

# Newspaper Clips

## June 9-10, 2013

June 9

HT Mumbai

# IIT-B making TB patch that works with sunlight

**INNOVATION** Funded by Bill Gates, project will eliminate need to visit DOTS centres

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**MUMBAI:** The Indian Institute of Technology - Bombay (IITB) is developing TB Nanodots, a skin patch which could rid patients of tablets and injections while being treated for tuberculosis (TB)

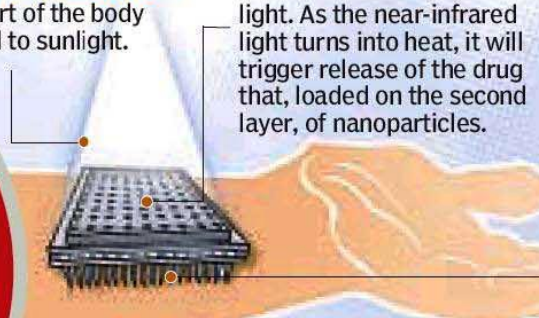
The patch will be embedded with 100 micron micro needles and two layers of nanoparticles, one of which will be loaded with the TB drugs.

"There is too much non-compliance by patients during the tuberculosis treatment since it involves regularly taking many drugs at one time and injections in severe cases, to complete a entire course. Access to TB medication is also problematic in rural areas," said Dr Aravind Kumar, co-investigator.

At present, patients have to be enrolled with the Revised National TB Control Programme (RNTCP), which is a six-month to eight-month treatment. Under the programme, a TB patient has to visit the DOTS (Directly Observed Therapy, Short Course) centre and take the drugs every alternate day before the DOTS provider for the entire course. In cases of multidrug resistant

### SOLAR RELIEF AGAINST TB

**The skin patch is implanted with 100 micron micro needles and two layers of nano particles.**



**THE PATCH CAN BE STUCK** on any part of the body exposed to sunlight.

**WHEN SUNLIGHT HITS ONE LAYER** of nanoparticles, the visible light will get converted into near-infrared light. As the near-infrared light turns into heat, it will trigger release of the drug that, loaded on the second layer, of nanoparticles.

**THE DRUG WILL GET DIFFUSED** via the nanoparticles directly into the blood stream through the pores on the epidermis (outer layer of the skin) created by the micro needles placed under the patch. The needles will not reach the dermis, the location for blood vessels and pain receptors.

**DRUG DELIVERY THROUGH TB NANODOTS** will reach the blood stream directly and bypass the liver thereby reducing side effects like liver toxicity or nausea, which is common in the current TB treatment.

**THE FIRST PHASE OF THE PROJECT** will take about 18-months with testing on small animal models for bio-availability of the drug, which should match the existing scenario with tablets or injections.

ILLUSTRATION: SHRIKRISHNA PATKAR

TB, the patient has to take an injection along with oral medicines everyday before the DOTS provider.

"Our innovation is aimed at a sustained sunlight mediated drug delivery system that will eliminate the need for the patient to visit the DOTS centre every week, both in cities and rural areas," said professor Rohit Srivastava, principal investigator and head of the NanoBios Lab, IITB.

The project received a grant of \$1,00,000 by the Bill & Melinda Gates Foundation last month.

Under the RNTCP, there were 30, 828 cases of TB in Mumbai last year and 8,155 from January to March this year. In India, an estimated two million develop TB annually with around 3, 30,000 deaths, according to World Health



Organisation.

According to the team,

drug delivery through TB nanodots will reach the blood stream directly and bypass the liver thereby reducing side effects like liver toxicity or nausea unlike the current TB treatment.

"Nanotechnology for drug delivery is promising and a viable option. However, it is at a very nascent stage and too early to tell whether it will work at the clinical stage," said Dr On Srivastava, infectious disease specialist, Jaslok Hospital.

## Asian Age ND 09/06/2013P-2



President Pranab Mukherjee presents a degree to a student at the convocation ceremony of IIT-Indore on Saturday.

— PTI

### NATION

## President stresses on quality of education

AGE CORRESPONDENT  
BHOPAL, JUNE 8

President Pranab Mukherjee on Saturday stressed the importance of knowledge-based economy and said that innovation and quality of education is as important as the need to build the physical infrastructure for the higher education sector.

The President was addressing the first convocation of Indian Institute of Technology, Indore. He urged the first batch of graduates passing out of IIT Indore to inculcate the habit of learning every day. He said that the society has invested in students' education. Therefore, they should use their knowledge in the larger interest of society.

HT Bhopal

P R E Z @ M P



■ President of India gold medalist Ankit Goyal along with his mother Shikha Goyal after the convocation ceremony at IIT Indore's Simrol campus on Saturday. ARUN MONDHE/HT PHOTOS

## 'Just 0.6% of budget spent on research'

**IIT VISIT** Prez says allocation is inadequate, urges ex-students to help alma mater financially

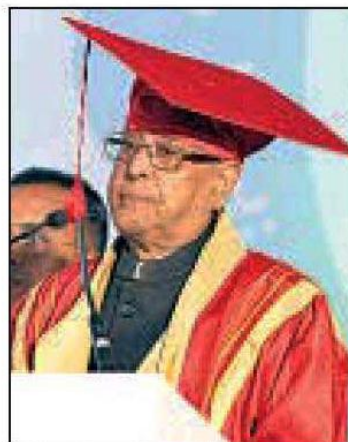
**HT Correspondent**

■ editorbhopal@hindustantimes.com

**INDORE:** Emphasising the need for innovation to survive in the competitive world, President Pranab Mukherjee called on former students of IIMs, IITs and central universities to help their *alma mater* financially so that they can become excellent centres of new researches and technological breakthroughs.

"If this can happen in US, Oxford, why can't it be repeated here. The private and public sector must come forward to provide market and other support to innovators," Mukherjee said in his address at the first convocation ceremony of Indian Institute of Technology, Indore, on Saturday.

Speaking further, he said only three out of 100 multinational



■ The President addresses the students at the convocation ceremony in Indore.

corporations in the country have initiated innovative culture. "The government," he said, "spends only 0.6% of the budget on

**CONTINUED ON PAGE 8**

» PRANAB VISITS MAHAKAL, P2

# ‘Just 0.6% of budget spent...’

## CONTINUED FROM PAGE 1

researches which is inadequate. Therefore, private and public support is must,” he insisted.

Commenting on the country's economic growth slipping down to 5% from 7.9% , Mukherjee said there was no need to panic. “I am not disappointed. It is a matter of concern but the country has the ingredients to tide over the crisis. I say this based on my four decades of experience (in government),” he remarked. To support his claim, he said India was among the few countries in the world to have registered 7.9% economic growth in last 10 years.

He said India which has journeyed from world's oldest civilisation to newest nation should focus on expansion of infrastructure facilities and quality of education in its academic institutions so that it can have world-class learning centres like Nalanda and Taxila again which came before Harvard and Oxford universities.

“You are product of your own thoughts,” Mukherji told students as he said they have responsibility towards their institute, society and country to help the three develop to their full potential.

Admitting that new globalised world faces hard challenges, he said India can excel if it will harness its potential in direction of research, development and innovation. Also, higher education should be affordable and accessible, he said.

Madhya Pradesh Governor Naresh Yadav was also present at convocation ceremony besides minister of state for

health Mahendra Hardia and Congress leader Suresh Pachauri. On Saturday, a total of 101 graduates passed out from IIT-Indore which was set up in 2009.

## PANEL TO VISIT LAHORE FOR GAS SUPPLY TALKS

But its priority is gas supply as some 40km of pipelines could be laid across the border within next 10 months. “We want to help Pakistan in its hour of power crisis as it will help lowering of hostility against India particularly in Punjab province, which is the hub of pan-Islamist terrorist groups,” said a senior South Block official.

Official sources said according to plans, the existing GAIL's Dahej-Nangal-Jullandar gas pipeline will be extended to Lahore via Amritsar to supply gas as much as five million cubic metres daily.

New Delhi wants to help Pakistan by supplying Qatari LNG at cost plus charges for tapping in Lahore. Petronet-LNG Limited JV imports Qatari gas at Dahej terminal and pumps it into the network after costly regasification.

According to senior officials, the Indian gas could feed into the Sui Northern Gas Pipelines Limited network at Lahore

for supplies to the entire country.

“If the LNG project goes through, then the same cross-border pipeline would be used by India for connecting to Turkmenistan gas via the Afghanistan-Pakistan route in the future and build confidence between the two countries,” said a senior official.

Aaj Samaj ND,09.06.2013 P-7

आईआईटी इंदौर के पहले दीक्षांत समारोह में बोले राष्ट्रपति प्रणब मुखर्जी

# उच्च शिक्षा का बढ़े भौतिक ढांचा

सूचना प्रौद्योगिकी के आधुनिक साधनों के प्रयोग पर दिया जोर

इंदौर। देश में उच्च शिक्षा क्षेत्र के मौजूदा भौतिक ढांचे को जबर्दस्त प्रतिस्पर्धा के इस दौर के मुकाबले 'अपर्याप्त' करार देते हुए राष्ट्रपति प्रणब मुखर्जी ने शनिवार को कहा कि इस क्षेत्र की सुविधाओं को फैलाने के लिये सूचना प्रौद्योगिकी के आधुनिक साधनों की मदद ली जानी चाहिए।

यहां भारतीय प्रौद्योगिकी संस्थान आईआईटी, इंदौर के पहले दीक्षांत समारोह में राष्ट्रपति ने कहा कि तीखी प्रतिस्पर्धा की इस दुनिया में भारत में उच्च शिक्षा क्षेत्र का भौतिक ढांचा पर्याप्त नहीं है। इस ढांचे के विस्तार के



दीक्षांत समारोह में छात्र को डिग्री सौंपते राष्ट्रपति प्रणब मुखर्जी।

लिये निजी और सरकारी क्षेत्र को एक साथ कदम उठाने होंगे। उन्होंने यहां से करीब 25 किलोमीटर दूर सिमरगल में आयोजित समारोह में कहा कि कई

बार उच्च शिक्षा के क्षेत्र में भौतिक विस्तार में मुश्किल पेश आती हैं। ऐसे में इस मकसद को पूरा करने के लिये ई-कक्षाओं और सूचना प्रौद्योगिकी के

दूसरे आधुनिक साधनों की सहायता ली जानी चाहिए। राष्ट्रपति ने कहा कि 18 से 24 वर्ष के आयु वर्ग में जर्मनी के उच्च शिक्षा संस्थानों में दाखिले का अनुपात 21 प्रतिशत है।

अमेरिका में यह अनुपात 34 प्रतिशत है। भारत में यह अनुपात केवल सात प्रतिशत है। लिहाजा मुझे लगता है कि हमें देश में उच्च शिक्षा के क्षेत्र में सुविधाओं को काफी फलाना होगा, क्योंकि ज्ञान आधारित अर्थव्यवस्था वक्त की जरूरत है। उन्होंने कहा कि देश में उच्च शिक्षा को आर्थिक तौर पर वहनीय बनाने के लिये छत्रवृत्तियों में इजाफे के साथ शिक्षा ऋण योजनाओं को बढ़ावा दिया गया है। लेकिन इस सिलसिले में अब भी बहुत कुछ किया जाना बाकी है, क्योंकि दुनिया बेहद प्रतिस्पर्धी है।

Hari Bhumi ND 09/06/2013 P-6

## आईआईटी ने नकारा, अमेरिका की आंखों का तारा

एजेंसी. नई दिल्ली

नेत्रहीनता और सीबीएसई की चुनौतियों को नकारते हुए कार्तिक साहनी ने बारहवीं की परीक्षा पहले ही 96 प्रतिशत अंकों से पास कर ली, आईआईटी फिर अडुंगा लगाकर खड़ा हो गया। अब वह अमेरिका के स्टैफर्ड विश्वविद्यालय से मिले निमंत्रण को स्वीकार करते हुए कंप्यूटर साइंस की पढ़ाई करने जा रहा है। अफसरशाहों और शीर्ष शीक्षण संस्थाओं के शिक्षाविदों की दृष्टिहीनता और अपनी नेत्रहीनता से ज्यादा चुनौतीपूर्ण मानते हुए साहनी पढ़ाई पूरी करने के बाद देश लौटकर व्यवस्था सुधार के लिए संघर्ष करना चाहता है।

दसवीं कक्षा के बाद जब कार्तिक साहनी ने तय किया कि वो आगे साइंस विषय पढ़ना चाहेंगे तो उनके सामने एक नहीं कई मुश्किलें थीं। कार्तिक को सीबीएसई की ये समझने में खासा वक्त लगा कि उनके जैसा एक नेत्रहीन छात्र भी साइंस जैसे प्रेक्टिकल विषय की पढ़ाई कर सकता है। बोर्ड परिणामों ने कार्तिक के दावे की पुष्टि भी कर दी। उन्होंने बारहवीं की परीक्षा 96 प्रतिशत अंकों के साथ पास की है।

कार्तिक कहते हैं, मेरी रूचि हमेशा से ही साइंस में थी और खासतौर पर कंप्यूटर साइंस में। इसलिए मैंने सोच लिया था कि अगर विरोध है तो भी मैं कोशिश करूंगा कि मैं सबको समझाऊं



सीबीएसई जैसे संस्थानों में भी कोई रिसर्च नहीं करता। सबसे मुश्किल बात तो ये है कि जब विकलांग बच्चों के लिए कोई नीति बनाई जाती है तो उस समय किसी ऐसे संगठन को शामिल नहीं किया जाता जो विकलांगों के लिए काम करता हो- कार्तिक साहनी प्रतिभाशाली छात्र

कि नेत्रहीन भी ऐसा कर सकते हैं। कार्तिक कहते हैं, सीबीएसई की पहली आपत्ति ये थी कि मैं साइंस पढ़कर करूंगा क्या।

नेत्रहीन छात्र का कंप्यूटर इंजीनियर बनने का सपना देखना ये बात वो हजम ही नहीं कर पा रहे थे। सीबीएसई को मुझे ये समझाना पड़ा कि आज ऐसी तकनीक मौजूद है जिसकी मदद से नेत्रहीन भी साइंस पढ़ सकते हैं। कार्तिक कहते हैं कि ज्यादातर लोग सोचते हैं कि नेत्रहीन छात्र बाकी बच्चों के मुकाबले कम प्रतिभाशाली होते हैं।

कार्तिक मानते हैं कि जब विकलांग बच्चों के लिए कोई नीति बनाई जाती है तो उस समय किसी ऐसे संगठन को

शामिल नहीं किया जाता जो विकलांगों के लिए काम करता हो। आईएस अफसर कमरों में बैठकर ही नीति तय कर देते हैं। वह सीबीएसई और आईआईटी जैसे उच्च संस्थानों को चला रहे लोगों के जानकारी के स्तर पर भी सवाल उठा रहे हैं।

कार्तिक चाहते तो थे कि वो बारहवीं के बाद अपनी पढ़ाई भारत के सर्वोच्च इंजीनियरिंग संस्थान आईआईटी से करें। लेकिन नेत्रहीन छात्रों को प्रवेश परीक्षा में मिलने वाली रियायतों में आए बदलावों के कारण कार्तिक ने तय किया कि वो अमेरिका जाएं। कार्तिक कहते हैं कि जब पहली बार उन्होंने आईआईटी से संपर्क साधा तो उन्हें बड़ी

हैरानी हुई। वह बताते हैं, जब मैंने पहली बार आईआईटी से ये जानना चाहा कि क्या मैं वहां से कंप्यूटर इंजीनियरिंग कर सकता हूँ तो कंप्यूटर साइंस विभाग के हेड ने मुझसे ये पूछा कि नेत्रहीन होने की वजह से मैं काम कैसे करता हूँ।

अगर आईआईटी के कंप्यूटर साइंस के एचओडी को ये नहीं पता कि स्क्रीन रीडर या टेक्स्ट टू स्पीच टेक्नॉलॉजी क्या होती है तो यह चिंताजनक स्थिति है। कार्तिक ने कहा कि वे पढ़ाई पूरी करने के बाद भारत लौटना चाहेंगे। मैं अक्षम छात्रों के लिए काम करना चाहूंगा ताकि उनके लिए शिक्षा का रास्ता आसान हो सके।

Deccan Herald ND 09/06/2013 P-4

# HRD minister satisfied with answers on FYUP

**GUWAHATI, PTI:** Notwithstanding the criticism of four-year undergraduate courses by University of Delhi, HRD minister M M Palam Raju on Saturday said the programme is being introduced after questioning and receiving "satisfactory" answers from the vice chancellor of the varsity.

The minister said that after VC Dinesh Singh had responded to the concerns "with satisfaction", the UGC has formed a panel which will monitor the implementation of the programme and may suggest other universities also to adopt it. "Lots of prominent people raised objections to the four-year course regarding its content. They also said it's being implemented too fast. We took note of that and questioned the VC of Delhi University," Raju told reporters here.

"But we are satisfied with his reply," he said on the sidelines of the convocation of IIT-Guwahati. The VC said DU is ready to implement the new programme and that it should not be delayed further.

"We do not want to interfere in this. A university has its autonomy and they experiment with new methodology," Raju said.

He added saying the minimum duration of any degree course should be of three years as per UGC guidelines.

Raju refuted the allegation that the course is being brought in without prior consultations.

"The academic council of the university had discussed the issue and approved it in 2008. It was again approved last year and then the executive council approved it. Finally, it went to the Senate," he added.

Earlier this week, UGC had constituted an advisory committee to track the progress of the implementation of the four-year degree course and offer corrective advice on the issue of curriculum.

The registration for the four-year programme, which stirred controversy and drew strong opposition from a section in academia and political class, has already commenced.

Criticising Delhi University's move, Leader of the Opposition in Rajya Sabha Arun Jaitley has demanded that the decision be deferred and extensive consultations be held among academicians before the switchover.

In a letter to Raju, Jaitley has raised certain questions on the move, pointing that the univer-

## Teacher ends hunger strike

Prem Singh, a Delhi University teacher who undertook a hunger strike at Rajghat seeking withdrawal of the four-year undergraduate programme, has ended his fast on Friday evening, which he had begun on Wednesday, reports IANS.

Prem Singh pleaded with authorities to consider deferring the four-year undergraduate programme which is to begin at Delhi University this academic year.

A number of members from civil society of Delhi and teachers from the university supported the fast.

Vice president of Delhi University Teachers Association (DUTA), Harish Khanna, opposing the four-year undergraduate programme, said that the members who are against the programme have appealed to the authorities.

He said they would con-

sider all aspects and opinions into consideration before making the decision.

The Left MPs had made rep-

resentations to the Prime Minister and the President demanding the roll back of the plan to introduce the four-year degree course.

continue to oppose the hasty implementation of the programme this year. In a statement, Khanna said, "All the members have issued an appeal to the authorities and have also resolved that all efforts would be made to oppose the hasty implementation of the highly debated four-year undergraduate programme in DU this year."

The University Grants Commission (UGC) has set up a five-member committee to track the progress of the programme and to suggest corrective measures.

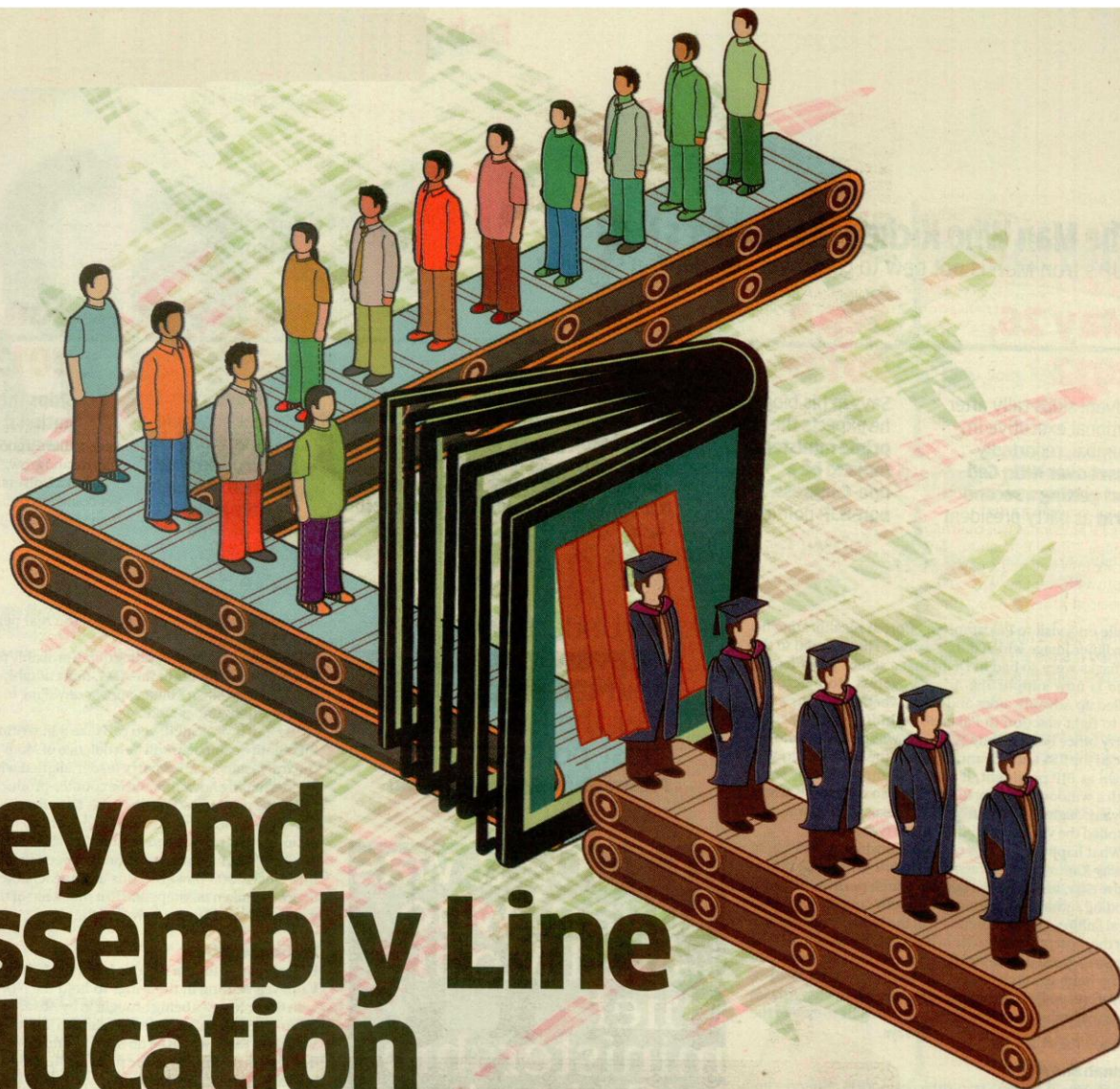
Udit Raj, convenor of the Joint Action Front For Democratic Education, said, "On the occasion of the end of his (Prem Singh) fast, we would appeal to the vice-chancellor and President Pranab Mukherjee, the visitor of DU, to perform his duty as the supreme authority of the university and repair the damage already done by deferring it."

## VC defends 4-yr course

**NEW DELHI, IANS:** Slamming his detractors, Delhi University vice chancellor Dinesh Singh on Saturday said the four-year undergraduate programme was not an eccentric brainwave of one man, and that the university brass was not a "bunch of doofuses" wrecking the system.

Speaking on a news channel, Singh said, "It's a big decision. It's not that one man woke up one day and decided to change the system. Do you think everybody here is a bunch of doofuses, who decided to wreck the system."

"Please give us some credit, there's some wisdom on our side. The academic council, the academic congress and executive council held massive consultations and more than 3,000 teachers participated in the syllabus-making process," he added. Slamming allegations that students would lose a crucial year in the job market, Singh said it was not compulsory for students to stay for four years and that they can get a bachelor's degree in a subject with a major in three years.



# Beyond Assembly Line Education

As students demand quality learning with a wider choice of subjects and an assurance of employability, private universities are promising that change

**:: Saumya Bhattacharya**

*"Ruined result, ruined career, ruined life"* – Facebook status of Aman, a Delhi student after the CBSE class 12 results a fortnight ago.

**A**man (name changed on request) scored 90%. That evidently isn't enough for the 17-year-old to dream of a career. And a life. The cut-off at Shri Ram College of Commerce (SRCC), University of Delhi's (DU) bellwether for higher studies in commerce and economics, was 96.5% to 98.5% in 2012. At other perceived top colleges of India, it's nothing less than 95%. If Aman thinks his life is ruined, it's clearly because 90% isn't going to get him admission to SRCC or any other of the country's Tier I colleges.

While he will later learn in life that marks are not necessarily the most accurate barometer of success, unfortunate-

ly at the moment Aman may be right. And he's not alone. There are tens of thousands of Indian students all over the country who aren't assured of quality education not because they didn't score top marks but simply because the Indian education system cannot accommodate so many overachievers. The bottom line: if you are not right up there at the

top of the heap, you will miss out on quality education. The other option is for parents to fork out a small fortune and send their children to universities abroad. It's an option only for the elite.

**1,500**

the number of additional universities required to meet the gross enrolment ratio target of 30% by 2020, according to National Knowledge Commission

If it's not about cut-offs at universities it's about those cut up with them. Ishita Batra, 18, is among the 7,231 students in India who have crossed the 95% threshold in their class

XII results for the Central Board of Secondary Education (CBSE) this year. Batra, a student of Delhi Public School (DPS), RK Puram, scored a neat 95.6% in the science stream.

## Lure of Foreign Lands

But it won't be an Indian institute for her from hereon. After getting admission into half a dozen universities abroad, Batra has chosen to head to University of Pennsylvania to do a major in biology in a couple of months.

Given an option, she would have stayed back in India for her undergrad education. But Batra didn't see any option. "Indian education is inflexible. And I don't have much faith in how the four-year undergrad programme will be implemented by DU," she says with a shrug. DU's executive council has approved a shift from a three-year to a four-year undergraduate programme. At the time of writing, DU



had begun the admission processes and sold over 90,000 forms, including all categories, in the first three days.

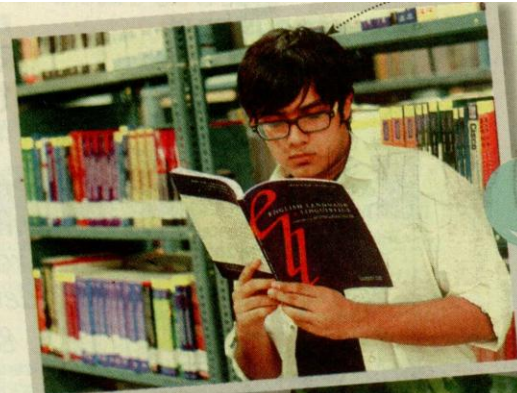
This shift in the cornerstone of undergraduate education is just one of the changes playing out on the landscape of Indian education. The DU move has polarised the country's capital (more of that later), but less controversial – and arguably more promising – is a slow yet decisive shift that centres on the advent of quality education through private universities at the undergrad level. The shift is not without challenges, but if it comes through it promises to transform the education ecosystem in India.

Says TV Mohandas Pai, chairman of Manipal Global Education: "Students are now beginning to choose quality over lower fees, are looking for assured employability, have more choices than before and have more financial power to pay fees than before. We see the beginnings of a flight to quality. In engineering and management, many mediocre institutions are closing down and that is very good news."

"Let's face it," adds Dhiraj Mathur, executive director at PricewaterhouseCoopers (PwC), a consultancy. "Apart from the big universities like DU, Mumbai, Kolkata, Chennai, etc, the standard of education in most government colleges is at best spotty. Private universities can play an important role in bridging the gap between demand and supply of quality education." He adds that because of greater autonomy, the private brigade has more flexibility in designing innovative programmes, "including the semester system".

For now, semesters are largely the privilege of the well-heeled, who can afford to step overseas for further learning. The cost of a year's education at an Ivy League university is prohibitive at around \$60,000, or upwards of ₹30 lakh. Batra was among the few lucky ones to get 60% financial aid at Penn. Still, with or without aid, more and more youngsters who are unable to get into the domestic top league are taking flight to the US, Singapore, Hong Kong and to some universities in Europe.

Sample these numbers from Princeton University, one of the Ivy League universities. The number



### Indrajan Banerjee | 19

chose Shiv Nadar University primarily because it offers a four-year degree

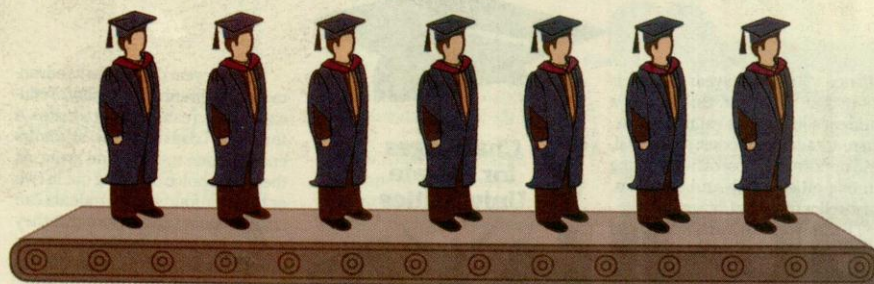
A four-year degree gives a lot of opportunity to research. Few universities give you that opportunity"

### Ishita Batra | 18

is headed to University of Pennsylvania after crossing the 95% threshold in CBSE class XII



Indian education is inflexible. And I don't have much faith in how the four-year undergrad programme will be implemented by University of Delhi"



of undergraduate students enrolled from India in the 2006-07 academic year was 14; that has gone up to 59 in 2012-13. At Yale University, too, there has been an increase in the number of undergraduates from India. "Our enrolment of undergraduate students from India has more than doubled from a decade ago," says a university spokesperson.

#### Private Universities, Ahoy

For those who can't afford lakhs of rupees, private universities are a sliver of hope. They won't come cheap, either, compared to current fees in domestic universities of just ₹10,000 per year for some DU courses; but, at between ₹3 lakh and ₹5 lakh annually, they won't be as exorbitant as the foreign ones, either.

"Private universities will play a

significant role in meeting the demand and supply gap. Those who enrol students in thousands will make a big impact," says Nikhil Sinha, vice-chancellor of Shiv Nadar University (SNU), which is in the third year of its maiden four-year undergrad degree programme.

But it's not just about soaking in more students; as Sinha points out, the new age universities are better

placed to provide "broad-based education, a combination of liberal arts and professional education". Agrees PwC's Mathur: "There is a growing awareness about the merits of a broad-based liberal arts programme. High-quality institutions like SNU are taking the lead in adopting this important innovation."

"Private universities will lead the change over the next 10 years. They are more focused; being fee-based, they know they have to attract students and deliver value; [but] they need to have a good management to survive and grow," adds Pai.

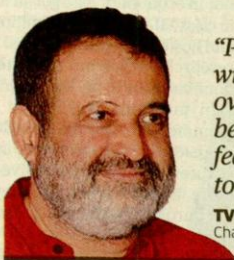
Ashoka University, which has not yet come into existence, has more than 1,00,000 likes on its Facebook page. The university will be a full-fledged liberal arts institute and begins session in June 2014. "At Ashoka University, we are talking about liberal education, which is the notion of combining specialisation and general education," says Pramath Sinha, one of the founders.

#### Sweet Spot

Perhaps there is a certain inevitability about private universities in higher education simply because of the sheer scale of investment required and the challenges that abound. As RK Pandey, president of NIIT University, puts it: "India's higher education system faces challenges on three fronts: expansion, equity and excellence." He adds there are other challenges, ranging from a low gross enrolment ratio (GER, or total enrolment at specific levels of education as a percentage of the population), inequitable access to education, and lack of quality research.

The government has set a target of 30% GER in higher education by 2020. Pandey says achieving that target – the GER currently is 18.8% – calls for an estimated investment of \$190 billion. "Given the size of the investment required, the private sector needs to play a much larger role," adds the NIIT University president.

Sinha of Ashoka University has a clear idea of his potential market – not those who want to study medicine, engineering, and commerce. "Some will go to Xavier's and Stephen's, they won't come to us. But after this level, quality [of institutions] goes downhill. That's the sweet spot



"Private universities will lead the change over the next 10 years because, being fee-based, they have to deliver value"

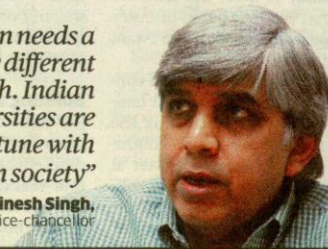
TV Mohandas Pai, Chairman, Manipal Global Education

There is nothing that prescribes that the US or the UK model is the best for India"

George Joseph, Assistant secretary, Yale University

"Education needs a totally different approach. Indian universities are not in tune with Indian society"

Dinesh Singh, Delhi University vice-chancellor





08

THE ECONOMIC TIMES  
**magazine cover story**

JUNE 09-15, 2013

## Ashoka University

**ESTABLISHED IN**

Foundation stone laid in 2012; plan to start from August 2014

**FOUNDERS**

A bunch of entrepreneurs and professionals, including Sanjeev Bikhchandani, Ashish Dhawan, Jerry Rao and Siddharth Yog

**OFFERINGS**

A host of undergrad interdisciplinary majors &amp; minors like environmental science, visual and performing arts &amp; entrepreneurial leadership

**PARTNERS**

University of Pennsylvania School of Engineering and Applied Science; Carleton College (ranked among top five liberal arts colleges in the US)

**FEE RANGE****₹3 lakh to ₹4 lakh**  
per year

*To be able to provide breadth through general education, you need time. In three years you cannot do what you want to do"*

**Pramath Sinha**, co-founder, Ashoka University

## Shiv Nadar University

**ESTABLISHED IN**

2011

**FOUNDER**

Shiv Nadar Foundation

**OFFERINGS**Undergrad, post-grad and doctoral programmes in engg, humanities & social sciences, natural sciences;  
To start in 2014:  
Communication, management and entrepreneurship, art, design & performance, law**PARTNERS**

Carnegie Mellon, Duke University, Babson College, Annenberg University, University of Essex

**FEE RANGE****₹1 lakh to ₹1.85 lakh**  
per year

*Private universities will play a significant role in meeting the demand and supply gap in providing broad-based education"*

**Nikhil Sinha**,

Vice-chancellor, Shiv Nadar University



we have," adds Sinha, a former partner at McKinsey and founding dean of the Indian School of Business.

**Four-year vs Three**

The four-year undergraduate system is one of the decisive shifts being witnessed in the Indian higher education system. Although the intent and objective is to address some lacunae in the existing system, its success and failure will purely depend on its implementation.

One reason DPS' Batra has chosen to look overseas for further education is that she feels she and her mates have become the guinea pig batch of the CBSE – the new system of CCE (continuous and comprehensive evaluation) started with them, class X boards were scrapped; and, now as the batch is entering college, DU is replacing the three-year system with a four-year undergrad programme. "In principle, the four-year programme is nice, but then we know that the first batch of every new system faces chaos. I don't want that instability," says Batra.

"It would have been ideal if considerable public debate had happened before implementing the system to avoid the present controversy," says KR Sekar, partner at consultants Deloitte Haskins & Sells.

Amity University, Noida, a private university that admits 7,000 undergrads annually, is averse to the

change. "The three-year degree is more than sufficient. One year of a student's life is very valuable. Plus, there are additional costs: residential, and opportunity cost of not working among others, says Atul Chauhan, chancellor of Amity University.

The newer universities seem more open to accepting the four-year system. Ashoka University, for instance, is looking at a four-year undergrad degree, with two years of general education and the other two for specialised education – just like the way it is in the US. "To be able to provide breadth through general education, you need time. In three years you cannot do what you want to do," says Pramath Sinha.

SNU, too, feels four years is the right timeframe for a degree. It gives students adequate time to build a basic foundation in a range of subjects, and even have the opportunity to change their minds about subjects. "The four-year programme was not pre-conceived; it was the outcome of wanting to meet these objectives," says SNU's Nikhil Sinha.

**Building a Base**

DU vice-chancellor Dinesh Singh avers that "education needs a totally different approach", and hence the four-year degree. "Indian universities and institutes of higher education are not in tune with Indian society," he had said a few weeks ago.

### Key Challenges for Private Universities

Availability of trained faculty

Access to low-cost funds for world-class infrastructure

Ensuring affordability to middle &amp; lower classes

Access to low-cost educational loans

Maintaining global quality benchmarks

Attracting bright minds to programmes such as liberal arts

Conforming to evolving regulatory requirements

The four-year degree has its advantages. "It will enhance quality of education and create better graduates. A four-year course gives students enough time to learn and grow. As there is a choice of opting out in two or three or four years, students can change course and ensure that they study what interests them too. Over time this will make a qualitative difference to graduates," reckons Pai.

Manish Sabharwal, chairman of staffing firm TeamLease Services and founder of one of India's first vocational education universities, also sees good coming out of this change. "DU is a lighthouse for Indian education and these changes should spark changes nationally. And frankly the fourth year is an option that I don't anticipate most students will take. Few realise that half of US college enrolment is in two-year associate degree programmes. Only 30% of these students go onto their four-year degrees," he says.

Massification of higher education requires diversity; multiple on and off ramps will create flexibility that makes the current one size fits all redundant, Sabharwal adds.

However, the four-year degree is hardly the panacea for all ills of the education system. "There is nothing that prescribes that the US or the UK model is the best for India," says George Joseph, assistant secretary at Yale University. The issues Indian

education faces have to be sorted out in a unique and indigenous manner because the systems of governance, regulation and education are different in India, adds Joseph.

**The New World**

Last year in August, Indranjan Banerjee, 19, a BA English student at Shiv Nadar University, did what 54,000 students will attempt to do this year at DU – be a part of the four-year undergrad degree. A student of ICSE board from Kolkata, Banerjee chose the university primarily because it offers a four-year degree.

"A four-year degree gives a lot of opportunity to research. In every course you do research and present papers. I would get to do an undergraduate thesis. No other university gives you that opportunity," he says.

Nipun Thakurel, 20, a batch senior to Banerjee and doing his second year of BS, mathematics with a minor in economics, had got an 88.6% in class XII. A recipient of tuition-fee and hostel-fee waiver, he says: "The research work from day one has done wonders to my learning."

In most undergraduate programmes in India, students do not do research. "However, private institutes can be progressive and more innovative because they are not burdened with having to follow the same set of regulations," says Joseph, who is keenly watching the

**June 10**

**Financial Express ND 10/06/2013 p-14**

## **Students of Jamia and IIT, Delhi, qualify for QuEST Ingenium 2013**

QuEST Ingenium 2013, among India's largest platforms for budding engineers, in its third milestone edition, saw two teams from Jamia Millia Islamia and Indian Institute of Technology, Delhi, qualifying to the final round. Presented by QuEST Global, this annual intercollegiate engineering design competition has received 1,413 entries this year. This year's edition of QuEST Ingenium is being held in association with Airbus.

Pioneer ND 10/06/2013 P-5

## IIT-KGP ka tempo high hai

**W**ith its senior officials and dons in the lens of watchdog CVC, IIT-Kharagpur has decided to “cleanse” its image online. Expressing hope of becoming one of the top 100 universities of the world, the director’s office despaired over negative media reports. It blamed a few reporters for spreading misinformation and decided to respond through its internal notice board as well as online rebuttal. “I hope this endeavour will keep all myths and misinformation away and give us more confidence to pursue our academic goals,” says the email circulated last week among faculty, staff and students, adding “Join me to say, ‘IIT-KGP ka tempo high hai.’”



Publication: The Times Of India Delhi;Date: Jun 10, 2013;Section: Education Times;Page: 39;

## Training to Indian students by US institutes

Some prominent US educational institutions are imparting industrial training to students in India under the Centre's Technical Education Quality Improvement Programme (TEQIP), Human Resource Development Minister M Pallam Raju said recently. Under the initiative, training is provided to students who have passed polytechnic and engineering courses, based



on their understanding of the subject and as per the needs of industry. The first phase of the World Bank-sponsored TEQIP, launched in 2003 and completed in 2009, has been implemented with the aim of improving quality of technical education in the country. On the future course, Raju said, "Eight educational projects have been identified under the Manmohan Singh-Barack Obama Global Learning Initiative programme and another eight projects will be identified by June."

The minister said that necessary steps were being taken for setting up triple-IT and Kendriya Vidyalayas in East Godavari district. Raju said that irrespective of many ups and downs on economic front, the country is maintaining the growth rate at 6 per cent under Congress-led UPA government.

He announced without elaborating that as many as 300 model schools will come up across 3,500 educationally backward blocks in the country.

## IRREGULARITIES AT UNIVERSITIES

# Raju hopes for law to tackle N-E troubles

DEEPAK KUMAR JHA ■  
SHILLONG/GUWAHATI

The Centre hopes the Parliament will pass a legislation in the Monsoon Session to prohibit unfair practices in higher educational institutions. There have been complaints of irregularities by private universities of north-eastern States.

HRD Minister MM Pallam Raju has sought cooperation from the States in his effort to tighten the noose around such institutions. "Universities (private) and institutes are getting away with fleecing innocent students/candidates. It is important that States and the Centre work in tandem to check the malpractice. We are hoping that the States will act faster," Raju told *The Pioneer*, regretting the fact that the Prohibition of Unfair Practices Bill is stuck in Parliament for close to two years now.

Raju, on a whirlwind tour of some of the elite North East educational institutions, said he has already discussed the alleged malpractices with Meghalaya Deputy Chief Minister and Education Minister Prof RC Laloo.

Meghalaya boasts a number of national and State universities and has seen many private educational institutes mushrooming in recent years. Of these, the names of CMJ University and Mahatma Gandhi University (MGU) have come up for wrong reasons.

"A committee to examine

### EDUCATION OFF TRACK

- ◆ Prohibition of Unfair Practices Bill is stuck in Parliament for two years nearly
- ◆ CMJ University, Mahatma Gandhi University of Meghalaya have been in news for wrong reasons
- ◆ HRD Minister MM Pallam Raju has sought cooperation from States to prevent malpractices



**Universities (private) and institutes are getting away with fleecing innocent students/candidates. It is important that States and the Centre work in tandem to check the malpractice. We are hoping that the States will act faster**  
— MM PALLAM RAJU

the alleged irregularities, set up under the State regulatory body governing higher educational institutes, has submitted a report and I will examine it before taking any action," Laloo told *The Pioneer*. He would not commit to shutting down the universities but only said, "No one will be allowed to fleece the students."

Addressing the 15th Convocation of IIT-Guwahati, Raju announced more institutions imparting technical and higher education likely in the region, with the Government working for the socio-economic uplift of the North East.

"I would like that IIT-G take over the task of becoming the regional hub for research, development and the main hub of National Knowledge

Network (NKN) to share its expertise and resources with other institutions through virtual classrooms and collaborative research," Raju said.

Raju also became the first HRD Minister to visit IIM-Shillong since its inception six years ago. He interacted with students and expressed hope the institute would meet expectation of the North East for progressive industrialisation.

The HRD Minister also laid the foundation of a new permanent campus for the English & Foreign Language University at Umsawli and attended the golden jubilee celebrations of the science department of the famous Shillong College, besides inaugurating an NCERT research centre.

Indian Express ND 10/06/2013 P-8

# UGC panel to review norms on private varsities

ANUBHUTI VISHNOI

NEW DELHI, JUNE 9

**T**HE UGC has set up an expert panel to review and tighten norms that regulate private universities in the country in a bid to ensure their quality. The commission's main concern is that several institutes that were either denied deemed university status or could not meet the standards have simply opted for the state university route.

The commission had brought in the UGC (Establishment of and Maintenance of Standards in Private Universities) Regulations 2003 to

maintain academic standards in private varsities that may have been set up through State Acts. The UGC has said that with expansion in higher education, it has become necessary to re-look the norms, make them relevant.

The HRD Ministry had taken non-legislative steps like UGC and AICTE regulations for more transparency.

Now the UGC has sought public opinion on what provisions need to be repealed, revised, amended or replaced. It has also sought to know more about the norms that are difficult to implement, that can be misused or abused.

**S**tudents intending to pursue PhD programmes in science and engineering have a wide range of opportunities in India today. Over the last decade, there has been a significant growth in the number of programmes that provide support for students to pursue research degrees. Entry to research programmes is facilitated when students qualify through the CSIRNET and GATE examinations, which are conducted on an all-India basis. Opportunities in pure sciences have grown in recent years

Scientific and Industrial Research, Department of Biotechnology and Department of Science and Technology, admit a number of research students every year.

Employment opportunities for students who acquire PhD degrees are also growing since there is a substantial increase in the number of academic faculty positions, which are available across the country. The introduction of the DST-IN-SPIRE Faculty Fellowship Programme and the



**SUBJECT WISE**

As an example, the Indian Institute of Science in Bangalore provides admission to interdisciplinary programmes in the areas of mathematical biology, bioengineering, nanoscience and engineering and energy studies. Several rapidly expanding areas like neuroscience, earth science and chemical and systems biology can accommodate students

**➔ NEXT WEEK**  
Find out about career options in science, along with course details, emerging trends and student testimonials

from diverse branches of science, engineering and medicine.

**WEB OF SCIENCE**

**P Balaram, director, IISc, speaks to Poonam Jain on the current research scopes in the field of science in India**

with the establishment of five Indian Institutes of Science, Education and Research located at Pune, Kolkata, Mohali, Bhopal and Thiruvananthapuram. The creation of several new IITs and central universities has also expanded available research opportunities. In addition to universities, both state and Central, a large number of national laboratories of the Council of

UGC's Faculty Recharge Initiative provide avenues for post-PhD employment. Research areas that appear to be particularly attractive for the future lie at the interface of multiple disciplines. Students obtaining Bachelor's and Master's degrees in a specific subject have a great opportunity to migrate to these inter-disciplinary areas.

**INDUSTRY VIEW**  
Devang Khakhar, Director, IIT Bombay

Traditionally, the sectors most active in research and development in India have been pharmaceutical, fine chemical and the automotive sector. However, now there is a broader interest across many sectors — from machine tools and cement to electronics and healthcare. There has been rapid growth in the multinational R&D labs based in India, along with their Indian counterparts. The number of students wanting to pursue PhD degree is increasing. This is reflective of the opportunities available for those with a PhD qualification. The nation is currently spending 0.8% of the GDP in research, which amounts to about Rs 50,000 crore; the funding will more than double by the next plan period to 2%, with both public and the private sectors estimated to invest 1% each of the GDP.



The creation of several new IITs and central universities has expanded research opportunities. Also, a large number of national laboratories of the CSIR, Department of Biotechnology and Department of Science and Technology, admit research students



# ADVANTAGE Delhi University

The four-year undergraduate programme to be introduced in Delhi University (DU) holds many positives from the socio-economic perspective, writes **Pratibha Jain**, International Education Consultant

**D**emographic dividend in terms of a young population is seen as India's strength today. Yet, India is experiencing a paradox of millions of young graduates preparing to join the workforce each year while India Inc is not generating enough new jobs to absorb them. The four-year degree programme to be introduced in Delhi University (DU) inadvertently holds many positives from the socio-economic perspective. This may not be the original intention of the policy-makers, yet its long-term implication on the social fabric of Indian life is bound to be deep and long lasting.

Historically, the addition of years to the education cycle from the 1960s, when it was 11+3

years to 12+3 years in the 1970s, has had a positive impact on delaying the burden of generating employment on the state, as well as adding to the maturity level of job applicants. An additional education year to all degree programmes as proposed by DU will continue to add to the benefits; provided it is well-spent in equipping students with skills they need to meet the changing expectations of the job market. A change in the Indian education pedagogy and curriculum has been an urgent demand from the corporate sector where employers often find fresh graduates lacking employable skills.

### IN-SYNC

This step by DU must be wel-

comed by all stakeholders as the beginning of change. It will open the way for more initiatives, which syncs Indian education

... THE FYUP WILL BRING ALL DISCIPLINES ON A PAR, HOPEFULLY REDUCING THE AURA OF SCIENCE-BASED FOUR-YEAR DEGREE PROGRAMMES

with the needs of employers and makes it on par with international education systems followed in the developed world.

Academically, the four-year degree will bring all disciplines on a par, hopefully reducing the perceived advantage and aura of science-based four-year degree programmes like engineering, etc. The new DU curriculum will begin with a foundation year with courses in modern Indian language, information technology, business entrepreneurship and management, communication skills, geography, history, culture, civilisation, environment and public health.

All the foundation courses are compulsory, irrespective of the discipline the student is pursu-



PHOTO: CHANDRA

ing. This will add the holistic approach and mindset needed to solve real-world problems and for occupational mobility.

The final year is expected to focus on discipline-related skills and assignments, complementing the theoretical base. Students may exit after three years with a Bachelor's degree and after four

years with a Bachelor's honours degree. The flexibility gives students a choice, which should appease those who prefer the traditional format.

### BIG IMPACT

Socially, simple mathematics of adding a year to the graduating age of young people will

have a direct impact on delaying the age of marriage, with a domino effect on pushing back the age when young couples have children. This will have a more real impact on controlling population than any other measure. Economically, large numbers of educated unemployed youth create a volatile situation with increased stress to create jobs on the government and industry.

Social science research attributes increasing crime among the youth to their frustration when the job market does not meet aspirations. Surveys point to the fact that educated unemployed are more likely to be involved in a range of criminal activities right from white collar crimes like theft of credit card details, petty crimes of mugging, chain snatching, to more serious crimes of rape, drug abuse, alcoholism and even murder.

Hence, the four-year degree is a positive step provided it is implemented in the true spirit of equipping students with the requisite skills, critical thinking competence and the mindset for productive employment, entrepreneurship or research.