Newspaper Clips
July 19, 2014

In science, India invests far less than China, US, South Korea

Hemali Chhapia,TNN | Jul 19, 2014, 01.12 AM IST

http://timesofindia.indiatimes.com/india/In-science-India-invests-far-less-than-China-US-South-Korea/articleshow/38634329.cms

MUMBAI: A report by a thinktank shows India's investment in science has lagged behind that of neighbouring China, the US and South Korea, resulting in these countries staying ahead when it comes to research.

While India invested 0.88 per cent of its GDP in science research, the US invested 7-8 per cent, and South Korea 3-4 per cent.

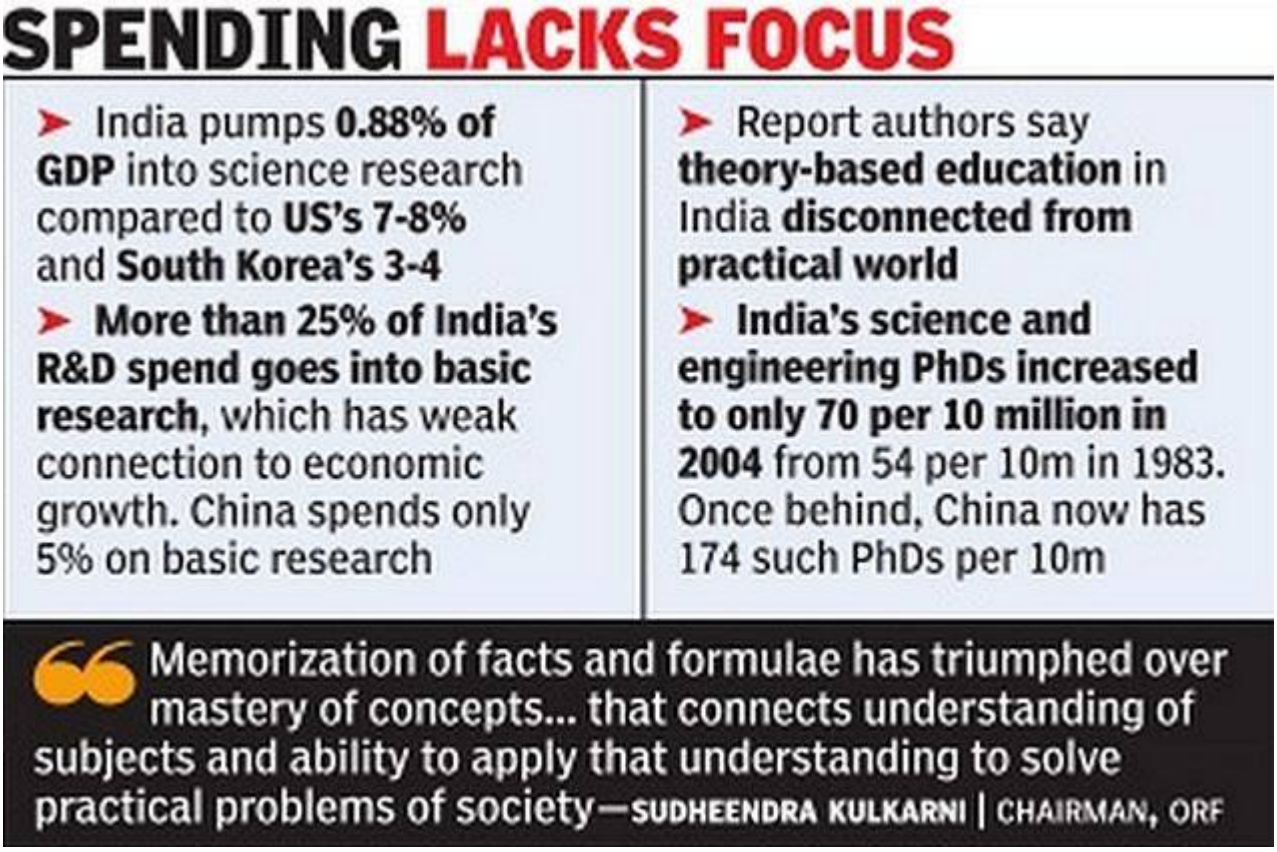
The Observer Research Foundation (ORF) report titled "Whither Science Education in Indian Colleges?" shows that India, with one of the lowest R&D spend-to-GDP ratios, is also expending resources on areas that have a weak connection to industry, thereby missing out on opportunities for economic growth.

"More than a quarter of (India's) R&D investment goes towards basic research, against 5 per cent in China and 17 per cent in the United States," the report states.

The Indian Institute of Science in Bangalore. (Getty Images photo)

There are other fundamental reasons, too, why science is ailing. ORF chairman Sudheendra Kulkarni said the "tight

equation between a degree certificate and education has created several distortions, both in society and in the system of education itself". He said it has placed a disproportionate emphasis on standardized examinations and students' ability to score well in them.



"Memorization of facts and formulae has triumphed over mastery of concepts, independent and creative thinking, integrative thinking that connects understanding of different subjects, and ability to apply that understanding to solve practical problems of society."

Science has also been solitary; ancient India did not erect a wall between science and art, or between science and spirituality. But science curricula at the undergraduate level tends to be highly theoretical and very dense in content. This poses two problems. "Theory is prioritized over application and time constraints do not allow teachers to explore all concepts, in depth. As a consequence, students are frequently exposed to many concepts but fail to understand them in depth and explore their application. This structure results in 'teach more and learn less', when ideally it should be the other way around," the report said.

A woman scientist working on stem cell research. (Getty Images photo)

The authors — Catarina Correia, Leena Chandran-Wadia, Radha Viswanathan and Adithi Muralidhar — conclude that India is facing two kinds of disconnect: a formal science education pedagogy in colleges that is too theory-based and is disconnected from the practical world; and a large workforce in the informal sector of the economy whose practice is disconnected from science education.

Despite a large tertiary student population, India has not been able to increase the number of PhDs in science and engineering significantly (from 54 per 10 million in 1983 to 70 in 2004). China, which lagged India until a decade ago, now has 174 science and engineering PhDs per 10 million.

The SAC-PM Vision Document (2010) that lays the roadmap for India to become the "global leader in science" calls for a target of producing 30,000 per year by 2025, as against 8,286 PhDs (S&T, agriculture, medicine, veterinary) produced in 2013.

HC stays AICTE's order refusing approval to 14 institutions

http://www.business-standard.com/article/pti-stories/hc-stays-aicte-s-order-refusing-approval-to-14-institutions-114071801180_1.html

n a relief to 14 technical institutions in Maharashtra, the Bombay High Court has stayed orders of the All India Council of Technical Education refusing them "extension of approval" and placing them in "no admission" category for the current academic year (2014-15).

Division bench of Justices A V Mohta and Amjad Sayed, on July 14, granted a stay, observing that "prima facie we find that the manner and haste in which AICTE has passed the orders is unjustifiable....There are infirmities in decision-making process in passing the impugned orders."

The court was hearing petitions filed by 13 of these institutions challenging the orders of AICTE.

The judges, however, made it clear that these institutions can grant only provisional admissions as of now, and they must inform the students that admissions would be subject to the final decision of the court on the petitions.

"The petitioners and the students shall not claim any equity (rights) on the basis of this order," the HC said.

AICTE is empowered to ensure that all the institutions recognised by it possess complete infrastructure, staff and other facilities.

There are about 1,800 private aided and non-aided institutions in Maharashtra which impart technical education. The court noted that since 2009 AICTE has not inspected the institutions in the state within the timeframe.

IIT-Madras eyeing top 50 league

Divya Chandrababu,TNN | Jul 18, 2014, 08.24 PM IST

CHENNAI: IIT-Madras has finalised its 'Strategic Plan 2020' with a vision to becoming one of the top 50 technological institutions globally.

"It articulates a vision to be in the global top 50 in all disciplines and become renowned for postgraduate education as for the undergraduate courses," Bhaskar Ramamurthi, IIT-M director, said at the institution's 51st convocation on Friday.

A draft of the plan was submitted to the faculty in March before it was finalised. The institute embarked on an ambitious "Strategic Plan 2020" to sustain its excellence in higher education, research and infrastructure development after the conclusion of Strategic Plan 2010.

IIT- M also expects that start-ups will use technologies developed by the institute to produce products. It will also look to sustain the campus in terms of energy, water usage, waste management and recycling.

The director said the vision was also meant to "earn a reputation among students that IIT- Madras is a happening campus."

Government to drop legal action against IIT-M

http://www.thehindu.com/news/cities/chennai/government-to-drop-legal-action-against-iitm/article6226668.ece

The State government has decided to drop legal action against the Indian Institute of Technology-Madras (IIT-M) for its delay in obtaining environment clearances for constructions on its campus. The reputation of the IIT as an institution of national importance has prompted the government to treat it as a special case.

The institution had been accused of flouting environment norms in constructing buildings on its campus, located adjacent to the Guindy National Park. The allegation was that it had cleared many trees to facilitate the constructions. The proposals for building two new hostels led to litigation in the National Green Tribunal, which intervened with a stay order.

However, official sources now revealed that the institution might escape legal action, recommended under laws whenever post-facto clearances are given for such projects.

The June 16 letter from the Principal Secretary to Government for Environment, Hans Raj Verma, to the Registrar of IIT-M, accessed by *The Hindu*, said that the IIT-M is an institution of national importance, higher technology learning and a research institute.

The letter said from the representations of the IIT-M authorities, it was learnt that the institution was very conscious of the biodiversity of the campus. It had increased the green cover on the campus from 20 per cent to 70 per cent.

In view of these facts, the government decided to treat the IIT-M as a special case and condone the delay in applying for environmental clearance. It also decided to drop any further legal action against the IIT-M, the letter further said.

However, activists of the Save Guindy National Park Campaign said that environment laws did not have provisions for exempting prosecution of the violators. “The Environment Protection Act offers no room for discretion by the State government in condoning offences. The government has no choice but to initiate credible action against IIT-M and its officials,” said Nityanand Jayaraman, a member of the campaign.

Karnataka ready to give 500 acres free of cost for setting up IIT

Govt to seek Rs 4,300 cr under RUSA for infra devt at higher education institutions

http://www.business-standard.com/article/current-affairs/karnataka-ready-to-give-500-acres-free-of-cost-for-setting-up-iit-114071801131_1.html

The Karnataka government has offered to provide 500 acres of land free of cost for setting up an Indian Institute of Technology (IIT) campus in the state. The state government has already submitted its formal proposal to the Union ministry of human resources development, said R V Deshpande, minister for higher education.

Replying to debate on demand for grants for higher education in the state legislative assembly on Friday, Deshpande said, he was surprised to know about the statement of Union HRD Minister Smriti Irani that there was no proposal from the Karnataka government for sanctioning an IIT campus.

“I have personally met Irani and three other ministers from the state at the Centre and requested for the sanction of an IIT for Karnataka. Even the chief minister has written to the Prime Minister in this connection,” he said.

Finance Minister Arun Jaitley, in his Budget speech earlier this month said that the government would set up five new IITs this year in Jammu, Chhattisgarh, Goa, Andhra Pradesh and Kerala. He did not make a mention of sanctioning IIT for Karnataka even though the state’s proposal is pending for a long time.

“We have been deprived of an IIT in the state despite our repeated efforts,” Deshpande said.

Deshpande said, the state intends to send a proposal to the Central government for sanctioning Rs 4,300 crore under the Rashtriya Ucchatar Shiksha Abhiyan (RUSA) or National Higher Education Mission for development of infrastructure in degree colleges and universities.

The state cabinet approval would be taken next week and send the formal proposal to the Human Resources Development ministry, he said.

Under RUSA, one of the flagship programmes launched by the UPA government, it is proposed to spend Rs 1 lakh crore for modernisation of higher education in the country.

The minister said that the higher education department has undertaken several new programmes to improve the standards of education in government-aided colleges and universities in the state.

A Central University would be set up very soon at Karwar, he said adding that there are 30,000 families in the Naval base, which have sought the university.

Stating that no Indian university figures in the list of top 200 universities in the world, he said the government would

take up measures to improve the standards of universities in the state. He said political interference in the appointment of vice chancellors is affecting the quality of education in state's universities, he said.

Hindustan Times (Chandigarh), HT Correspondent

India slides 10 ranks to 76 in Global Innovation Index

NEW DELHI: There is a big divide in the world of innovation. And India is on the wrong side of it.

The annual Global Innovation Index (GII) released on Friday has India slide 10 places to 76, with only Singapore, Hong Kong and South Korea representing Asia in the top 20 of the list, published by World Intellectual Property Orgainisation (WIPO), Cornell University and INSEAD.

China and Malaysia are the only upper-middle income countries in sight of top 25.

"To become a country qualified as a "innovation learner" in the GII, the policy makers need to identify and focus on the areas that will help propel their performance on innovation inputs and outputs relative to their peers and to excel beyond what is expected from them considering their level of development," said Chandrajit Banerjee, director general, Confederation of Indian Industry (CII).

The list is proof that despite some gains, less innovative economies have difficulty keeping up with higher ranking nations, thanks, in part, to an inability to grow and retain adequate human resource capabilities as competent and ambitious people move to advanced economies to pursue their careers.

The index publishers point out that this is a time of opportunity for countries like India, as despite large innovation-related stimulus packages following the global financial crisis, expenditure on R&D seems to have lost momentum in rich countries. Asia is expected to lead on the R&D front in coming months.

51st convocation held at IIT- Madras

Divya Chandrababu,TNN | Jul 18, 2014, 07.21 PM IST

http://timesofindia.indiatimes.com/city/chennai/51st-convocation-held-at-IIT-Madras/articleshow/38622774.cms

CHENNAI: A total of 1,691 students received their degrees at the 51st convocation of IIT Madras on Friday. It was the first time that B Tech Honours and BS and MS degrees in Physics degrees were awarded.
As many as 180 students were awarded PhD degrees, 58 BTech (Honours), 276 dual degree (B Tech and M Tech), 427 M Tech, 149 MS, 37 MA, 100 MBA, 137 MSc, and 46 PG diplomas.

Sneha Abhyankar won the President of India award for scoring the highest CGPA in dual degree (Mechanical Engineering).

Dr Devi Prasad Shetty, chairman and founder of Narayana Hrudayalaya, delivered the convocation address, and IIT-M honoured him with Degree of Doctor of Science (Honoris Causa). He told students to benchmark themselves with global standards and also make their engineering solution financially affordable.

In his address, director Bhaskar Ramamurthi outlined the achievements of faculty and students. He said there were 8,234 students on the rolls. The institute also added 30 new faculty in 2013-14 out of which four are women.

IITians told not to underestimate engineers from unknown colleges

Divya Chandrababu,TNN | Jul 18, 2014, 08.42 PM IST

CHENNAI: The 51st convocation of IIT- Madras, held here on Friday, saw the graduates receiving a rather different comment as opposed to the customary oodles of praise.

The chief guest, Dr Devi Prasad Shetty, chairman and founder of Narayana Hrudayalaya Group of Hospitals, delivering the convocation address, told the graduating top minds of the country to beware of college dropouts and engineers from unknown colleges.

"I know how difficult it is to get into an IIT, leave alone passing out. So the country is proud of you all. But never underestimate the unknown power of an engineer from an unknown college," he said amidst applause and laughter from the audience.

Dr Shetty, using his practice in the health care business as an example, told students to come up with ideas and models that are affordable and to benchmark themselves with global standards. "If a solution isn't affordable, then it isn't a solution," he said.

Times of India ND 19/07/2014 P-21

Lunar pits to act as astronauts' base?

Nasa Finds Over 200 Moon Craters Perfect To Shelter Explorers

Kounteya.Sinha@timesgroup.com

London: Before a lunar colony for humans becomes a reality, Nasa has plans to build make-shift shelters for future astronauts.

Large pits on the lunar surface fit the bill perfectly.

While the moon's surface is battered by millions of craters, it also has over 200 holes, steep-walled pits that in some cases might lead to caves that future astronauts could explore and use for shelter, according to new observations from Nasa's Lunar Reconnaissance Orbiter (LRO) spacecraft. The pits range in size from about 5 metre across to more than 900 metre in diameter.

© Caspar Benson/fstop/Corbis

The pits will provide a safe location for astronauts: free from radiation and micrometeorites, with little dust and no temperature swings

Hundreds of these pits were found using a new computer algorithm that automatically scanned thousands of high-resolution images of the lunar surface from LRO's Narrow Angle Camera (NAC). "Pits would be useful in a support role for human activity on the lunar surface," said Robert Wagner of Arizona State University. "A habitat placed in a pit — ideally several dozen metres back under an overhang — would provide a very safe location for astronauts: no radiation, no micrometeorites, possibly very little dust and no wild day-night temperature swings."

Most pits were found either in large craters with impact melt ponds (areas of lava that formed from the heat of the impact and later solidified) or in the lunar maria (dark areas on the moon that are extensive solidified lava flows hundreds of miles across). The pits could form when the roof of a void or cave collapses, perhaps from the vibrations generated by a nearby meteorite impact, according to Wagner.

Exploring the pits could also reveal how oceans of lava formed the lunar maria. "The mare pits in particular would be very useful for understanding how the lunar maria formed," said Wagner. "We've taken images from orbit looking at the walls of these pits. Ground-level exploration could determine the ages of these layers, and might even find solar wind particles that were trapped in the lunar surface billions of years ago."

Mission Mars: UAE planning Arab world's first space voyage

The UAE is planning to launch an unmanned mission to Mars by 2021, becoming the Arab world's first mission to another planet, MarsNews news portal reported on Friday. For the Mars flight a new UAE Space Agency will be created to coordinate with the country's growing space technology sector and to supervise the mission. The UAE is one of only nine countries with space programmes to explore Mars. The probe's nine-month-long and 60million-km journey will coincide with the 50th anniversary of UAE's formation.

Srinivas Laxman

WASHINGTON, PTI: Large pits on the lunar surface may hold the key to living on the moon, according to a new Nasa study.

These pits could provide astronauts with shelter from the radiation, dust and temperature swings.

While the Moon's surface is battered by millions of craters, it also has over 200 holes—steep-walled pits that in some cases might lead to caves that future astronauts could explore and use for shelter, Nasa said.

The pits range in size from about 5 meters across to more than 900 meters in diameter, and three of them were first identified using images from the Japanese Kaguya spacecraft.

Hundreds more were found using a new computer algorithm that automatically scanned thousands of high-resolution images of the lunar surface from Nasa's Lunar Reconnaissance Orbiter spacecraft's Narrow Angle Camera.

"Pits would be useful in a support role for human activity on the lunar surface," said Robert Wagner of Arizona S versity, Tempe, Arizo

"A habitat placed i ideally several doze back under an ove would provide a very tion for astronauts: tion, no micrometeor sibly very little dust, a day-night temperatur said Wagner, lead aut research published in nal Icarus.

Most pits were fou in large craters wit melt ponds —areas o formed from the heat pact and later solidif the lunar maria — d on the Moon that are solidified lava flows of miles across.

Various cultures h preted the patterns f the maria features in ways; for example, s the face of a man, wh saw a rabbit or a boy bundle of sticks on hi

The pits could form roof of a void or cave perhaps from the v generated by a near orite impact, accordin