Newspaper Clips

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Tribune ND,7/7/2013 p-2

PGIMER to set up national healthcare engg institute

Satellite centres at Sangrur, Ferozepur get in-principle approval

RITIKA JHA PALIAL
TRIBUNE NEWS SERVICE

CHANDIGARH, JULY 6

The Post-Graduate Institute of Medical Education and Research (PGIMER) is going to set up a National Institute of Healthcare Engineering and Architecture - a first of its kind masters degree programme in Southeast Asia - during the 12th Five-Year Plan.

Announcing the plan during the 51st foundation day function of the PGIMER here today, Union Minister for Health and Family Welfare Ghulam Nabi Azad said, "I am happy to announce the setting up of a National Institute of Healthcare Engineering and Architecture in PGI. It will be offering Masters Programme in Health Facilities Planning and Designing and Health Care Engineering and Management. This institute, supported by the Indian Council of Medical Research, will be the first of its kind in Southeast Asia."

The function was presided over by Vice-President Hamid Ansari. Addressing the gathering, Ansari shared the future plans of the nation in the healthcare sector.

"These include substantial expansion and strengthening of a good quality and affordable public sector healthcare system, enhancing availability of skilled human resources, increase in the health sector expenditure to 2.5 per cent by the end of the 12th Plan, redesigning of financial and managerial systems to ensure more efficient utilisation of available resources, encouragement of cooperation between the public and private sector in achieving health goals, putting in place a strong and functioning regulatory system to supervise the quality of services delivered and control the cost of care," he said.

Vice-President Hamid Ansari (R) being honoured by Union Minister for Health and Family Welfare Ghulam Nabi Azad (C) at the 51st foundation day of the PGIMER, Chandigarh, on Saturday. Prof Yogesh Chawla, Director, PGI, is at the extreme left. TRIBUNE PHOTO: PRADEEP TEWARI

The Union Health Minister said that a 250 bed hospital would come up on PGI campus. It would lead to the addition of private rooms and 10 operation theatres at the institute. It will house, among other facilities, the expanded oncology, ENT and endocrinology departments.

"I have also given in-principle approval to PGIMER to develop a 300 bed satellite centre at Sangrur in Punjab. It could be expanded to a 500 bed facility depending on the load. Further, a 100 bed satellite centre will also be set up in the border district of Ferozepur to provide quality tertiary care to the people living in remote areas.

"In the Union Budget this year, Rs 635 crore has been allocated to the PGIMER to keep up its best tradition of service, education and research," Azad added.

Parkash Singh Badal and Bhupinder Singh Hooda, Chief Ministers of Punjab and Haryana, respectively, Haryana Governor Jagannath Pahadia and Minister of State for Health Santosh Chowdhary were also present during the function.

Later, Azad laid the foundation stone of 250-bed expansion of Nehru Hospital.

Amar Ujala ND, 7/7/2013 p-6

नेशनल इंस्टीट्यूट ऑफ हेल्थकेयर इंजीनियरिंग एंड आर्किटेक्चर खुलेगा चंडीगढ़ में

अब पीजीआई में होगी इंजीनियरिंग की पढ़ाई

चंडीगढ़। पीजीआई चंडीगढ़ के स्वर्ण जयंती समारोह के मौके पर भार्गव ऑडिटोरियम में शनिवार को आयोजित कार्यक्रम में केंद्रीय स्वास्थ्य एवं परिवार कल्याण मंत्री गुलाम नबी आजाद ने एक बड़ी सौगात दी। उन्होंने पीजीआई में दक्षिण एशिया में अपनी तरह का पहला नेशनल इंस्टीट्यूट ऑफ हेल्थकेयर इंजीनियरिंग एंड आर्किटेक्चर (एनआईएचईए) शुरू करने की घोषणा की।

उन्होंने कहा कि स्वास्थ्य के क्षेत्र में लगातार सामने आ रही चुनौतियों से निपटने के लिए जरूरी है कि चिकित्सा क्षेत्र में आधुनिकतम तकनीक और सुविधाओं का इस्तेमाल किया जाए। एनआईएचईए में स्वास्थ्य संबंधी सुविधाओं के लिए प्लानिंग, डिजाइनिंग, हेल्थकेयर इंजीनियरिंग एंड मैनेजमेंट में मास्टर कोर्स करवाए जाएंगे।

इंडियन काउंसिल ऑफ मेडिकल रिसर्च (आईसीएमआर) के सहयोग से प्रस्तावित संस्थान दक्षिण एशिया में अपनी तरह का अनूठा संस्थान होगा। उन्होंने कहा कि केंद्रीय बजट में पीजीआई को मेडिकल एजुकेशन, चिकित्सा सुविधाओं के विकास एवं अनुसंधान के लिए 635 करोड़ रुपये की राशि आवंटित की जा चुकी है। ब्यूरो

Amar Ujala ND, 7/7/2013 p-16

बोर्ड की वजह से पिछड़ रहे उत्तर भारत के छात्र

बृजेश सिंह

दक्षिण भारत के स्कूलों में छात्रों को सीबीएसई बोर्ड से भी ज्यादा अंक मिलते हैं

नई दिल्ली। उत्तर भारत की तुलना में दक्षिण भारतीय राज्यों में स्कूली छात्रों को परीक्षाओं में ज्यादा उदारता से अंक दिए जाते हैं। उत्तर भारत में सीबीएसई बोर्ड की परीक्षाओं में छात्रों को तो काफी अच्छे अंक मिलते हैं जबकि राज्यों के बोर्ड में उन्हें औसतन काफी कम अंक दिए जाते हैं। दक्षिण के अधिकांश राज्यों के बोर्ड सीबीएसई बोर्ड से भी ज्यादा अंक देते हैं।

यह ट्रेंड पहली बार आईआईटी परीक्षा के लिए इंटरमीडिएट में देश के सभी शिक्षा बोर्ड के परीक्षा परिणामों की 20 पर्सेंटाईल सूची से सामने आया है। आईआईटी प्रवेश परीक्षा के लिए गठित ज्वाइंट एडमिशन बोर्ड द्वारा तैयार कराई गई विभिन्न बोर्डों की इस पर्सेंटाईल सूची के अनुसार आंध्र प्रदेश सेकंडरी एजुकेशन बोर्ड में सबसे ज्यादा उदारता से छात्रों को परीक्षा में नंबर प्रदान करता है। वर्ष 2012-13 की परीक्षा में इस बोर्ड में उत्तीर्ण हुए छात्रों में से 20% छात्रों ने 500 अंकों में से 459 (92%) या इससे अधिक अंक हासिल किया। कर्नाटक बोर्ड में इस साल टाप 20% छात्रों ने 86 फीसदी से अधिक अंक हासिल किए, जबकि केरल में यह आंकड़ा 85% अंक से ऊपर है।

उत्तर भारत में एक भी ऐसा परीक्षा बोर्ड नहीं है जिसके टाप 20 फीसदी छात्रों ने 80 फीसदी का कट आफ हासिल किया हो। अलबत्ता सीबीएसई बोर्ड ने 20 पर्सेंटाईल में आल इंडिया स्तर पर 81 फीसदी का कट आफ हासिल किया है। उत्तर प्रदेश इस बार टाप 20 पर्सेंटाइल में 73 फीसदी या अधिक अंक पाने वाले शामिल है। जबकि बिहार में यह दर और नीचे 65 फीसदी पर आ जाती हैं। इसी तरह हरियाणा बोर्ड लगभग 76 फीसदी, पंजाब 66 फीसदी पर सिमट जाते हैं। उत्तराखंड के टाप 20 फीसदी छात्रों का कट आफ 73 फीसदी रहा।

July 8

HT Mumbai

JEE Mains answer key flawed, claims a new petition

Apoorva Puranik
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MUMBAI: With the on-going petitions surrounding the normalisation of class 12 marks and JEE scores, two other petitions, filed at the Hyderabad court, were heard on July 5.

The petitioners, Yash Mehrotra and V Venkat, JEE aspirants, claimed that the CBSE had erred in checking the answers of five questions for the online JEE (mains) exam held on April 23, 2013. "The answer key is flawed since it has wrongly answered 5 questions, which has led to students getting lesser marks than deserved," said Neeraj Mehrotra, Yash Mehrotra's father.

The petitioners have requested the Hyderabad High Court to direct the CBSE authorities to award them marks for these questions and revise their ranking. The High court has now directed the CBSE to file a reply within seven days.

The JEE results have been mired in legal hassles because of the controversial normalisation formula. The JEE (main) merit list, which is the final basis for admission to National Institutes of Technology (NIT) and other technical institutes like Delhi Technological University had left students, who had scored high marks in JEE advanced, with low ranks in the JEE mains due to the normalisation of marks. A petition has been filed in Delhi High Court on the subject. One of the NIT is in Nagpur and many students from Mumbai are seeking admission in the institution.

"Parents are likely to file a case in Supreme Court on Monday against this normalisation formula which has disturbed the ranking system of the NIT examination," said Neeraj Mehrotra. The CBSE spokesperson said that they will comment only after consulting their legal experts.

FRESH TROUBLE

- The JEE results have been mired in legal hassles ever since they were declared due to the controversial normalisation formula.
- In the latest petition, the petitioners, Yash Mehrotra and V Venkat, JEE aspirants, claimed that the CBSE had erred in checking their answers of five questions for the online JEE (mains) exam held on April 23, 2013.

Parents will file a case in Supreme Court on Monday against this formula

NEERAJ MEHROTRA
one of the petitioners

Entering IIT-Bombay gets tougher this year

Yogita Rao, TNN | Jul 8, 2013, 01.19 AM IST

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READ MORE JEE | Chandra Ashok Maloo | IIT-Bombay

MUMBAI: With more toppers choosing computer science and engineering (CSE) at IIT-Bombay, getting a seat at the premier institute has got tougher this year. Admissions to CSE there closed at the 57th rank in the first round of allotments. Last year, it closed at 75{+t}{+h} rank in the final round. Though three more rounds are yet to go, it is unlikely the closing rank will drop much in subsequent rounds.

This year, students with higher ranks have chosen computer science, electrical and mechanical engineering, in that order, across IITs. Post-round one, the courses have seen higher closing ranks among sought-after IITs, with IIT-Bombay registering the highest for all courses. A higher closing rank means more top rankers opted for the stream. At IIT-Delhi, the closing rank was 107 and at IIT-Madras it was 212.

The secret behind students' preferences lies in placements and research opportunities. After completing undergraduate courses in CSE or electrical engineering, students usually get best placement offers compared to other courses. In the 2012-13 placement season, the two students who bagged the highest offers were from CSE. Chandra Ashok Maloo, with an all-India rank (AIR) of 43, opted for CSE at IIT-B.

Candidates are allotted seats based on preferences and AIRs. With three more rounds, closing ranks are unlikely to change for CSE at premier institutes, said Hemchandra Gupta, chairman of JEE (Advanced) 2013. Gupta said the confirmation process will go on till Monday midnight and the second list will be out on Tuesday.

Electrical engineering closed at 126 in the first round at IIT-B. The rank may or may not dip further in the subsequent list, while mechanical engineering, the third best choice among students closed at 477. Courses such as metallurgical engineering and material science, civil and aerospace engineering have not managed to attract high scorers as closing ranks of these courses at IIT-B were 2619, 1639 and 1610, respectively.

Hindustan Times ND 08-Jul-13 P-8

When engineering meets neuroscience

Vanita Srivastava
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NEW DELHI: If you thought that computer and electrical engineers like to study only chip and circuit designs, you are wrong. A team of 21 student engineers, mostly from IITs, are exploring a new field—neuroscience.

The two week IIT-MIT-Harvard summer school which concluded at IIT Delhi on Saturday, introduced them to the gamut of brain science and allowed them to explore some exciting research topics in neuroscience.

Resonance 2013 Summer School in Neuroscience had lectures on introduction to neuroscience, innovative projects, field visits to AIIMs and Mahajan MRI lab, and a first-hand look at dissection of a sheep brain.

Students were exposed to a plethora of lectures related to neuroscience by MIT and Harvard professors.

They mostly asked about epilepsy, the neural correlation at the time of a near death experience and how does neurons respond to stimulus.

So what does engineering have to do with brain study?

"Engineering meshes with neuroscience in different ways. The two week course has introduced interesting problems in brain science to engineering students. This will, hopefully, induce them to look beyond the traditional job tracks and explore exciting research avenues," says Dr Pawan Sinha, professor of visual neuroscience, MIT.

Engineering students have a first-hand look at dissection

He added that not many engineers in India aren't aware of the challenges that neuroscience offers.

"Neuroscience brings biology and engineering together. Engineers can help create devices that can interface with the brain like artificial retinas for the blind, cochlear implants for the deaf. These are engineering challenges that require an understanding of how nerve cells communicate information," said Sailesh Conjetici who attended the course.

Tribune ND 08-Jul-13 P-18

ISRO gears up for Mars mission

BANGALORE, JULY 7

Preparations are afoot for the upcoming "big-bang" Mars Orbiter Mission in October-November, an ambitious venture that would shed light on the possible existence of life on the planet besides boosting space agency ISRO's brand equity.

The satellite, which would be launched on board Polar Satellite Launch Vehicle (PSLV-XL), will carry compact science instruments totalling a mass of 15 kg, according to ISRO officials. There will be five instruments to study Martian surface, atmosphere and mineralogy.

Lyman Alpha Photometer (LAP) is aimed at studying the escape processes of Mars' upper atmosphere; Methane Sensor for MARS (MSM) will look to detect presence of methane while Martian Exospheric Composition Explorer (MENCA) will study the neutral composition of the Martian upper atmosphere.

MARS Colour Camera (MCC) would undertake optical imaging and TIR imaging spectrometer (TIS) is targeted to map surface composition and mineralogy.

"Mars Orbiter Mission (MOM) spacecraft integration is under progress," an ISRO official said here today. "The spacecraft has to undergo qualification tests for proving space worthiness once the integration is completed."

The mission would help ISRO understand the technological challenges of such an exploration, the possible existence of life and future colonisation of Mars — Earth's nearest planet which resembles it in many ways. This would be India's first mission to a distant planet.

ISRO will launch the mission in October-November. "If launched within the launch window (October 21-November 19), the spacecraft will travel the least distance to reach Mars," the official said.

This is the immediate next available opportunity for such a mission as Earth and Mars would be coming closer then.

The PSLV-XL (PSLV-C25) will inject the spacecraft from the spaceport of Sriharikota in the 250 X 23000 km orbit.

After leaving Earth orbit in November, MOM spacecraft will cruise in deep space for 10 months using its own propulsion system and will reach Mars (Martian transfer trajectory) in September 2014.

The 1,350 kg spacecraft subsequently is planned to enter into a 372 km by 80,000 km elliptical orbit around Mars.

"The primary objective of this challenging mission is to establish the Indian technological capabilities to reach the orbit of Mars," said ISRO Chairman K Radhakrishnan, also Secretary in the Department of Space. "A number of technological challenges need to be negotiated for a successful Mars mission".

Critical mission operations and stringent requirements on propulsion, communications and other bus systems of the spacecraft are sure to keep the Bangalore-headquartered ISRO on the tenterhooks.

"One of the technological challenges is to realise related deep space mission planning and communication management at a distance of nearly 400 million km," an ISRO official said.

The spacecraft has been provided with augmented radiation shielding for its prolonged exposure in the Van Allen belt. Due to the long range of the order of 55-400 million km from Earth to Mars, there is a communication delay of 20 minutes one way itself. For this reason, ISRO has built high level of onboard autonomy within the Mars orbiter. For Chandrayaan-1, ISRO had to deal with only 4 lakh km.

The robustness and reliability of propulsion system is "one order higher" as after leaving the orbit of Earth, the system would require to work after almost 300 days. And during this voyage, the system needs to maintain complete integrity so as to capture the Martian orbit. — PTI

TRIP TO THE RED PLANET

- ISRO will launch the mission in October-November
- After leaving Earth orbit in November, the Mars Orbiter Mission spacecraft will cruise in deep space for 10 months
- It will reach Mars in September 2014

Tribune ND 08-Jul-13 P-2

Hyderabad to get Asia's first engineering college for the blind

SURESH DHARUR/TNS

HYDERABAD, JULY 7

Asia's first engineering college for the blind is proposed to be set up near Hyderabad. The novel initiative has been undertaken by city-based Devnar Foundation for the Blind, with help from professors from the Birla Institute of Technology and Science (BITS), Pilani, in developing the course material.

The Devnar Foundation, which runs a school and a junior college for the visually impaired children, has developed a digital library using indigenously developed software by downloading textbooks and general knowledge material onto a CD with MP3 format.

"We are ready with the syllabus. The government has responded positively to our request for the allotment of around three acres. We also have donors and faculty," said foundation chairman A Saibaba Goud.

An opthalmologist-philanthropist, Goud started the foundation in 1991 to provide education and vocational skills to the visually impaired children and the organisation has won acclaim and several national awards for its work.

Eight students from Devnar School for Blind went on to complete engineering from mainstream engineering colleges with one of them completing further studies in Boston, US.

This prompted Goud to set up an engineering college.

Andhra Pradesh has the highest number of 700 engineering colleges in the country. But none has customised courses to meet the needs of the visually impaired students.

"Many students are enthusiastic and eager to study after intermediate but they have problems in mainstream colleges," the chairman said.

The Devnar school has been offering English medium education right from the primary school up to class 12.

"It has been our long-cherished dream to provide a right platform to the visually impaired students to pursue professional courses," he said.

"We have applied for affiliation with the BITS, Pilani, and Jawaharlal Nehru Technological University, Hyderabad. We are planning to restrict the intake to 40-50 students per year and select students strictly on merit," Goud said.

The students at the Devnar school are given training in computers from class VI and become proficient in handling computers and browse the Internet by the time they reach class IX.

"Computer education is provided to the students using latest computers and screen reading software which converts a PC into a talking computer for the visually challenged," he explained.

NOVEL INITIATIVE

- The engineering college is the initiative of Hyderabad-based Devnar Foundation for the Blind
- A digital library has been created using indigenously developed software
- Professors of the Birla Institute of Technology and Science, Pilani, have developed the course material

> "We are ready with the syllabus. The government has responded positively to our request for the allotment of around three acres. We also have donors and faculty. Many students are enthusiastic and eager to study after intermediate but they have problems in mainstream colleges"
>
> — **A Saibaba Goud,** Devnar Foundation chairman

Financial Express ND 08/07/2013 P-12

INDIAN HIGHER EDUCATION ECOSYSTEM

Are we failing our students?

We need to expand our higher education capacity by creating universities of excellence that innovate on curriculum and teaching, provide a breadth of study options, and excel as institutions

VINEET GUPTA

A part of my job involves counselling students who want to study abroad for higher education. I have been doing this for the last 15 years, and though I love meeting students of all ages, I particularly like meeting those who are in class XI and XII and are trying to figure out what to do.

Often, they have not figured out which subject they like and are torn in the classical dilemma that our Plus-2 system offers. I do feel bad for them. They are being brought up in an India that does not have enough opportunities for them as far as higher education is concerned. Nor does this India offer them enough of a choice. Therefore, the typical first question is: "What should I do after class XII?" This question is born out of a realisation that they are about to make an important decision of their life—a decision that will silo their learning into one of the four choices available: medical, non-medical, commerce or humanities. If you choose to study physics you cannot study history as a subject, and if you choose to opt for commerce as a stream, it is assumed that you like only business subjects and will not want to study anything else. As an engineering student myself, I do regret not being able to study history after school, a subject that I love studying. It is strange that I realised this only after I had finished my engineering degree. As somebody who was good at mathematics, I was destined to be an engineer. The world around me never led me to believe that I could do/be anything else. It is also strange that I never used any of my engineering knowledge in my career as an entrepreneur. I do empathise with all the kids who sit across the table wondering "what should they do". Our higher education system, unfortunately, does not have the right answer to this question. So much for choice!

What about opportunities? Let us take a typical commerce student passing out from a school in Delhi. She had the courage to take commerce in her Plus-2 despite most of her friends opting for non-medical or medical, two buckets which seem so rewarding for one's career that it is assumed all our brighter kids will opt for either of these two! One is almost classified as a "not so bright one" if one opts for commerce or humanities. I recently discovered that a lot of schools do not even have a humanities section in class XI because not too many students opt for it as a stream. What are the choices before this student after she finishes class XII. She probably needs a 94% or above (if the cut-offs this year increase, it could be even more) in her board exams to study BCom honours or economics honours at Delhi University. (The story in other cities is a little better.) If she ends up at less than this, what does she do? Unfortunately, she will not know. And mind you, a student with 92% is a bright student, almost as bright as the one who got 97%. She just had one bad day and one bad exam. Also, this student would most likely be eligible to study at a top university abroad. And what about the ones who end up scoring an 85% or even an 80%? They are bright kids as well. One shudders to think what choices they make. Which is why for a lot of students in class XII, to apply abroad for higher studies is almost a backup option. This is a sad situation for all those whose parents cannot afford sending their children abroad. So, in a way, are we failing our students by telling them that our country does not have enough capacity to offer high quality higher education?

AJIT BAGCHI

THE DEBATE ON 'EDUCATION ABROAD' HAS TURNED 360-DEGREES. IT IS NO LONGER THE PRESERVE OF THE WEALTHY FOR WHOM IT WAS 'FASHIONABLE' TO SEND THEIR CHILDREN TO STUDY ABROAD. TODAY, IT IS ALMOST A NECESSITY FOR THOUSANDS OF OUR BRIGHT CHILDREN WHO DO NOT HAVE ACCESS TO HIGH QUALITY HIGHER EDUCATION IN INDIA

The story for the other two buckets (non-medical and medical) is not too different either. You have to be amongst the top 2% to qualify for one of the IITs or amongst the top 5% to make it to an NIT. After this, you start competing for a seat in one of the numerous private engineering colleges the country has. Given our love to make our children engineers, we have more capacity in our engineering colleges than students wanting to become engineers. One would think that we have created enough opportunities in this bucket, at least! Whereas some of the private engineering colleges have established good standards of faculty and teaching, a majority of them are buildings that are barely managing to cope with fairly routine regulatory requirements.

I remember counselling a student about six years ago who was admitted to the University of California, Berkeley, arguably one of the top-most engineering colleges in the world. Unfortunately, this student did not make it to the top 2% in IIT JEE and neither did he make it to the top 5% for NITs. His parents could afford to send him abroad but decided against it. They feared that they would "loose" their only son. The student went on to study at a private college in south India. To me, the comparison was stark, a student can qualify to study at a top university in the world yet not qualify to study at a good engineering college in India. This one incident really shocked me. I realised that we, as a nation, had failed to create enough good opportunities for many of our students.

It goes to the credit of some of the top universities of the world including Harvard, MIT and Princeton, amongst others, which have need-blind admission policies. This, in effect, means that if you are accepted for admission and if your parents or guardians cannot pay, then you can get full scholarship. I have not heard of too many universities in India offering full scholarship to Indian students, forget offering scholarship to international students. It is their desire to attract top talent from across the world that makes these universities truly world-class, not to mention the high quality of faculty, choice of courses and career opportunities. Not only is the West coping with the issue of quality but also of capacity. The US alone has 50 top universities, which can admit most of our students scoring an 85% or above. If we add the UK, Canada and Australia to the pool, they can together ensure that all our students get access to high quality higher education.

In my 15 years of counselling students, the debate on "education abroad" has turned 360-degrees. It is no longer the preserve of the wealthy for whom it was "fashionable" to send their children to study abroad for undergraduate education. Today, it is almost a necessity for thousands of our children who do not have access to high quality higher education in India. The solution to this is only one—we need to expand our higher education capacity by creating universities of excellence that innovate on curriculum and teaching, provide a breadth of study options, and excel as institutions. And if we do this right, then we can not only fill the vacuum in higher education that exists in this country but also attract the best talent from the world to study here.

The author is managing director, Jamboree Education, and founder and trustee of the upcoming Ashoka University

Mint ND 08-Jul-13 P-1

Will Aakash 4 tablet deliver the goods?

By Leslie D'Monte & Gopal Sathe

MUMBAI / NEW DELHI

If Aakash, the low-cost computer tablet aggressively promoted by the government to bridge India's digital device, fails to live up to its promise, it won't be for lack of trying.

After faltering on quality issues when it was launched in July 2010, the human resource ministry has again asked for vendor comments on the proposed fourth iteration of Aakash with strengthened specifications, which is expected to cost around ₹3,000.

But the world has moved on since then and 70% of the tablets sold in India now retail below ₹10,000, compared with just 10% when Aakash was commercially made available in October 2011. Many experts are not convinced if the government will be able to persuade buyers to purchase the tablet in large enough numbers.

"The specifications of Aakash 4 appear good on paper, but given the past experience, can the government ensure that good components are procured at the prices specified

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Will Aakash 4 tablet deliver the goods?

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for Aakash 4 so that users can have a good experience?" asked Jayanth Kolla, founder and partner of research firm Convergence Catalyst.

Manasi Yadav, senior market analyst, mobile phones and tablets, at IDC Centre for Consultancy and Research, held a similar view.

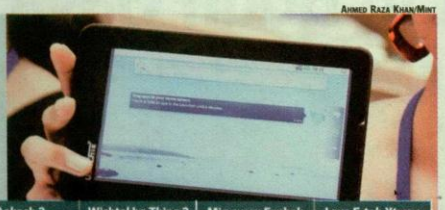
"The specifications for Aakash 4 look good on paper, but we still have to wait and watch as to what the pricing will be," Yadav said. "Most of these low-end tablets suffer on the quality and specifications owing to the price barriers that come into play."

The minimum requirement for the latest version of Aakash, according to the official specifications list, includes 1 GB DDR3 SDRAM, 4GB or more integrated flash storage, slot for micro SD card 2.0, support for USB mouse, keyboard, cards, 3.5 mm jack, a seven-inch LCD screen, wi-fi connectivity, bluetooth and camera. It, however, makes no mention about the minimum processor speed.

India's tablet market is dominated by low-cost devices, with about 74% of the volume coming from the sub-$200 category, according to Yadav. "Most of the local brands and Chinese vendors operate in this space," she said.

Convergence Catalyst estimates that there were 1-1.2 million tablets in the Indian market in 2012, and expects the number to touch 3-3.5 million in 2013.

LOW-COST TABLETS IN INDIA



AHMED RAZA KHAN/MINT

	Aakash 4 (proposed)	Aakash 2	Wishtel Ira Thing 2	Micromax Funbok Infinity P275	Lava E-tab Xtron+
Price	₹3,000	₹2,263	₹2,999*	₹4,999	₹6,990
CPU	Not specified	1GHz	1.5Ghz	1.2Ghz	1.5Ghz Dual Core
RAM	1GB	512MB	512MB	512MB	1GB
Storage	4GB	4GB	4GB	4GB	8GB
Screen size	7 inch	7 inch	7 inch	7 inch	7 inch
Resolution	800X480	800X480	800X480	800X480	1024X600
WiFi	Yes	Yes	Yes	Yes	Yes
Bluetooth	Yes	Yes	No	Yes	Yes
Battery	Up to 6 hours	Up to 3 hours	Up to 6 hours	Up to 7 hours	Up to 6 hours
OS	Android 4.2	Android 4.0	Android 4.0	Android 4.1	Android 4.2
Weight	Maxi 500gm	350g	400gm	360g	363g
Cellular Voice/2G Data	via USB	Yes	via USB	Yes	via USB

(MRP ₹6,499)

Source: Company information and Mint research

"Of this, 65-70% are tablets that are priced below ₹10,000," Kolla said.

The cheapest tablet in India right now is a heavily discounted Wishtel Ira Thing 2. Available for ₹2,999, Thing 2 has less RAM than Aakash 4, but in most other specs, it appears identical.

However, the best option in the low-cost category is the Lava E-tab Xtron+. Costing almost ₹7,000, it is much more expensive than Aakash or Thing 2, but the user experience is smoother, according to a *Mint* review of the gadgets.

In contrast, the first two versions of Aakash were poorly made, poorly assembled and cumbersome to use, testing a user's patience. There was no Aakash 3 because the next upgrade was called UbiSlate 7C+.

The Aakash 4's proposed specifications suggest a device that is more user friendly, and the minimum qualification of being able to play high-definition video from the web sounds good.

Compared with the first Aakash, the second iteration was fairly responsive, and much more suited to its role as a students' companion; reading e-books and checking email were smooth experiences.

The screen though was terrible. Unless the user perfectly aligned her eyes with it, the screen was unreadable. The touch screen was patchy, missing taps or turning them into swipes erratically.

There were also significant delays in the delivery of the upgraded version of Aakash 2, called UbiSlate 7C+.

Suneet Singh Tuli, chief executive officer of UK-based **DataWind Ltd**, said that "over 90% of what we've sold is the UbiSlate 7C+, and we've seen less than a 0.5% fault rate on that. This is better than industry norms".

DataWind, which manufactured the earlier versions of Aakash, plans to bid for Aakash 4 too. Tuli expects the government "to put out the tender in August, award it by September and hopefully have devices in production by October".

The government, Tuli said, intends to divide the estimated 5.7 million units amongst five bidders.

"The intent from the original 100,000 unit tender was also to divide it across four bidders," he said by email. "Unfortunately, none of the other bidders were able to match our price."

Tuli expressed surprise that Aakash 4 does not require embedded mobile-phone connectivity. He acknowledged that providing mobile connectivity with external dongles was impractical and "will add at least 50% extra to the cost of the product".

Tuli reacted sharply to criticisms that cheap Chinese components were used in the Aakash devices. "It would help to define which of Apple or Micromax's components are not Chinese," he said. "And it would help to identify which of our components is cheap and not lasting."

It has not been a smooth ride for the government's dream tablet and there's nothing to say that the situation will improve significantly.

Such low-cost initiatives, tied as they are to education, have thus far run out of steam due to lack of adequate supporting infrastructure, including content, unlimited data plans and applications, besides a robust distribution network, analysts, manufacturers and industry experts say.

Before Aakash was unveiled in 2011, there were attempts to produce a cheap, disruptive device that would break down the technological divide and transform education, and other areas of public and private life.

The Simputer, which stood for a simple, inexpensive and multilingual people's computer, is a case in point. The handheld low-cost computing device was introduced in 2002 by the Simputer Trust, a non-profit organization formed by seven Indian scientists and engineers. It was touted as a device that would change the low-cost computing ecosystem in the country.

By 2011, when the Aakash was made commercially available with similar lofty aims, the Simputer had faded from public memory.

Globally, low-cost computing hasn't managed to hold to price targets. The XO from Nicholas Negroponte, founder of the One Laptop per Child project, was initially priced at around $100. The laptops, which now sell in 40 countries including India, are priced in excess of $200.

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SUBJECT WISE

VARIED SKILL-SETS

Humanities and social sciences not only satisfy your thirst for knowledge, but also enable you to pursue careers that stand on a strong foundation. Garima Upadhyay Rawat reports

ILLUSTRATION: DEBASISH SARMA

Humanities and social sciences (HSS) infuse fresh air into the world of education by helping you develop a strong faculty to critically engage with society through its ever-growing number of courses. While undergraduate education introduces you to the ideas, theories and framework of the subject, a postgraduate education refines your ability to engage with it.

HSS offers numerous subject options to choose from at the postgraduate level — history, political science, economics, English, foreign languages, media and culture studies, film studies, theatre studies, sociology, psychology, philosophy, social work, communication studies, new media, and so on.

"HSS is a reflection of society and is evolving with it," says Saugata Bhaduri, chairperson, Centre for English Studies, School of Language, Literature & Culture Studies, Jawaharlal Nehru University (JNU).

The last few years have seen a complete curriculum revamp at some of the institutions of postgraduate studies in HSS in India. IITs, JNU, Tata Institute of Social Sciences (TISS) and University of Delhi (DU), among others, have been making their curriculum inter-disciplinary and contemporary.

Adds Bhaduri, "The Centre has been offering courses on Panini's *Ashtadhyayi*, Bhartrhari's *Vakyapadiya*, Bharata's *Natyashastra* and the Indian grammatical traditions. The aim is to familiarise students with their cultural and intellectual heritage. While we constantly innovate, teachers, students and research scholars have always emphasised on developing a modern Indian methodology for English studies, keeping in mind the growing competitive international standards."

At a time when job-ready courses are outselling others, it may look like there are not many takers for HSS. Contrary to that, a look at the statistics will clear all doubts. The annual entrance for MA English at JNU attracts more than 2,400 candidates from across India and foreign countries every year. Only about 30 odd-students (less than 1.5%) are selected. The beauty of studying HSS is that it allows you to satisfy your thirst for knowledge and pursue careers that stand on a strong foundation. Says professor Sanil V, head, department of humanities and social sciences, IIT Delhi, "HSS is about providing a larger framework and skill-sets, which can be employed as suited. For example, training in English, and providing public relations training are two different things and should not be clubbed. The university should focus on providing the larger framework, training should be left to the industry."

Satyajit Singh, associate professor, department of political science, faculty of social sciences, DU believes, "Social scientists engage with contemporary issues, which can be wide-ranging. The idea is about developing strong articulation ability to engage with your subject and the discourses surrounding it. Employment is what comes along, with students branching out to be academicians, teachers and research scholars."

There is a notion that HSS students don't find ample jobs in the market beyond academics. Sarath Pillai, a PhD student at the history department of DU, believes that is not the case. He says, "Not all engineering or management students land a job, then why single out HSS students? If you are good, you will be absorbed. From the civil services to corporate houses, students can get a job in almost all industries."

>> The Centre for the Study of Religion and Society, recognised by the department of sociology, Jadavpur University, has introduced a diploma course in society, religion and social works. Ruby Sain, head of department, says, "Apart from creating awareness through research of the current communal affairs in the world, a diploma in the course will augment the eligibility of individuals aspiring a career in NGOs, in India and abroad." The centre is dedicated to the study of Indian cultural heritage. It aims at promoting a better understanding of it through a comprehensive programme of education, publication, and research

– Inputs from **Zaiceka Ahmed, Kolkata**

>> OFFBEAT CHOICES

While the traditional disciplines — psychology, English, economics and sociology continue to be popular specialisations, the changing societal dynamics have opened up avenues in the comparatively lesser popular streams such as anthropology, geography, philosophy, history, religious studies and women's and gender studies too. For instance, the American Anthropological Association states anthropologists can be found in a range of workplace scenarios such as corporations, government, non-profit associations, community development and humanitarian efforts, among others. Similarly, according to the Society of South African Geographers, students with a major in geography can look for employment as a cartographer (one who develops maps), a geographical information systems officer, environmental consultant or town planner, etc. A specialisation in a subject like women's or gender studies may lead to opportunities with NGOs, government and community organisations, mental health facilities, community centres and even corporates as stated by the University of Toronto on its website

– Compiled by **Ruchi Chopda in Mumbai**

NEXT WEEK
Everything you need to know about careers in humanities along with student testimonials, latest trends, course details, funding, and more

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IIT-M scholar invents sensor to check milk

DC | N. Arun Kumar | 20 hours 30 min ago

Picture for representational purposes only.

Chennai: With the Supreme Court raising its concern about adulteration of milk, a research scholar from the Indian Institute of Technology, Madras (IIT-M) has developed a colour-based sensor (membrane), which changes colour when the milk gets spoilt.

Concerned over how people get fooled by milk traders who sell spoilt milk to people, Anshika Agarwal, a research scholar in the department of biotechnology at IIT-M decided to come up with a solution to help people buy good quality milk.

She started to work a year ago to solve the problem as part of her Ph.D research. “Milk often gets spoilt before the expiry date printed on the sachet. Keeping this in mind, I developed a sensor which is sensitive enough to detect milk spoilage at anearly stage,” said Agarwal, doing research in electrospinning (electrical charge draws very fine fibres from a liquid.).

The membrane (sensor) would be printed on the external wall connected by a small piece of sensor, which would sense the quality of milk and change the membrane’s colour in the sachet. “My sensor is cost-effective and easy to incorporate in packaging system. Prof T.S. Chandra of

the Biotechnology department and Prof T.S. Natarajan from the Physics department have helped me a lot in developing this membrane," she said.

K. Sekar, a milk vendor said,"People keep complaining about the poor quality of milk being supplied to them but now if this membrane is fixed, I am sure we will get to know the quality of milk when its supplied to us.