged. Government schools are a story by themselves even if they are not short of funds.

4.7 The historical dearth of opportunity

The fifty years of socialist experimentation, necessary though it may have been from some points of view, made the government the largest single employer. The "license raj" ensured that the state remained so. For many brought up in that era, the need to squeeze everything out of every opportunity, meant that re-investment was not a popular idea, nor for that matter, was investment in research and development.

Today, a younger breed of entrepreneurs are taking over the industrial helm. The "pull" is there but the push requires students with a meaningful education. Are we willing to provide that?

4.8 The dearth of research

Some years ago, the teenage son of a friend came to ask for help with getting pictures for his project, I asked him what was happening about the text. His cheerful answer was, "Mummy's already done that".

At an elite ladies college in Bangalore, a 600 word statement describing the requirements of an 800 word mid term applied research assignment, generated one submission with less than 200 words. The rest were sometimes in tens of words. The same students participated with gusto in an interactive seminar on governance even though they had difficulty writing 800 words. Different skills are required that should have been developed in school, even when enthusiasm is not an issue.

Motivation driven by excitement in pursuing real world problems, is often the guiding factor in research. The ethics of documenting sources, the capacity for coherent thinking and writing, the role of analysis are all issues for which time and scope has to be provided within a renewed system of secondary education. This will allow our students to perform in a University environment as well as in the workplace.

4.9 Einstein - a warning

Einstein is reported to have said that the problems of the day cannot be solved with the same thinking that gave us the problem in the first place.

An educational debate has to make place for informing our stakeholders of the tremendous advances in understanding how we learn e.g. in the role of working memory in the failure of some to learn, and in measuring performance and using it for remediation rather than filtering children out of opportunities.

If we have not been so informed as a population, we have to ask ourselves where are the centers of educational research, how do they function and how are they fulfilling this role.

If we debate issues of educational reform without upgrading our national thinking, our processes will remain entombed within the past.

4.10 Quality assurance

There are several outstanding schools in our country. They are driven to quality by the passion of those who work there. None of the systems that I have seen are scalable as passion is hard to replicate. The needs of today cry out for a system that is scalable, provides measurable increment of learning, is affordable within our context, and is effective within the national framework of needs.

It is vital to have mechanisms for assuring quality within a system that also provides autonomy to give scope for teachers and students to develop creative ability in the arts and sciences, in ethics and sports, in research and debate, in writing and reporting, and, with working in teams as well as in managing teams.

It is vital also to be able to provide the public and the schools credible statements of where institutions stand within the spectrum of quality based on the quality assurance system. Quality assurance is not about high quality but about reaching the level of quality that the school states it will offer. That statement can be upgraded annually.

5 Conclusions

Minister Sibal is to be congratulated for inviting a debate. However, the important task is to manage the debate, generate conclusions, persuade the stakeholders to adopt the best compromise, implement the process, and monitor and fine tune the implementation. There are many people across this country, with knowledge and competence who are committed to joining in this task. Our hope is that for perhaps the first time, India will witness a minister who sees himself as the agent of the electorate - entrusted with an enormous task - working with stakeholders to complete that task. The Prime Minister has shown the way with the appointment of Nandan Nilekeni, and the Minister has the potential to do better with a wider remit for an even more important task.