Entry to IITs: making new system work

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For the last few months, a debate has been raging on whether to lend weightage to Class 12 exams for entrance to the IITs.

Our policy-makers have given their decision - 2013 onwards, a Class 12 student would be eligible for IIT entry only if he or she is among the top 20 percentile of students who take the same board exam that year. Moreover, the new IIT selection formula has two tiers.

First, the screening through the AIEEE conducted by the CBSE, and the second would be the JEE-Advanced to be held by the IITs. Weightage to Class 12 marks is being given so that the students get back to the school curriculum, and the coaching centre culture is discouraged. But will it really happen?

Let me first discuss the problem areas, and then the recommended solutions.

The first problem relates to the syllabus of Class 11 and 12, and that of the IIT entrance exams. The aim of education is positive culmination of the desired aim.

If the exam pattern of IIT does not have minimum percentage of Class 11 and 12 syllabus, then there is no point in giving 40 percent weightage to board marks. Dignity of the school curriculum will be restored, but at the cost of making a child work doubly hard. That is study for boards and also prepare for the IIT. In case the child is not in the top 20% bracket of Class 12 boards, his efforts for preparing for the IIT would go waste.

Do the policy-makers feel that a child can study twice as much without actually getting split? Are we not going to burden the student that way?

The second issue is that on the one hand we have introduced continuous comprehensive evaluation (CCE) up to Class 10, with no child being failed, and giving the basic right of matriculation to every student. But on the other hand, as the student steps into Class 11 and moves up to Class 12, there is a sudden increase of academic pressure, which is quite demanding and leaves a child confused.

Up to Class 10, our changed education system has become very student-friendly. No child can be detained as the benchmark has become so wide and each aspect of the child's personality is appreciated and graded.

Thereafter, there is a sudden demand to excel, both in the Class 12 boards and the entrance exams. It may produce a large number of frustrated youth. If you have given crutches to a child to walk for ten years, snatching them away suddenly will only lead to a staggering gait and not a firm walk.

I feel the change should start from Class 9 onwards, and the curriculum should orientate the child to various aspects of basics in science and math, and build up the aptitude. Class 10 can build upon Class 9 syllabi, and Class 11-12 should be completely exam-oriented and gel with entrance exams. Then, we can achieve our aim of giving dignity to the school curriculum, and also ensure orientation of a child towards IITs.

Inclusion of board marks for IIT entrance is to counter the growing influence of the coaching centres. But our present proposal, once put into practice, may turn out to be a double-edged weapon. First, the students will go for tuitions to be thorough with the board syllabus, which was earlier neglected by their tuition teachers.

Second, they will go to the coaching centres for the IIT entrance as the pattern remains the same and those centres have set training modules with them for years.

It is also worrisome to notice the incoherence in perception of different authorities. The IITs do not want their hold to be loosened, the CBSE wants its own share, and the HRD minister wants to revolutionise the education system by bringing in these experimental reforms.

Do it, but with one voice. The thought and the idea are noble, but the will to implement has to be unanimous.

To re-emphasise, here are some specific suggestions to make Kapil Sibal's idea of 'One Nation One Test' a success:

- As preparation to win a marathon starts one to two years in advance, similarly, changes in the curriculum to suit the IIT entrance should start from Class 9.
- Syllabus of Class 11-12 should at least be 60% same as that of the IIT entrance exam.
- To discourage coaching institutes, and to build confidence in students, the curriculum should be well spaced out, streamlined, and goal-oriented.
- Empower the teachers at the senior secondary level by holding workshops to keep them abreast with the latest policies and the expectations.

If we do all this, I feel that the child will emerge the winner. It will also help the poor children who suffer, as they cannot afford coaching centres. The new system will particularly give an impetus to the girls who normally out-shine boys in Class 12 exams.

The new AIEEE-JEE combine, with value to school marks, will offer more options to the students, and will also restore the standing of the school system.

The school curriculum and the teaching faculty will now be respected more. Above all, hard work and creativity of a child, and the guidance by the teacher, will be rewarded.

(The writer is a teacher at Army Public School, Ambala. Views expressed are personal)
Feeling honour bound
Pranab Mukherjee may not yet be elected president of India, but his near-certain victory in the elections to the country's highest office has already meant losing an academic honour the Indian Institute of Technology, Kharagpur, was planning to bestow on him. The human resource development ministry has taken Mukherjee's name off the list of personalities that IIT Kharagpur wanted to honour with an honorary doctorate at its convocation next month. The reason: the president is also the 'visitor' — the top appointing authority — for all central higher educational institutions, including the IITs. It would be inappropriate for an institute under the president to confer him an award, the government concluded. British universities, however, are under no such compulsion and two of them are considering honorary doctorates for Mukherjee.

ISRO to launch Astrosat in 2013

Indian Space Research Organisation, Indian premier space agency headquartered in Bangalore, is all set to launch its prestigious Astrosat, a multi-wavelength space observatory, next year. ISRO chairman K Radhakrishnan told media in Mysore on the sidelines of the 39th Scientific Assembly of the Committee on Space Research that ISRO proposed to launch 1,500 kg Astrosat, a dedicated satellite to study the universe, in 2013.

Astrosat is the first dedicated Indian astrometry mission which will enable multi-wavelength observations of celestial bodies, cosmic sources in X-ray, visible and UV spectral bands simultaneously. "Unlike astronomical satellites of other countries, Astrosat will study visible to high-energy X-ray emissions from celestial objects on a single platform, take the highest angular resolution imaging in ultraviolet and measure short-term variation of X-ray emissions. Most astronomical objects emit radiation spanning the electromagnetic spectrum from long wavelength radio waves to very short wavelength gamma rays. Simultaneous observation of the multi-wavelengths will enable us to understand the physical processes behind the phenomenon," Rao said.

Orbiting at 650 km from the earth with a five-year lifespan, the satellite will conduct major investigations across visible, UV and X-ray bands to find out the source of radiation, study magnetic fields on neutron stars, search for sources of black holes and scan the farthest regions of the universe. The spacecraft has already been designed and built to integrate the instruments (payload) at ISRO's satellite centre in Bangalore. The Canadian Space Agency and Britain's University of Leicester are also collaborating with the Astro project.

In another development, ISRO is planning to conduct flight testing of Geo-Synchronous Launch Vehicle with indigenous cryogenic engine and stage by January next year. ISRO chairman said, "We have done a lot of studies to find out the reason for the failure and taken corrective actions. We have conducted almost 40 tests on subsystems as well as on the engine. A couple of weeks ago, the flight engine was tested for 200 seconds. That's cleared for Assembly as a flight stage."

ISRO needs to conduct two more ground tests before committing the flight, which is expected by the year-end or January next year. He also said the SARAL satellite, a joint ISRO-French Space Agency (CNES) mission, is planned to be launched by an PSLV from Sriharikota spaceport by October-end this year. "The instruments are basically to look at ocean parameters," he said.

ISRO officials said SARAL would provide data products to the operational and research user communities in support of marine meteorology and sea state forecasting, operational oceanography, seasonal forecasting, climate monitoring, ocean, earth system and climate research.
Mission to Mars

WITH THE Indian space department having made it clear that India is all set for the ambitious mission to Mars, the exciting inter-planetary space flight may take place as soon as November 2013. Only the hurdle of the last phase of approvals within the government remain and, with a significant amount of work on the planned mission already been done, an announcement is likely to be made soon. The scientific payloads of the mission have already been approved. The mission envisages launching an orbiter around Mars using Polar Satellite Launch Vehicle (PSLV). It will be placed in an orbit varying from 500 kilometres to 80,000 kilometres around Mars and will have a provision to carry nearly 25 kilogrammes of scientific payloads on-board. This mission, when it takes place, will be another milestone for India's space exploratory efforts. These have been not less that significant. India has not only mastered space technology sufficiently to be able to place advanced satellites in orbit around Earth routinely but has also demonstrated capabilities of being able to launch probes to investigate the moon. Chandrayaan I was an important mission in which an orbiter was placed around the moon, which mapped its surface while an impactor descended to the surface of the moon. India became only the fourth country in the world to plant its flag on the lunar surface. The important aspect of the Chandrayaan project was that it was largely indigenous, conceptualised and developed independently by Indian scientists.

The mission to Mars, too, will be similar in nature. The inter-planetary mission to Mars will involve complicated science, complex engineering and innovations in technology. It will thus keep Indian science at the cutting edge. The Mars mission will, no doubt, have technological spin-offs that will benefit society back on Earth, further enabling the application of technology to the problems of man and society. The Mars mission will also be an important exploratory scientific mission in itself, for it will gather data about the current condition of the red planet. These, in turn, will not just answer questions about the history of Mars but also give a further insight into the past of the Earth and its possible future. While competing with no other country in its space programme, and despite many constraints, India is holding its own. Its scientists deserve to be applauded.
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हमें पहली बार कैसे होता है?

जस्तूत है नए दांगी की

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के बारे में जानना है कि यह हमारी
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