

Teaching Students to Think

Our school education lays undue emphasis on examinations wherein students reproduce learnt material rather than learn to think, an approach that continues in colleges. The debate on higher education reform must focus on the quality and academic accountability of teachers and on the need for policies that encourage thinking at both levels.

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Prime minister Manmohan Singh recently proposed that every one of India's 28 states have a central university and every one of the 600-odd districts a college. Yet, these legitimate issues of improving and enlarging access to higher education rarely link up with a consistent concern expressed by employers and scholars alike. This concern pertains to the need to upgrade quality to serve better the needs of a knowledge-based society and a vibrant economy.

What is the goal or rather what should be the goals of undergraduate education in India? Let us specifically narrow the question. After all, the context in which undergraduate education in India has to be viewed is very different from the manner in which it may be viewed in a developed country. Undergraduate education in India cannot be the purview of an elite minority. Often it is the only means of access that a non-elite member of the society has in terms of achieving any kind of parity. Further since undergraduate education is primarily funded by the government there is a genuine paucity in the number of institutions across the country to take care of the need and aspirations of our large population.

Even the existing institutions of higher education face the twin problem of being accessible to people from all walks of life and also in maintaining a certain standard of education. The reason that these two different goals come in conflict with each other is myriad, but one predominant feature is the lack of good school education. This does not mean that students from private schools are automatically better than students from other kinds of schools but rather that on the whole school education in India has deliberately set itself on the route of judging ability in terms of examination marks and, at the same time, has primarily constructed examinations which are based

on the student's capacity to reproduce material learnt rather than examinations that require students to think. (Unfortunately, this is also the mode that the universities seem to follow not just in undergraduate education but at the postgraduate level as well.) When such examinations are the rule you will automatically have students with access to material and means to reproduce such material doing well. It is almost the prevailing trend at the school level (and also a trend in at least Delhi University in certain subjects) that students resort to tuition or coaching classes for the sole aim of doing well in their school leaving examination (or university examination). What is even more telling is that such students invariably do realise their goal. Thus you encounter students who secure full marks in mathematics but who are unable to even grasp a basic axiom of mathematics, namely that, you are supposed to think about questions posed.

Systemic Failure

On the surface, it may not at once be apparent why any of this should matter. We have a school system that produces a large number (in numerical terms as compared to the number of seats available for undergraduate education) of students that have done very well indeed. They get admitted to a university and leave it with a degree, again, often with very high marks but without the capacity to even attempt a question which requires a minimal amount of thinking. This individual now proceeds either for a higher degree, is an applicant for a job, is a future administrator or a teacher or a lecturer and has spent three valuable years learning to do very well in examinations but has not learnt to think. The situation often only worsens at the postgraduate level. Yet at a superficial level we have a functioning education system; we produce so many school leaving students with such high marks and so many graduates with

such high performance. But of course the toll of not being able to think or not having an analytical ability to reason has to show up somewhere. If we look at any statistic on research in various disciplines in India we immediately see the abysmal picture. We also see it in the corporate sector's statement that out of 100 graduates that we produce, only 25 are possibly employable and that too after a fair amount of training.

These days there are numerous articles and speeches about how India is "shining", "poised", "rising", "emerging" and of how, "it will take its rightful place as a global superpower" in the years to come. If we do actually examine the case at a micro-level the claims start to look ridiculous to say the least. The ground level situation in undergraduate education should serve as a clarion call to anyone involved with higher education. Beyond even those, it should be a wake-up call for anyone concerned with the content and direction of higher education.

It is quite extraordinary that college education is rarely the subject of intense debate the way school education is. School education and undergraduate education are inexorably linked. The students arriving at the portals of any university are drawn from students who have completed their school education. Teachers teaching in schools are in turn drawn from the pool of graduates that the university system produces. By the time students arrive at a college for pursuing an undergraduate degree, they have already been through 12 years of primary, middle and higher secondary school education. Given that they have already developed a mindset of "not thinking" or "not questioning" it is no easy task to set this right in three years of undergraduate education. Therein lies the problem; if three years of undergraduate education does not produce "thinking graduates" with a good set of communication skills, and a deep and abiding interest in a discipline of their choice then the teachers who will shape a new generation of young minds are not going to be equipped with skills that are needed to transform the education system whether at the school end or at the university level.

Any reforms that need to be chalked out have to deal with both the school system as well as the university system simultaneously. As far as reforms of school education are concerned, in the last few years there has been a redrawing of

the national curriculum, writing of new, eminently readable, affordable textbooks for school students and a recurring theme or underlying philosophy throughout these processes is that we have to create a student who is not afraid to ask questions and also a student who can think deeply and innovatively of answers. In practical terms, there has been an attempt to design projects, laboratory work, themes for debate and discussion as part of curriculum as well as textbooks, to aid, assist and bring to fruition the "able , thinking, student". These are important, such processes have to be encouraged and such changes should be ongoing exercises rather than a once-in five years event. We will have to wait to see if these result in achieving their aims or whether they die the usual death at the hands of the existing examination system which more or less begins to take its toll on the "thinking student" from middle school onwards.

There are many unresolved issues to be dealt with under examination reform. The current trend of reform as far as board examinations go is to reduce stress and trauma to the individual student. The idea of issuing grades instead of marks is also an idea that has surfaced to minimise the ongoing agonising struggle that students experience over getting half a mark more or one mark more. There is also a view that a certain percentage of marks that a student gets should be via continuous internal assessment done by the school. Currently the board examination is trying to serve as both a minimum standards test as well as scholastic aptitude test. These are two completely different aims and it is difficult to achieve both in a single examination. May be the way forward is for board examinations to design the former and for the universities or colleges to design the latter. This will mean yet another examination for the aspiring university student to take and this is an issue which requires informed debate.

Monitoring the Teachers

Thus, all said and done, one has seen debate, discussion and action in pedagogical terms as far as school education is concerned. We have also seen commissions being set up by the government on how to reform higher education. But there has not been the required focus on how to improve quality at the undergraduate level. This will prove to be the Achilles heel of any reform of higher education

unless special and urgent attention is paid to this. Tied in intimately with any reform of undergraduate education will be the answers to the following questions: How do we build academic accountability for teachers while ensuring reasonably secure employment? How do we attract the best of our talent to stay on in higher education? How do we improve the quality and skills of the current teacher at the undergraduate level? (Technically to teach at the undergraduate level one need not have any more than a Masters degree.) What incentives and disincentives can we provide in our system such that teachers feel impelled to improve their knowledge and keep it updated? How do we reform our examination system such that it does not reward regurgitation of memorised answers but helps the talented thinking student to do well?

The current system in place does not even begin to do lip-service to the many burning issues raised above. There is no academic accountability, there are almost automatic time-bound promotions euphemistically called "merit-promotions". The only things that need to be done to secure these merit-promotions are audits of a certain number of three-week courses that are supposed to enhance and upgrade knowledge. Many teachers, even in a discipline like mathematics, do not even feel the need to have visited the library in search of good books on the subject or even to have built up on their knowledge base post the qualifications with which they have entered the profession. In such an atmosphere if one is mainly interested in teaching at the undergraduate level, focusing on a larger pedagogical notion of thinking widely in one's discipline, doing research or encouraging students to think about non-examination oriented questions, attending talks and encouraging students to attend talks in one's discipline, setting "thinking question papers" for class tests, internal examinations or even university examinations become exercises fraught with some danger.

If we do not set right undergraduate education we will see its effect in school education despite the processes set in place there for reform. We are doomed in the long run if do not see how to improve access to education to every child in the country and also to a large percentage of the school leavers who wish to participate in higher education. But we are doubly doomed if we continue to produce undergraduates with virtually no skills and to whom the

concepts of being able to think, analyse and express are completely alien. So all policies decided and implemented by the government have to address both these issues simultaneously. There is no point in thinking of one without the other.

While we often see many debates in public on policies of the government which focus on the issue of access to education there is almost no discussion or debate on how to improve the quality of education. To have a debate about the latter, specially, with regard to college education would first of all require the existing universities and colleges to acknowledge publicly that there is a problem of standards. What you do often see used as an argument against reservations and quotas is that there will be a necessary fall in standards if students with lower marks are admitted. I think we will definitely have a fall in standards if we continue to admit students who do not have an aptitude for the subject of study (and this is definitely not reflected by the marks that a student scores in the board examinations). If we were to focus only on the student, it is the aptitude, ability and the attitude of the student, that are the main factors that determine whether a student will be able to develop or enhance his or her skills of analysis, reasoning and communication within the framework of the discipline of their choice and not whether they have found a place in the college via affirmative action or via the general category.

The situation will further worsen if we continue with the current regime of teaching at the undergraduate level which does not expose the students to a larger view of their discipline but focuses on a narrow routine which creates meaningless examinations for them to do well in. This will remain the case whether they are in the general or reserved categories. It is time the debate and public attention moved from the apparent to the real ills that plague Indian education. There is no place better to begin than the undergraduate colleges. All roads lead to this destination but if the present scene is to be fully and frankly assessed, the road ahead leads nowhere. **EPW**

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