

good research is not strategic, applied, basic, mission-oriented, theoretical, experimental or developmental. There is only good or bad research.

By blindly assuming that all applications necessary for development would and should stem from known principles, one is possibly endangering good, original scientific concepts to develop and is possibly sending wrong signals to the younger generation. This is also possibly telling the youth that all science should lead to only making money rather than understanding how nature works. Is it any wonder then that even premier educational institutes like the IITs are worried about the low percentage of students wanting to study and carry out research in basic sciences?

For those of us who have lived through the good times for basic research, we

believe that a university is a community of scholars engaged in teaching and research, and that its essential function is to teach the young in each and every generation to question the science and values of previous generations and, in the process, open new knowledge. This view of our role is now possibly being threatened.

Academics feel that it is self-evident that research is a good thing that ought to be supported, especially fundamental research. But they are mystified by the decline of resources available to do research, especially in basic sciences. Because the new science managers tell us what is right to know and assign what they call human resources in the so-called national interest.

Of course, one should not be too critical and forget the few good investments

that have been made in some of the more prestigious and academically sound universities in India. For the moment we have to accept a situation of declining standards in science education and the number of science graduates passing out of the universities to ludicrous low levels. The main problem that we have to address is how to keep science alive for the following generation and make it attractive so that India may one day produce Nobel laureates in her own soil.

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## Celebrating mediocrity with entrance examinations

'I myself do not burden my memory with simple facts that can be looked up in textbooks. The true purpose of education is to train the mind to think.'

Albert Einstein

A letter by Gupta<sup>1</sup> on the limited usefulness and relevance of coaching for entrance examinations, made interesting reading. I think the author has only understated the evils associated with the overemphasis on entrance examinations.

While we have a mad rush choking the entrance exam halls, these very exams have also become the most litigious educational issues. Entrance-exam rank lists have been frequently challenged in the courts, especially in Kerala. In July 1999, the Kerala High Court, with the help of an expert committee, came to the conclusion that a staggering 57 questions were defective in a Kerala entrance examination question paper. Of these 57 disputed questions, the committee found wrong questions, questions with more than one correct answer and questions with the wrong answer marked as key.

It is difficult to understand how errors on such a large scale crept into these question papers, because it is easily the most sensational event in the educational calendar of Kerala!

To make things worse, the fiasco occurred again. In a more recent dispute, the Kerala High Court directed the Commis-

sioner of the Entrance Examinations to re-value the papers of the medical/agricultural entrance examinations and recast the rank list. Significantly, this ruling came in the wake of a batch of writ petitions challenging the deletion of 17 defective questions during valuation. So much for the Kerala model!

When the questions are already full of errors, as the courts have repeatedly asserted, how can such examinations be the basis for identifying merit and aptitude? The whole exercise is prima facie invalid.

An entrance examination, whatever be its utility and convenience, is myopic because, at its best, it only serves to monitor input rather than output. Ironically, entrance examinations have thus become instruments of social exclusion rather than inclusion. This is antithetical to the very spirit of empowerment.

In a study undertaken in 1974, Dave and Hill<sup>2</sup> came to the conclusion that examinations in India have become the basis of an 'educational caste system'. To quote a few lines . . . 'A person's standing in the examinations affects many aspects of his life. Not only is it a basis of his economic success, but it also affects his prestige in his [or her] family and his [or her] value in the "marriage market". The examinations thus form the basis of a kind of educational caste system, superimposed on the traditional caste system of the country'.

Examinations, chiefly entrance examinations, have only been deepening social divisions by creating a new class of educated upper castes. Having acquired elite degrees, the recipients often display the same haughtiness that reminds one of the feudal times.

The intemperate focus on multiple-choice questions [the mainstay of most entrance examinations] is so devastating that there is hardly any importance given to grasping the larger picture. Both language skill and language instruction are steadily losing importance in secondary education. The central purpose of coaching centres is to convert questions of reasoning into questions of recall. Having solved a typical model question, thinking is replaced by a memory drill. In other words, the students' creativity and genius are, in one stroke, sacrificed at the altar of entrance examinations. Here is a shoddy system that can potentially jeopardize the future of our country.

1. Gupta, Y. K., *Curr. Sci.*, 2002, **83**, 1301–1302.
2. Dave, R. H. and Hill, W. H., *Comp. Educ. Rev.*, 1974, **18**, 24–38.

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