New formula pacifies IIT faculty members

KALPANA PATHAK
Mumbai, 24 June

A compromise offer worked out by the Joint Admission Board (JAB) for admission to the Indian Institutes of Technology (IITs) has pacified agitating members of the All India IIT Faculty Federation (AIITFF). Even so, the problem of autonomy of the IITs persists, according to the federation.

Under the compromise worked out, while the board marks will continue to be an eligibility criterion for admission to the IITs, the current cut-off of 60 per cent aggregate marks will go. Instead, a certain percentile of the topper’s score will be considered.

In the JAB meeting held last week, directors of the IITs accepted a proposal to allow only the top 20 per cent students in the Class XII board examinations to appear in the entrance examination.

“We want to support schooling and we think this new formula will support schooling system. Rather than having an absolute percentage, this formula will work better,” said a faculty member from AIITFF. “However, faculty members still have the issue of autonomy of IITs. It all depends on what decision council will take on meeting on June 27.”

“If the IIT Council decides on something and gives the IIT senates the liberty to take a final call, the senates will feel they have been respected for academic matter — and will positively respond to that,” he added.

IIT directors who attended the JAB meeting did not want to comment on the matter.
Compromise formula hinges on Senates’ call

93% of students against new JEE format: Survey

DEEPAK KUMAR JHA
NEW DELHI

The compromise formula being worked out by the HRD Ministry and Council of IITs towards conduct of a common entrance test has to cross the hurdles of all the Senates of IITs. Empowered to take all academic decisions, the final call has to be taken by the Senates, which recently turned down HRD Minister Kapil Sibal’s one-nation, one-test proposal leading to controversy.

The cut-off marks being set on a percentile basis for each State boards, is now likely to become a bone of contention. Even if the new eligibility criteria were announced by Sibal and Council of IITs on Wednesday, the Senates will have to give it thumbs up. Then only the proposed test could be conducted by 2013. The seven IITs have collectively nearly 1,400 Senate members. This number is much higher than the strength of the Council and Board.

“All the IIT Directors, HRD should understand and appreciate that final decision is of Senates when academic matters are concerned. The Council has to only coordinate amongst all IITs, which includes the nine other IITs. There should always be a common minimum programme chartered out from Council, Senate and Board to reach a consensus,” said a professor of IIT-Kanpur.

To break the logjam, the IIT Directors on Saturday discussed a compromise formula, which includes a proposal to take top 20-30 students based on percentile ranking of respective boards for preparing the merit list. The percentile criterion along with performance in the JEE-Main will be used for filtering students. Their scores at the advanced test conducted by IITs will be taken into account to prepare the merit list for admission to IITs.

Meanwhile, even as the controversy is yet to settle down, the student community of IIT has expressed its resentment through an online referendum. In the survey conducted by the students of IIT Delhi, a majority of them have disapproved of the new format of the JEE proposed by the HRD Ministry.

They had also conveyed about their feelings to the IIT-Delhi Senate before it took a decision to go for an independent entrance similar to the announcement by IIT-Kanpur.

A majority of the students (93%) are opposed to the new format of the JEE. Only 5% of the respondents felt that the new format will lead to a reduction in stress, thereby questioning the credibility of the claims made by the MHRD.

Further, 87% of the students believe that the way in which the decision has been made leaves much to be desired. Therefore, there should be more debates and discussions involving the stakeholders: faculty, students, alumni, and then a proper decision should be taken and implemented from 2014.

As many as 78% students felt that the new test will lead to a reduction in quality of the students being admitted to the IITs. Eighty-eight per cent of the students want IIT-Delhi to go ahead to support the IIT-K proposal to conduct the existing JEE, if the MHRD will not reconsider its decision.

Regarding the pattern of the exam, quite a few students (52%) desire that the JEE be returned to its pre-2006 format with a subjective main exam after an objective screening exam, however, 44% are in support of the status quo.

The students commented that the hasty procedure followed by MHRD was the most shocking of all actions. “These developments make the student body feel demotivated enough to expect marks within a deviation of at least 5% of their original expectation, which can effectively make or break an aspirant’s future, says the students’ internal survey with 921 respondents organised by the Co-curricular and Academic Interaction Council (CAIC), and Student Affairs Council (SAC) of IIT-Delhi,” the finding of the survey said.
Address the Real Problem

The IIT admission row is about our democratic polity and wrong choices made in education, outside IITs

The IIT student selection imbroglio has the familiar confusion on what the real problem issues are. Understandable, because the problem is complex and the solution not obvious because of a sensitive public good that has many stakeholders, and because the root cause lies outside the IITs, in a largely state-controlled mediocre education system with an enormous demand-supply gap for quality and meritocracy. Parents and students see the few islands that have delivered both, and pull out all the stops to get in. Therefore, what is currently being formulated as a "too much pressure on children, how to reduce the number of tests" problem should be formulated as "too little capacity, how to fast-track building equally-good capacity in the shortest possible period of time".

This needs far more than announcing new colleges with the same name in remote locations. What is wrong in students taking multiple tests, if they are conducted fairly and do not hear money or political influence speak? It is the rite of passage of student

hood, even in the best education systems globally, students slog over multiple applications, essays, aptitude tests and interviews at undergraduate levels. The mass of youth seeking jobs in India has a far greater time than IIT aspirants. The real answer to the problem may not lie in the Ministry of human resource development domain (decreasing the number of tests, etc.) but in the faculty domain (dealing intellectually smart computer-based testing system that defangs coaching classes).

In a public good, there are always shades of grey on who gets to call the shots. Faculty cannot say "it's our call", and then not urgently deliver solutions to the problems caused by the present testing system, that many of them admit to. Supporters of educational/institution autonomy and activists in the ecosystem cannot unconditionally oppose examining the constraints (implicit and explicit) barriers of clout, freedom and responsibility. And, all of us who seek to engage with this problem, including government, must approach it thus.

The need for change in the IIT student-selection process has reportedly been discussed frequently by faculty senate. The faculty are increasingly concerned that the present process favours students who have successfully managed to be one-time pole vaulters, after two years of narrow-focused training, to the exclusion of everything else. Many have not attended regular classes for "plus-two" (speaks volumes for the plus-two system) and are ill-equipped for the challenges of a IIT-type college system. They recognise that the test format selects high-intensity coaching-class students and does not sharply differentiate between normally-educated bright kids and obsessively-polished not-so-bright kids. Some of us who see the IIT system at close quarters wonder if we are getting hothouse flowers who cannot function except in a controlled environment.

If we decanted the top hundred from the CAT and took the next two hundred, might we get a more healthy and hardy mainstream students who are better rounded, individuals, likely to be better risk-takers, not obsessed about a single "right answer" and, hence, better performers in the real world? The idea of a two-stage selection for IITs, the first stage including school marks (measured in a much more sophisticated way than MHRD suggests) as an indicator of sustained performance, is a good design principle. It will reduce the grip of the coaching classes. But the real answer is in designing innovative tests that measure 'true worth' and further reduce the coaching-class boot the system effect, and is the big intellectual challenge that the IIT faculty must solve quickly and completely, and earn the right to tell everyone else to back off.

Mr Kapil Sibal makes a special argument when he says that "it is the decision of the IIT council and not of the ministry", when he is, in fact, the chairman of the council presumably because he is the minister. Further, he exercises considerable power in deciding members of the council, by deciding chairmen and members. The "we will choose from three names institutions give us" autonomy, as in the case of IIMs as well, is a strange autonomy because the institute does not accept any ranking or feedback based on the institution's assessment of each chairman candidates' strengths and weaknesses vis-à-vis the contextual requirements for the job.

We owe it to our children not to bring arrogance, ego or poor listening skills to the problem-solving table, and to continue working collectively and intensively for as long as it takes for a good-enough solution that every stakeholder is okay with.
आईआईटी के लिए क्या है सही, बताएगा सर्वे

प्रमुख संवाददाता || नई दिल्ली

आईआईटी में एडमिशन के लिए सरकार का प्रस्तावित सिंगल टेस्ट फॉर्मेट किता सही और अपार इसमें कुछ खारिज बातें है। ऐसे उपयोग का जा सकता है। इसका पता लगाने के लिए एक सर्वे किया जा रहा है।

- आईआईटी मुंबई के पूर्व फॉर्मेट कर रहे हैं सर्वे।
- सरकार के फॉर्मेट का ऑनलाइन विरोध
- रिपोर्ट इस महीने के आखिर तक मिल जाएगी।

आईआईटी मुंबई के पूर्व स्टूडेंट्स का असंसूचन पहले ही ऐसी पहल कर चुका है। कई संगठन ने तो सरकार के खिलाफ कोई जाने की भी चेतावनी दी है। आईआईटी कानून और आईआईटी दिल्ली सिंगल टेस्ट से किसी का अन्दर हुए अगले साल खुद एबिन लेने की बात कह चुके हैं। दिल्ली आईआईटी मुंबई के पूर्व स्टूडेंट्स का असंसूचन यह सर्वे कर रहा है। इसके लोगों से विस्तार से सवाल पूछा जा रहा है। उपभोक्ता है कि असंसूचन सर्वे से मिली रिपोर्ट इस महीने के अंत तक दे देगा।

हो रहा है विरोध: प्रस्तावित एडमिशन पर विरोध आईआईटी से जुड़े संगठन अपना विरोध ऑनलाइन और ऑफलाइन दर्ज कर रहे हैं। आईआईटी दिल्ली के पूर्व दूसरे आईआईटी भी ऐसा रास्ता अखिल राष्ट्र कर सकते हैं। इस पूर्व आईआईटी मुंबई में इस महीने के अंत में सेनेट की मीटिंग होने वाली है। इससे चब्बाक एचआईडी मिनिस्ट्री ने ट्रकराव दूर करने के लिए 27 जून को एक मीटिंग बुलाई है जिसमें निर्णायक सहमति बनने की उम्मीद है। प्रवासी मंत्री ने भी मामले में हस्तक्षेप करते हुए इसके सुलझाने के मकसद से दोनों पक्षों से संपर्क साधा है।
IIT's designs to make your life simpler

**CUTTING EDGE** IIT-B's two-day annual design show, to be held at Nehru Centre at Worli, will feature innovators whose work has won national and international awards.

**Designing the Future**

**Standardising mobile BILLS**

**PROJECT BY:** Kenwick Ashwin

People do not like filling up multiple forms, especially mobile users. Every company has their own bill designs. The aim of the project is to design a standardised bill for all service providers. The design can be printed on the repurposed smartphone BILLS with graphics support to make reading information easier. The bill will feature the most frequently called number, payment details, and other information. This will be adapted for tablets.

**Transformable furniture**

**PROJECT BY:** Byetta Tripathi

The design is about allowing more sharing and saving trees. Getting the most out of one piece of furniture was the main aim of the project. Transformable furniture could allow an individual to make his furniture more versatile and be used for different purposes according to his requirements.

**Puppex: An interactive tangible tabletop**

**PROJECT BY:** Rahul Mehta
Puppex is a paper folding tool for children which helps children to play and learn with different types of toys using animation. Children can create their own stories by drawing characters from the printed character dictionary. Children can place the toys on the screen and corresponding animated elements appear on the screen. The design can create a narrative through an animated story wrapped around the display of those toys.

**Redesign of Mumbai suburban railway indicator**

**PROJECT BY:** Deepak Kharatkar
The project aims at redesigning Mumbai suburban railway indicators for effective communication with regular commuters as well as new travelers. Kickstarter studies showed that people face issues such as missing trains, missing stops, and bad signage. The project also studied walkways induced in other cities and foreign countries. Based on the findings, the project focused on improving the visual design, typography, and visual display of the indicator.

**Redesigning classroom furniture**

**PROJECT BY:** Mark D'Souza
The project aims to cater to government schools where the project was undertaken for analysing the habits and behavioral patterns of students and transact them into windows of proba-...
Universalisation of education

There's the need for a well-designed PPP model in education.

Rakesh Bharti Mittal

The education sector is clearly at a major crossroad today. Thanks to the success of programmes like the Sarva Shiksha Abhiyan, the number of out-of-school children in the 6-14 age group in the country has declined considerably in recent times. This has come down to less than 5% of the population in that age group. To me, this is a huge achievement. However, while it has ensured that children are enrolled in schools, the quality of education still remains a concern.

Increased enrolment in primary education reminds us of the impending rise in demand for education at the secondary level. The big question facing policymakers and educationists today is how to carry forward this momentum in primary education to the secondary level in the midst of the severe resource crunch facing the government.

Unavailability of adequate infrastructure is clearly the biggest challenge facing secondary education today. Enrolment at the secondary level is still very low with large numbers of dropouts at each level. While this can be attributed to a variety of factors, the quality of education delivery—as is the case at the primary level—remains one of the key contributing factors. Thus, the need of the hour is to address quality improvements such as robust curriculum framework, improved classroom processes, and enhanced teacher performance to ensure holistic development of children as well as improved learning outcomes at the secondary level.

The Rashtriya Madhyamik Shiksha Abhiyan launched in 2009 by the ministry of human resources development to strengthen the secondary school infrastructure in the country was a step in the right direction. Since the initiative, by itself, is not enough to secure the wider objective of universalisation of secondary education, the government has committed itself to set up 6,000 model senior secondary schools. Of these, 2,500 are to be set up under the public-private partnership (PPP) model.

PPP models have already been working successfully in different infrastructure sectors of the economy. A lot has been discussed about successful PPP projects in the physical infrastructure area. In education, too, we already have quite a few successful PPP initiatives both at the primary and secondary level. Bharti Group’s philanthropic arm, Bharti Foundation, is running two PPPs in Rajasthan and Punjab. In Rajasthan, the foundation has adopted 48 government primary and elementary schools. Similarly, at the secondary level, the foundation is running five senior secondary schools in Punjab under the Adarsh School programme. Under the scheme, while capital expenses are shared 50:50 between the government and the private partner, operational expenses are shared in a ratio of 70:30 calculated at the rate of Rs 1,600 per month per child with a provision of cost escalation of 5% every year.

Today, the PPP model is operational in three different variations. The first need-based intervention model requires the private partner to contribute to activities like teachers’ training programmes, pedagogical processes and inputs. Ownership and management of the schools continues to be in the hands of the government. In the second variation, the private partner adopts an existing school and manages it on behalf of the government, which continues to fund the operations. The private partner funds teachers’ training, pedagogical inputs, effective supervision and monitoring. In the third variation, the private partner is not only required to construct the new school under a shared funding arrangement but also manages it with partial operational cost support from the government. It also allows the private sector to be at its best in terms of efficiency besides helping ensure a strong accountability framework. But I believe the second option may emerge as the best since it facilitates the use of existing infrastructure to deliver quality education.

The Union government’s ambitious agenda to set up 2,500 senior secondary schools under the PPP scheme is laudable and requires a well-considered regulatory framework to be successful. Agreement between the government and the concessionaire needs to govern various conditions under which the schools would be constructed and operated. To enable the scheme to move in the desired direction, key performance indicators need to be simple to measure and easily quantifiable. We need tangible parameters; the assessment of which cannot be left to individual discretion. We also need to keep in mind that the fact that targets and expectations set out in the concession agreement are realisable and achievable. Setting too-idealistic targets without any consideration for the ground reality may not generate enough enthusiasm among potential private players. The targets would also be in the nature of benchmarks, which, if surpassed, should lead to incentives for the concessionaire and vice versa.

Last but not the least, the government must ensure that the whole process of invitation of bids and final allotment is transparent to encourage serious players to play an active role.

Secondary education constitutes a key link between education and economic development, as it prepares young minds both for higher education and participation in the overall growth process. Its importance has gone up immensely in recent times in view of the rapid scientific and technological changes taking place in the place of work in a liberalised and globalised economy. Every sector—from manufacturing to services—is undergoing considerable changes both in terms of skill requirement and management practices. In view of these changes in the environment, it is now imperative to make way for compulsory vocational education at the secondary level.

I strongly believe universalisation of secondary education can play a powerful role in driving the inclusive growth agenda of the government. The PPP model is an inherent potential to deliver quality education to marginalised sections to create employability among them. It can effectively complement public expenditure in the sector.

The author is vice-chairman & MD, Bharti Enterprises
CHANGING FOCUS

IIT-Kharagpur looking to improve research output

BY Prashant K. Nanda
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NEW DELHI

Breaking with current practice, the oldest Indian Institute of Technology (IIT), the one at Kharagpur, has decided to improve its research output by reducing intake at undergraduate programmes, thus earning as much as ₹500 crore a year in revenue from sponsored research.

The move has come at a time when the IITs are facing criticism for not focusing on research and development and hence not ranking among the top 100 institutes in the world.

"We want to ramp up our research in the next five-six years," said Damodar Acharya, director of IIT-Kharagpur. He said the institute, which now has nearly 10,000 students, will not increase this number beyond 12,000.

Of the total number, 40% will be undergraduates, and the remaining 60% will be postgraduate and PhD students. The current proportion is nearly the reverse.

Besides typical academic research, the institute will have a strong focus on sponsored research. The IIT sees this segment giving students a lot of exposure and opportunity to work on live projects.

"Out total sponsored research varies between ₹100 crore and ₹170 crore a year for the past few years," Acharya said. "It’s almost matching with the (planned) grant that we are getting from the government. As far as sponsored research is concerned, our objective is to have ₹500 crore per year."

In 2011, a committee led by the Anil Kakodkar, former chairman of the Atomic Energy Commission, had suggested that the IITs should be rebranded as primary research institutes that should boost PhD students from fewer than 1,000 graduates to 10,000 per year by 2020-25.

There is a common perception that the IITs are primarily teaching institutes with little contribution to research.

"This is a positive move," said Nitin Sharma, chief strategic officer, Sambodhi Research and Communication Pvt. Ltd, a project management and research consultancy in Delhi. "Nobody should take the India growth story for granted. When institutes tilt towards research, it’s a realization on their part to be more relevant. For them, research and analysis help. And it does help the undergraduate students as well."

Acharya said both collaborative and sponsored research help the institute improve infrastructure while giving students exposure. Several companies—General Motors Co., Texas Instruments Inc. and Indian Railways—have research collaborations with IIT-Kharagpur, which has a permanent faculty of nearly 600.

Its director said this was helping build laboratories and close to 1,000 people were working on sponsored research projects that have been awarded by private companies and government organizations.

"Our PhD students get to work on sponsored research and we have started giving opportunity to UG (undergraduate) students to get involved with the sponsored research," Acharya said. "So you earn while you learn."

Acharya said ramping up research will help the IIT improve its international standing. "We want to make sure that in the next 20 years, we are in the top 20 in the world," he said. "To do this, we have to do a number of things—one is the academic goal and the type of graduates we produce. Here, the research focus helps."

As a first step, IIT-Kharagpur has enrolled 1,600 PhD scholars, perhaps the highest number in any technical institute in India.

Besides this, it has been patenting nearly 40 products or services annually for the last couple of years. To aid this, the legal department has a specialization on intellectual property law. This year, it has started a stream on competition and corporate law.

Acharya said such moves have helped the school’s patenting initiative. While for students this a learning process, for the institute it involves being able to copyright research outcomes, he said.
New website makes getting in touch with IITians easier

GAURAV SAINI

THANKS to a website people can now make friends with graduates from the prestigious Indian Institutes of Technology.

Dateitians.com is the brainchild of three graduates from IIT Kharagpur, Layak Singh, Kinshuk Bairagi and Nikhil Kaushik.

While Singh is the chief of operations and business management, the other two are co-founders of the portal that now boasts of 7,000 users, 35 per cent of whom are girls. The website, which was launched in February, aims at bringing quintessential geeks to one platform and introduce them with others and share information.

"Techies are regarded to be the people who are always busy with their ideas and work, those who have little or not time to interact with people and are considered boring because of their obsessive hobby or narrow interests. We wanted to connect these geeks and let them have some fun," Singh said. The idea to launch a website struck the trio when they were having a chat at IIT Kharagpur that IITs do not have much girls.

"We were of the opinion that the boy to girl ratio is not good and students do not mingle easily. So to establish a connection between the IIT students, we planned to start with the online website. We, in fact, did a market survey and found out it to be a worthy initiative, thus started the making of a dedicated dating website for IITians," he said.

After an incredible response, the website is all set to go global in August.
आईआईटी कैप्स में तारकोल डालता ज्ञुलता

दक्षिण दिल्ली (सं)। आईआईटी कैप्स में शानिवार दोपहर छत पर तारकोल डालता एक मजदूर झुलता गया। नाम जयदीश (20) बताया जाता है। वह मूलरूप से मध्यप्रदेश के टीकमगढ़ जिले का रहने वाला है। मजदूर को सफदरजंग अस्पताल में भर्ती करवाया गया है। पुलिस जांच कर रही है।

जयदीश ने पुलिस को दिया बयान कि वह एक सतार पहले ही गांव से दौड़ती आया था और आईआईटी में ही रह रहा है।

■ आईआईटी के माइक्रो मॉडल स्टोर में चल रहा था काम

आजकल वह ठेकेदार के डी गुस्सा के पास दिखाई देने के काम करता था। शानिवार को ठेकेदार ने जयदीश और बीर सिंह को माइक्रो मॉडल स्टोर की छत पर तारकोल डालने के लिए कहा था। तारकोल डालने के लिए दोनों मजदूर ने ठेकेदार से बड़े बूट लेकर दस्ताने और हेलमेट की मांग की। लेकिन ठेकेदार ने उनकी बात अनुसन्धान कर दी। इसके बाद बीर सिंह छत पर तारकोल डालने लगा और जयदीश नीचे तारकोल गर्म करते लगा। दोपहर की बार 12 बजे जयदीश ने जैसे ही तारकोल को पतला करने के लिए मिट्टी का तेल डाला तो एकदम आग धक उठी और जयदीश उसकी चपेट में आ गया। आनन-फातन में आईआईटी की एंबुलेंस में उसे अस्पताल में भर्ती करवाया गया। मजदूर का शरीर का लगभग 50 प्रतिशत हिस्सा जल गया है।
Online content partnerships

Aaditi Isaac/TNN

In order to supplement the teaching and learning process through videos and to expand its reach from university education to primary, secondary and lifelong learning, YouTube Education is here in India for new content partnerships.

"The IITs are already imparting lessons through YouTube Education, but we are looking for more quality content partners beyond them," says Angela Lin, head, YouTube Education.

YouTube Education, at present, has 750 educational channels and 400 universities that upload quality content online. "We are a global video classroom that focuses on bringing classroom concepts to life, allowing people to create videos and access them from one's school. Students can access content created by Stanford University, MIT, etc. In India, Khan Academy is helping us with primary and secondary education. With more than three billion views per day and 60 hours of video being uploaded every minute, this platform has a lot of potential," she says.

Talking about the advantages of studying through videos, Lin says, "Videos are not a replacement for teachers, but they enhance learning by engaging the user. Some students learn faster orally, some visually. Video combines both and helps a student learn and retain. It is free and acts as a global platform," says Lin.

Educational institutions who want to be featured on the YouTube Education website need to apply to the YouTube partner programme. The institution will be reviewed, before being allowed to be featured on the YouTube Education website.

www.youtube.com/partners