IITs creating 'tinkering labs' to bake ideas into products

By DEVINA SENGUPTA & SRERAGHA D' BASU, ET Bureau | 22 Oct, 2013, 06:59AM IST

MUMBAI: In 2011, when Siddhartha Khaistgir, a student at IIT Kharagpur, set out to build a formula-modelled racing car to enter a competition in the UK, IIT gave him 9.5 lakh to fund it, but only an old, abandoned shed to build it in. "I wish we had proper labs for such work then," recalls Khaistgir, who now works as a project engineer at automotive firm FEV GmbH in Germany.

That's precisely the kind of 'tinkering labs' that many IITs at Kharagpur, Mumbai, Kanpur, Chennai, etc. are now creating or have just created.

"A tinkering laboratory is a platform for creative minds to come out of their 'think space' to a more hands-on 'tinker space', to transform their ideas into real-time engineering objects, and eventually to products and patents," says Sameer Khandekar, associate professor, Department of Mechanical Engineering at IIT Kanpur. "IIT students are good at theoretical knowledge but need more hands-on experience," adds Khaistgir.

The labs many IITs are now building are at least partly inspired by the Massachusetts Institute of Technology's (MIT) 'Fab Labs'. MIT started its first such lab in 2001 and now runs 134 labs in 34 countries.

The lab at IIT Kanpur was started a couple of years ago. The class of 1986 initiated the project and created a corpus of 70 lakh, which was matched with an equal contribution by the institute. In January 2013, the class of 1978 pitched in with a 50 lakh contribution.

IITs at Bombay and Madras are setting up similar tinkering labs. They are roping in alumni for technical and financial support. In fact, IIT Bombay started a separate tinkering lab for its mechanical engineering department this year. Its electronics department already had one.

"Students need a dedicated facility, run by them and not one that has to be shared with other streams for research work," says Devang Khakhar, director of IIT Bombay. "Alumni have been roped in for funding and the college too will chip in," says Khakhar.
IIT expert suggests chemical changes for better life-span of machinery parts

VARANASI: The life of machinery parts could be extended three times by introducing some chemical changes in pure iron, a student of Indian Institute of Technology (IIT), Banaras Hindu University (BHU), Pallav Gupta, who is carrying a study under a project funded by Council of Science and Technology, Uttar Pradesh, said.

Gupta, a researcher in ceramic engineering, IIT-BHU and principle investigator of the project, has claimed that the iron, with its changed chemical and physical properties, can have increased compressive strength and undergo less erosion.

"This kind of iron is prepared by using powder metallurgy technique. In this, electrolytic iron (that is pure iron in its powered form) is mixed with alumina (aluminum oxide). The properties of iron change by mixing only 5% of alumina. "The hardness, compressive strength and the strength of standing friction were measured and we saw changes as compared to normal iron," he said. Other properties of iron, specially rusting were still observed.

The research project 'Effect of processing parameter of the properties of nano structured Iron-Alumina metal matrix composites produced using power metallurgy technique' under Young Scientist Research Team of Council of Science and Technology, UP, is being supervised by professor Devendra Kumar, professor Om Prakash of ceramic engineering and professor AK Jha of mechanical engineering, IIT-BHU.

This iron, with its changed properties, is not used anywhere in the world. Once all the physical and chemical properties are studied and verified, it can replace the normal iron used in many industries. This iron can be primarily used in railways for preparing wagon wheels. It can also be used in heavy duty machines, vehicles and automobile parts, thereby increasing the life span by two to three times. The research suggested that the machine parts may have least wear and tear. The powder metallurgy technique could be economical and can be helpful for most of the industries," he hoped.

The project was sanctioned to him approximately one year ago. There are two more years to carry out more researches. "During this period, we will be studying varied composition of alumina in pure iron. Initially, we mixed 5% alumina. We would increase it to 10% and then to 30% in the coming months. As a part of the project, the industrial application of this iron would also be carried out by collaborating with some industries and factories," Gupta added.

Sturdy facts:

# The iron-alumina is prepared with powder metallurgy technique.

# The changed form of pure iron has shown more hardness, compressive strength and undergoes lesser friction.

# The life span of this iron is three times the normal iron.

# The principle use of this iron is being observed in railway wagon wheels.

# It can also be used in making automobile parts, heavy duty machines and vehicles.

# The researchers are studying varied composition of alumina in pure iron.
Jadavpur VC resigns

SUBHANKAR CHOWDHURY

Calcutta, Oct 21: Jadavpur University vice-chancellor Souvik Bhattacharyya has put in his papers following persistent differences with officials close to the Bengal government, varsity sources said today.

According to the sources, Bhattacharyya who had joined JU in August last year from IIT Kharagpur, on Sunday submitted his resignation to governor M.K. Narayanan, who is chancellor of the university.

It is not clear whether the chancellor has accepted the resignation. But sources in the government said they were trying to find an interim replacement.

Tension has been mounting between the officials close to the government and Bhattacharyya for some time, the sources said.

He ran into hurdles at the university's executive council, the highest decision-making body of the institute, facing resistance from members close to the government.

In the last executive council meeting, Bhattacharyya was forced to form a three-member committee to review the punishment slapped on two Jadavpur University students accused of ragging a junior. The two students had been suspended for one year and six months, respectively.

Bhattacharyya was gheraoed for over 50 hours by students demanding revocation of the punishment.

The vice-chancellor also drew the ire of the government over enforcing a circular on suspending students' union elections in all state universities in February this year. When students held the vice-chancellor captive for over a day protesting against the suspension of elections, the government held the university authorities responsible for the agitation.

Bratya Basu, the education minister, had wondered how a vice-chancellor could run a university if he could not explain the meaning of a government circular to "little students".

The government had asked senior department officials to probe why the vice-chancellor was failing to explain the meaning of the circular.

Differences had also emerged over a decision to introduce a common entrance test for postgraduate admission in state universities.

While the government was planning to introduce the test, Jadavpur University authorities opposed the decision and sought to retain its own admission system. Under the university's own system, undergraduate students are given direct admission to postgraduate programmes.
Indian Express

Innovative changes needed in higher education system: Pranab Mukherjee

PTI Posted online: Tue Oct 22 2013, 16:12 hrs

Shillong: Maintaining that delivery of higher education in India cannot be allowed to continue in a "routine fashion", President Pranab Mukherjee on Tuesday said there has to be an "elevated level of urgency" among administrators and academicians to introduce innovative changes.

He also regretted that no Indian university has found place in the top 200 global ranking list and said they have to be "careful" in positioning themselves among the top institutions in the world.

The President emphasised on better coordination among various departments of the universities to achieve excellence and help them to be among the best in the world.

"Our academic syllabus is not up to the highest standards as recognised by world universities. We are not emphasising on ranking ourselves. We have to be careful," the President said while addressing the convocation function of the North Eastern Hill University.

He inaugurated an innovation club on the occasion which seeks to facilitate in-house research activities in various disciplines.

Mukherjee said Indian universities have to foster greater linkages with international universities for student and teacher exchange programmes.

He also stressed on improving facilities in the various departments of the universities and said though Nobel laureates like Amartya Sen, P V Chandrasekhar and Hargobind Khurana passed out from Indian universities, they won their respective Nobel prizes after going abroad.

The President suggested fostering endowment culture in the campuses, saying most of the top-league universities like Harvard and Cambridge excelled over the centuries largely because of the endowment received.

He said the delivery of higher education in India cannot be allowed to continue in a "routine fashion any longer".

There has to be an elevated level of urgency among administrators and academicians to introduce innovative changes in the institutions. "Core problem have to be addressed expeditiously and a culture of excellence has to be promoted by allowing adequate flexibility in different aspects of academic management," the President said.

Calling upon the institutes to retain meritorious students and give enhanced focus on research activities, the President stressed that universities get international exposure in terms of having visiting professors from abroad and student and faculty exchange programme.

The President said adequate support to the universities could improve their fortunes and help them excel in their fields.

He cited an example of IIM-Calcutta, which he had visited two years back and had extended Rs 20 crore to the
institute’s finance and economics programme.

He pointed out that a latest report of Financial Times London has said that these two departments are among the 70 leading business schools in the world.

**Seemandhra may get IIT, IIM as sop**

The coastal region of Andhra Pradesh, fuming over the creation of Telangana, may get an Indian Institute of Technology (IIT), an Indian Institute of Management (IIM), a metro rail, an international airport and a training hospital modelled on the All-India Institute of Medical Sciences (AIIMS).

Sources involved in the process said that the Group of Ministers headed by home minister Sushil Kumar Shinde is contemplating these projects in a bid to mollify Seemandhra, but plans to tread a tightrope on a host of contentious issues, including the key one of sharing water resources with Telangana.

Among the other potential goodies lined up for Seemandhra are a new port, a new central university, a school of fashion technology and a few research institutes.

The sources said that while various options were under consideration, a final decision would take time. A few projects may also come up in Telangana. Hyderabad, which falls deep inside the proposed Telangana state, already has an IIT.

The GoM meeting last week discussed the water sharing issue and ordered detailed reports, Seemandhra leaders are pressing for a stable mechanism to ensure water supply to their region. Large portions of the key rivers supplying Seemandhra lie in Telangana.

Sources indicate that Shinde’s panel may consider several proposals including creation of centrally-controlled River Valley Authorities for Krishna and Godavari — the two key rivers.

**SWEETENING THE SPLIT**

- To cool tempers in coastal Andhra over creation of Telangana and address its economic concerns, Centre is planning some sops
- Metro rail, international airport for new capital as Hyderabad, which is the economic hub of the state and will be the shared capital for 10 years, lies deep inside Telangana
- Indian Institute of Technology, Indian Institute of Management and an AIIMS-like medical facility also on cards
- A central university, Nift, and some research institutes may also be offered
- Centre also trying equitable distribution of water to both the regions as large portions of key rivers like Krishna, Godavari supplying Seemandhra lie in Telangana

Detailed discussions are set to take place on projects like Srisailam and Nagarjuna Sagar reservoirs, Rajolibanda Diversion Scheme and Polavaram irrigation project.

Srisailam is a key reservoir for drinking water and electric power in Seemandhra. The Nagarjuna Sagar, undivided Andhra’s biggest reservoir, spreads across Nalgonda district of Telangana and Guntur district of...
“We are trying to find out a mechanism that ensures both states get equal opportunities in terms of water resources and irrigation facilities,” said a senior Congress leader.

http://www.hindustantimes.com/StoryPage/Print/1138752.aspx
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Indian Express
It's been over a week since Dr M C Misra took over as director of AIIMS but the welcome notes and bouquets have not stopped coming. He offers sweets to all, including us, as we arrive for an interview.

Q. Why a special initiative on doctors' day?
A. It is a way of showing gratitude to doctors who work tirelessly and selflessly.

Q. How do you plan to handle the backlog of patients?
A. We are working on creating additional capacity and also improving the efficiency of the existing services.

Q. Suggest some health tips for doctors.
A. Regular exercise, proper diet, and adequate rest are important for maintaining good health.

Q. How do you plan to address the shortage of doctors?
A. We are working on improving retention rates and also exploring ways to attract more doctors to the profession.

Q. What is your view on public awareness about healthcare?
A. Public awareness is crucial to improve health outcomes. It is important to educate people about the importance of regular check-ups and seeking timely medical help.

Q. What role do you see for AIIMS in training healthcare professionals?
A. AIIMS plays a crucial role in training and educating healthcare professionals. We are committed to producing competent and ethical healthcare providers.

Q. How do you plan to improve the quality of patient care?
A. We are focusing on continuous improvement and also引入最新的技术和最佳实践来提高医疗服务的标准。

Q. How do you plan to handle the increase in patient load?
A. We are expanding our facilities and also introducing new technologies to handle the increased demand.

Q. What role do you see for AIIMS in the future?
A. AIIMS will continue to be a leader in healthcare and research, addressing the evolving needs of the population.

Q. Are there any plans to establish branches of AIIMS outside Delhi?
A. We are exploring opportunities to establish branches in other cities to provide better access to quality healthcare.

Q. Are there any plans to introduce new medical specialities?
A. We are always looking at expanding our specialities to meet the needs of the population.

Q. What role do you see for AIIMS in addressing public health issues?
A. AIIMS is committed to being a partner in public health initiatives and working towards improving health outcomes for all.

Q. How do you plan to handle the rising costs of healthcare?
A. We are looking for ways to optimize our resources and also exploring ways to reduce costs without compromising on quality.

Q. What role do you see for AIIMS in the spirit of the right to health?
A. AIIMS is committed to providing healthcare services that are accessible and affordable to all.

Q. Are there any plans to introduce patient-centered care?
A. We are constantly looking for ways to improve the patient experience and also introduce patient-centered care practices.

Q. How do you plan to handle the increasing demand for healthcare services?
A. We are focusing on improving efficiency and also exploring ways to expand our facilities.

Q. What role do you see for AIIMS in the ongoing digital transformation of healthcare?
A. AIIMS is committed to being at the forefront of digital transformation, using technology to improve healthcare delivery.

Q. Are there any plans for international collaborations?
A. We are exploring opportunities for international collaborations to share best practices and improve healthcare outcomes.

Q. Are there any plans for the AIIMS graduation day?
A. The graduation day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS jubilee day?
A. The jubilee day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS alumni day?
A. The alumni day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS sports day?
A. The sports day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS cultural day?
A. The cultural day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS science day?
A. The science day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS medical day?
A. The medical day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS research day?
A. The research day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS education day?
A. The education day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS medical ethics day?
A. The medical ethics day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS medical humanities day?
A. The medical humanities day is an important event and we are planning a special programme for the occasion.

Q. Are there any plans for the AIIMS medical ethics and humanities day?
A. The medical ethics and humanities day is an important event and we are planning a special programme for the occasion.

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Messenger Service, Tug – o – War, Mad Ads, Graffit. Do dare acts on stage and win prizes or do the impromptu performances and win hearts. Play music on demand for your loved one or go on a treasure hunt with your team, showcase your sense of art and absurdity in tattoo making or just hang out. All here at the Mall @Old SAC the major buzz area during Antaragni.

(http://www.coolage.in/2013/10/21/antaragni-13-iit-kanpur-informals/)

**Life imitates art as Rock On!! actor Farhan sets Rendezvous festival alight**

By Mail Today Reporter

It's almost like a case of life imitating art. Farhan Akhtar, who played the role of a rockstar in his debut film Rock On!!, gets to live it in real life these days.

On the last day of the IIT-Delhi cultural festival (Rendezvous) on Monday evening, Akhtar and his band performed songs from movies encompassing his entire career in Bollywood.

Rocking out: Farhan Akhtar plays at the IIT-Delhi festival which saw a huge crowd at the institute

His band, Farhan Live, is a nine-member group consisting of Shannon Donald (vocals), Sarosh Izedyar (lead guitarist), Dibyajyoti Nath (bass guitar) Darshan Doshi (drums), Umaang Doshi (keyboard) and others.

Akhtar and the musicians started the set with Sinbad the Sailor from Rock On!!, following it up with Dil dhadkane do from Zindagi na Milegi Dobara.
Throughout the concert, Akhtar was full of energy and was matched equally with the audience in terms of enthusiasm.

The Open Air Theatre at the IIT was bustling at the seams, and was full of people who were singing along with Akhtar.

Fans: Throughout the concert, Akhtar's powerful energy was matched by the enthusiasm of the audience.

Dressed in all black, Akhtar introduced the title track of the film which launched his career, with: "This song (Dil Chahta Hai) is about all the time I spent in school and college. Those were the best days of my life."

Akhtar requested for the lights to be switched off and began a soulful rendition of Tum ho toh.

The band has given several performances in the past year or so, including at IIT Roorkee and the Dubai Music Week recently.

**Alcher Strikes Back @IIT Guwahati**

If you are a student of IIT-G, then, it is safe to assume that you spend 76.34% (fairly accurate on that number) of your time in front of the computer. Also, it is certain that you have Facebook on another tab as you continue to browse through your IMDB top 250 looking for new movies to pass your night. In which case, you must have noticed that you pretty much have your entire wall sprayed on and spammed to bloated proportions by this one poster.
Immediately, you spill your diet coke all over the laptop and those Cheetos scatter everywhere on the floor. "Wait what-" is the first thought that comes to mind. "Alcher? Really? What's happening here?" Seriously, the festival was so far shrouded in mystery ever since Alcher 2013 concluded. There were absolutely no news or updates from its Facebook page, a rare event for anyone who is well acquainted with it. You had a higher probability of knowing which political leader held his stash in the Swiss Bank. Even Wikileaks couldn't disclose what went on behind those four walls. The eerie silence regarding Alcher had many float the rumor that it wasn't happening this year.

So, naturally this update came off as a huge surprise. But, that wasn't the end of it. Following this were a plethora of students who changed their profile picture to some sort of an ancient pyramid with a cyclone as seen from bird's eye (see if you can do a better job describing it). The team behind the fest launched a teaser video on youtube via Alcheringa's facebook page that gave a sense of much needed confirmation to everyone while also releasing the theme for its 18th incarnation.

The teaser displays boldly "Alcheringa: Atlantis" written in ancient text with the dates "30th January – 2nd February." It also ends with the statement "Keep Calm – We are back", probably a nod to all those flying rumors. Well, I'm here to blow all that smoke and dust off this subject. Its Official guys! Alcheringa - The annual cultural festival of IIT Guwahati, that 4 day window where the college sees an appreciable proportion of the fairer sex lives to see its 18th incarnation.

Your device does not support video embed feature.&lt;a href="http://youtu.be/SPs8Ikkm_c"&gt;Click here to watch the video.&lt;/a&gt;

For those unaware, Atlantis, as told by Plato, is a legendary island said to exist somewhere around 9000 B.C (sure! Why don't we just throw in random numbers and expect people to believe them?) It was said to contain precious metals like gold and silver in abundance along with rare wildlife. Its founders were believed to be half-god and half-human. These founders soon built their utopia around the island and achieved immense naval power.

It is a legend about spiritual and moral people living in a technologically advanced civilization, who soon gave into their greed and became devoid of all morality, which pretty much makes them as normal as any person living in your lobby.

"That 4 day window where the college sees an appreciable proportion of the fairer sex lives to see its 18th incarnation."

Because there was far too much awesomeness to be contained, as a punishment, the gods cast fire and earthquakes upon the land and Atlantis sunk in "a single night of misfortune."

Alcheringa seems to have made it a trend to tackle different worlds and their culture with each oncoming installation. Alcheringa 2012 saw the fest focus on the street life with its theme 'Urban Odyssey'. 'Alcheringa 2013: Parallel Paradise' was a trip to the psychedelic universe. The theme of Atlantis is one that tweaks an individual's imagination. Whether you believe it or not, The Legend of Atlantis is definitely one of the most fantastical myths present in our folklore and it was only a matter of time before a college fest based its theme around it.

This immediate release saw the festival gain huge attention with news spreading like wildfire across campuses. Alcheringa seems to be the talk of the town. Students are talking about it, TA's are talking about it, and your mom's talking about it. And rightly so, the fest has escalated to be a behemoth in a short span of time with fine performances from the likes of Eluviete, Orphaned Land and world famous Anoushka Shankar. Of course, everyone remembers how they struck gold last year with the Bollywood giant Mohit Chauhan. So the question
now is how does Alcheringa 2014 top this? Well, one can only wait and watch.

"The theme of Atlantis is one that tweaks an individual's imagination."

Where do I stand between all of this? I couldn't be any happier! While I still can't figure out how exactly to pronounce the world 'Alcheringa' (seriously though, how?), I'm completely pumped at the notion of working for it again. I still remember the amount of fun I had last time!

(http://www.coolage.in/2013/10/21/alcher-strikes-back/)

Times of India

DU colleges eye big, fat annual fests

Manish Pratap Singh | Oct 22, 2013, 11:47 PM IST

NEW DELHI: IIT-Delhi's Rendezvous '13 was big this year. And DU doesn't want to be left behind. Most of the colleges are banking on corporate banking for visibility among youth. They hope the biggies, at least, will pump in money like anything to make their annual festivals grander than usual.

Leading the race is Shri Ram College of Commerce, which is expecting sponsorship deals between Rs 1.25 crore and Rs 1.5 crore for its festival Crossroads. While Harrow College is planning to woo top 200 colleges to be a part of their annual Confluence, Guru Gobind Singh Indraprastha University and Kirori Mal College are also eying big funds. And why not as corporates despite all their “austerity drive” are keeping their purses at liberal best for these consumers.

While American rock band Hoobastank was the star attraction at IIT-Delhi last week, they may not be the last of the international rock band performing at youth fest this season.

“I think there will be a star performer on all the four days of Crossroads this year. And yes, students are keeping all options open, including inviting an international rock band,” said principal of SRCC, P C Jain. Last year, SRCC had spent around Rs 1 crore and is looking at an upper limit of Rs 1.5 crore this year.

Harrow College is also planning something extravagant - right from getting sponsors up to Rs 60 lakh to making it an "all India" festival bringing in participants from institutions like IITs and IIMs. Mohit Saxi, president of Harrow College Students' Union said, "With rock bands and participants from across the country, it is natural that the budget will get bigger by the day."

The students are confident that they will get the required funding from the corporates. "They have products to promote and if they don’t do that in youth festivals, then where will they get the audience?" said Sheerat Gupta, president of the students' union, SRCC. "65% of the population is youth. And they form the largest chunk of consumers. So it’s natural that corporates will seek visibility in such events where youth gather in large numbers as they have products to sell," said Jain.

Despite the economic downturn, many MNMs and other business groups are ready to fund these events. According to a senior official of a multinational manufacturer of soft drinks, "Such events are the perfect platform to communicate with the target audience and many brands are ready to sponsor such events."

Kirori Mal College is eying a sponsorship of around Rs 35 lakh - up from Rs 15 lakh of last year. They plan to organise a football tournament for the fest this year. "We are also trying to bring in a celebrated footballer. Let's see how things turn out as we still have three months to work on the plans," said Jaswinder Chauhan, president of the students' union of the college.