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Industry internships have transformational potential — they double up as a vehicle to initiate competency development in students and subsequently, improve their employability

■ SUDHIR VARADARAJAN

ADVANTAGE INTERNSHIP

Another season of summer internships is coming to an end. Today, we see a large number of third and second year engineering students taking up internships during their summer vacation. This is a far cry from the days when summer vacation used to be a true holiday. While peer pressure plays a role, students realise that summer internships provide an important opportunity for learning and advancing career prospects.

The All India Council for Technical Education (AICTE)'s policy of mandatory internship of 14-20 weeks, announced in 2018, will not only add fuel to this trend, but will also unlock about 127 million student-days of effort every year. Are the stakeholders prepared to exploit the transformational potential of this policy?

The AICTE policy is based on the premise that internship is an imperative to improve employability of engineering students, and this can be a win-win for the three key stakeholders – students, industry and academia. However, a true win-win partnership among the three stakeholders is an exception rather than a rule. In most cases, at least one stakeholder may not effectively participate in the process.

One scenario that is often observed is where the student and company see mutual benefit in pursuing a project, but the faculty does not see an alignment with his/her research interest. A second scenario is where the student and faculty see potential in developing an idea, but there is no commitment from any company (example, research internship). A third scenario is where the company and faculty are keen to do a project, but the student does not find it exciting. In order to realise the transformational potential of the AICTE policy, the stakeholders must rethink their views on internship.
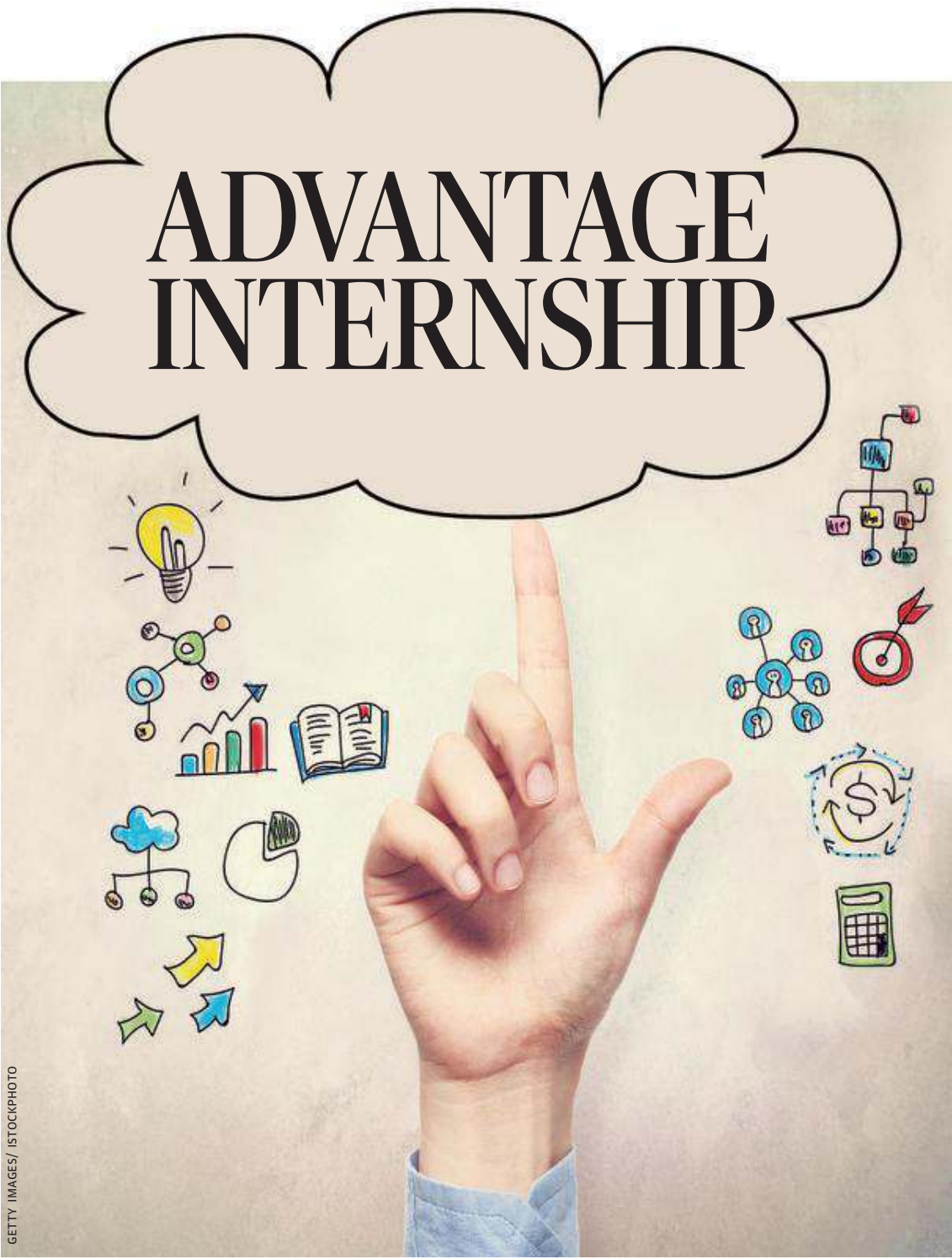
Academic involvement

Students who have had good internship experiences often say that they learnt a lot more in one to three months compared to the three years of their course. While this is discomforting to faculty, a careful observation suggests two things: (a) the students are internalising a lot more by personally experiencing the real-world when compared to

- AICTE's policy of mandatory internship of 14-20 weeks is a move to improve employability of engineering students.
- A deeper involvement of the academia with internships will help them collaborate better with the industry.
- SMEs should see internships as an opportunity to take risks and prepare for the disruptive trends.

listening to concepts or examples in the classroom; and (b) this learning is effective only under proper supervision.

The academia must see internship as a vehicle to initiate competency development, i.e., an ability to integrate knowledge, skills and attributes to solve real-world issues. And understand that competencies can be gained only through learning-by-doing and under expert guidance for a minimum of four to six months. If academia adopts this perspective, then they will take the responsibility to institutionalise a full-semester internship programme and proactively engage with students to deepen learning.

A deeper involvement of the academia with internships will also help them collaborate better with the industry. It will also open possibilities for creative integration of courses such as professional ethics with the internship programme. Academic institutions must recognise these possibilities and incentivise faculty to participate in the process.

Scope for innovation

While large corporates and high-tech startups have programmes to attract and utilise interns in their innovation initiatives, it is the Small and Medium-sized Enterprises (SME) in manufacturing that need to rethink their approach to internship.

SMEs are under serious threat due to disruptive technology trends such as Industry 4.0 and electric vehicles. Recent surveys by Confederation of Indian Industry (CII) and commentaries by CxOs suggest that while Industry 4.0 is an imperative, smart use of digital technologies can help deliver value even with small budgets. SMEs should start

seeing internships as an opportunity to take risks and prepare for the disruptive trends. With a little bit of planning and setting aside some time and small annual budgets (like the mandatory CSR spend), they can leverage internship programmes to solve everyday issues.

Recent events like Smart India Hackathon show that, with some support, students can come up with innovative ideas for persistent issues. Working with academic partners will not only help SMEs to identify time-bound projects that fit within an internship programme, but also seek matching grants for these projects through schemes such as the Innovation Voucher programme of Govt. of Tamil Nadu. This can help SMEs to experiment with digital technologies and develop low-risk, low-cost innovation networks for their benefit.

The future

For students, internships can be more than learning a new skill or securing a future. It is a massive opportunity to not only surprise themselves but also the society in a positive way. By staying curious and cultivating skills to empathise with issues in their local context, they can help envision a new future. Such an immersive experience over four to six months can be transformational to the student.

It is this experience that is far more valuable than the number of internships and the quality of logos on the CV. It can transform the student into a job-creator which is both the need of the hour and the real value of this internship initiative.

The writer is Dean (Design, Innovation & Incubation), IIITDM Kancheepuram.

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A question of credibility

The HRD ministry has sent a list of 'Non-NBA premier institutes' and 'Institutes of National Importance' to the Kuwait government to resolve the invalidation of engineering degrees, as Indian professionals face job uncertainties in West Asia. What can be done to improve the creditability of our degrees abroad?

■ NEHA RUPEJA

MUDIT CHAUHAN, PGPM, MDI, GURGUGRAM

The HRD ministry needs to focus on authenticating colleges other than those accredited by the National Board of Accreditation (NBA). A regulatory push is also needed to ensure that the premier colleges are recognised by the board to verify the quality of a college. The funds received from the government should depend on their accreditation grade to motivate them towards achieving a better reputation. Moreover, the authorities should also work on policies to build the global stature of Indian colleges.

RISHI MOHAN, III, BA HONS POLITICAL SCIENCE, LUCKNOW UNIVERSITY, UTTAR PRADESH

This proactive step by HRD ministry is a move in the right direction which will affect Indian students positively. It will provide students with a ray of hope and motivate them to work hard, in order to pursue their dream jobs abroad.

To make Indian degrees globally acceptable, Indian universities must be streamlined so that major accreditation institutes are merged into one internationally recognised macro unit which will help avoid the problem of invalid degrees.

ADARSH CHOUDHURY, GRADUATE 2018, B. TECH, MECHANICAL ENGINEERING, DELHI TECHNOLOGICAL UNIVERSITY

Lack of accreditation is one of the major reasons for Indian students' inability to bag core jobs abroad. Companies are cautious about hiring Indian students because of the lack of a systematised mechanism that fulfils international standards. Development of standardised norms, against which the quality of the country's engineering colleges can be measured will help the Indian education system become more reliable and transparent for the recruiters.

DEVANSH GOEL, FINAL YEAR, MBBS, AIIMS, RISHIKESH

Every government holds the right to employ the best professionals to serve their country, and the only way to gauge applicants' creditability is to trust accreditation committees. But Kuwait's decision to trust only the National Board of Accreditation for accreditation of degrees while disregarding the premier universities such as IITs is a nasty move. It might demoralise Indian professionals working in Kuwait and other gulf countries. The problem is the low ranking of Indian universities, which should be worked on.

Villages in our schools

Can students in urban schools be taught about the 'real' villages to question the current paradigm which is unduly biased?
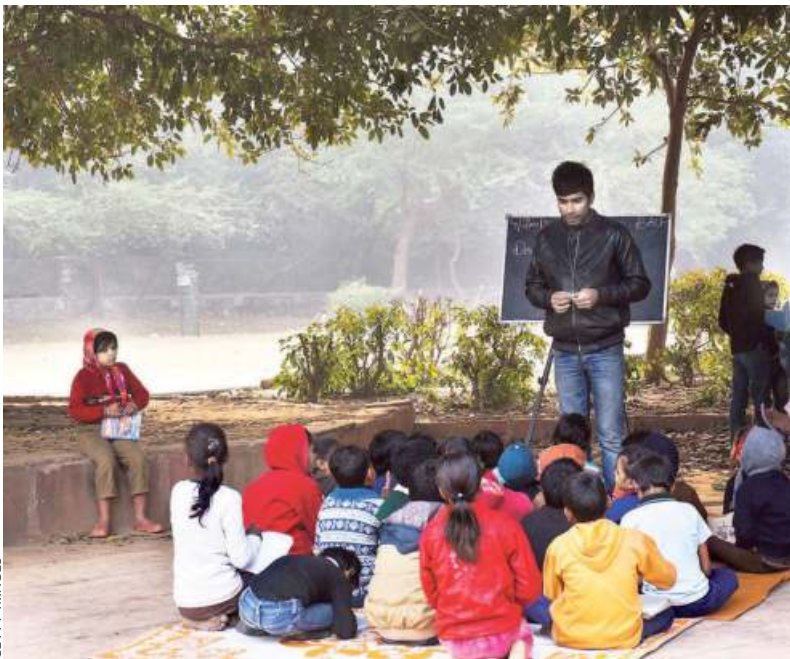
■ NIMESH VED

I was asked if I would share some of my experiences of village life with students. This discussion, with students, would precede their trip to an organisation working in a rural set-up. I figured that this would be challenging given that most students came from affluent families. In other words, they would possibly have limited exposure like I once had.

I began on a lighter note with snippets of my ignorance during my initial days in Central India – how it had taken me more than a month's stay to figure out the significance of three tea-stalls in the village, abutting each other and each boasting of strictly loyal clientele – my first lesson in caste. Unlike the illustrations I had come across in text-books, neither was *panchayat* a meeting with five people under a tree, nor was *sarpanch* the person with the biggest head-gear. Couple of years later I moved to another village, further eastwards in our country. Over the period, my awe for the landscapes replaced the shocks, and my respect for the people grew. Their abilities to work with hands, for example – the sheer range of use they put the same knife (*dao*) to.

Realisation

The sharing got a tad serious, as I moved to my learning. The initial months brought out that what many of us in cities consider as basic and necessary, is many a time luxury or simply absent in villages. It was at these villages that I learnt how to shower selfless affection – by being at the receiving end. Neither had I met them before, nor were there too many similarities in our lives and yet the people showered love and warmth. Over time I realised that clichés like 'sleepy old village', I had grown up with, were as real as ghosts in the villages. And that it was easy to fall into the trap of either patro-

> ...it was easy to fall into the trap of either patronising the village people or treating them as exotic creatures. The challenge was to accept them as they were...

nising the village people or treating them as exotic creatures. The challenge was to accept the people and village as they were, and treat them as equals.

Back to the discussion; the idea was, with help of anecdotes, to get the students to react and question. The questions ranged from whether I had worked with tribals to what they ate, from how much were the people in villages interested in my life to, of course, which of the stall(s) I had tea at? I was walking a tight-rope. I had to resist either painting a glossy image or underscoring the stereotype. I was keen to convey that life in villages, like elsewhere, is dynamic and that people in

villages love, hate, quarrel, celebrate and sing like all of us.

As I sit to draft this, I wonder on my school days – a 'regular' English-medium school in an urban area. The school taught me the foreign language, I write this in, but little did it teach me about life in a village; a life majority of my country brethren lived. Home too did little on this front. This was one of 'us' and 'them'. Unlike today, however, villages then did exist in television serials and Hindi movies.

Can we discuss this topic at city schools? To understand that villagers are individuals beyond construction workers and domestic help? To enable the students (and teachers) to know their country better? To highlight the interdependence and enable the students – even a few – to question the current paradigm which is unduly biased in their favour?

The writer can be reached at nimesh.explore@gmail.com.

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IIT Madras launches AI platform

Indian Institute of Technology (IIT) Madras faculty are launching a platform, 'AI4Bharat', to build Artificial Intelligence solutions to address India's problems and accelerate AI Innovation. It will be a community of AI professionals, students, domain experts, policy makers and academicians collaborating on solving real-world challenges in agriculture, healthcare, Smart Cities, Digital India and sustainability. The platform is also open to students who will be mentored to solve these problems.

It was founded by Mitesh M. Khapra and Pratyush Kumar, Assistant Professors, Department of Computer Science and Engineering, IIT Madras.

Pause to find a purpose

Take a gap year to explore, travel, and find a new 'you'

CAREER CUES
RICH DWIVEDI SAKLANI

Steve Jobs was not the first person to visit India for a gap year and subsequently make it big. While I am not implying a direct link between the two events, here are a few more examples. Mark Zuckerberg visited Nainital – on Steve Jobs' advice – in the early stages on Facebook; Benedict Cumberbatch moved to Darjeeling after Harrow to teach Buddhist monks; 19-year-old Mother Teresa's trip to Darjeeling inspired her to build the Missionaries of Charity; feminist writer Gloria Steinem spent two years in India after college helping young women organise against injustice.

While India is a popular "gap year" destination, the only gap year Indian students knew till recently was the one you took to prepare for medical or engineering entrance tests. The "gap year" to explore, travel, breathe and find yourself is very new and shrouded in much excitement and many apprehensions. Will it affect my college admissions positively or negatively? Will it help me get the answers I am looking for?

What is finding myself anyway?

I see it as knowing what you want. Sometimes, students go through school and college pleasing teachers, parents and the larger "system". The end of school or college often creates a huge void – how do I choose my next move? How do I know what is right for me?

A gap year allows students to take on self-exploratory activities like internships, short courses, and travel without the pressure of making a commitment. This provides the space for students to hear their own voice within and watch how they resonate with things (or don't). The "answer" may be a life-changing "aha!" moment ("I know I want to teach"; "Research is my thing"; "The answer is Law") or simply be a realisation of your strengths and weaknesses, letting you fall in rhythm with yourself.

Some famous examples include Nigella Lawson who worked as a chambermaid in Florence where she discovered her love for Italian cooking; Dan Brown who spent a year in Spain studying art history which would become the subject of his bestselling books including the Da Vinci Code; and Charles Darwin whose theory of evolution was inspired by a trip to the Galapagos Islands as a travel companion to naturalist Captain Robert Fitzroy.

While a gap year does not guarantee such resounding success, it certainly allows students to move ahead with greater purpose and less stress.

Some ideas to make your gap year count:

Pursue a "passion project": Do you want to work on a film? A blog? A business? Work in a kitchen? Go on a trek on the Himalayas? Work with animals? Pursuing a passion project without the pressure of making it a lifelong career or a runaway success is one of the biggest opportunities that gap years offer.

Learn a new skill or develop a new hobby: A new language, diving, cooking, rock climbing, guitar, tennis, or running may not become careers for you but will provide you the balance that you may need once you take on the pressure of studies again and eventually, that of a job.

Join a gap year programme: While most universities in the U.S. and U.K. offer gap year programmes that include travel, volunteering and skill building, this is still a new concept in India. Some U.S. universities also offer scholarships for gap year programmes to deserving students.

Meet people who could be your role models: Do you admire the teen tech blogger? Or the young girl who took over her father's conservatory? Or the banker who became a famous novelist? Seek out the people whose career trajectory you admire, and get answers to your own dilemmas in their journeys.

Blog about your gap year: India has few students taking the plunge and if you go down this path, your journey will have tremendous interest and value to those still thinking about it. And well, you could end up with a popular blog or at least a serious hobby to spend your life with.

> A gap year allows students to take on self-exploratory activities like internships, short courses, and travel without the pressure of making a commitment

Dos:
Plan your gap year while still in school or college. Decide if you want to get admission into your dream course and ask for a deferment or only apply the next year. Many colleges support students taking a gap year by deferring their admission offer. Check with your college – or dream college – what their gap year policy is.

Plan your gap year in three-month chunks, for example: chill and travel, internship, short course, social project and so on.

Find a place to report to almost every day when you intend to "work from home" – your parents' office or a co-working space. If studying for entrance tests, join coaching classes!

Donts:
Allow your indecision about whether you are taking a gap year or not to result in poor academic outcomes. If you plan in advance, you could focus on board results during your last year in school or college and spend the gap year honing your application and improving test scores.

Take more than a month of "doing nothing". While a gap year allows you to take a breather before you jump back onto the academic roller-coaster, too much fallow time can erode your ability to focus and persevere once you are ready to bounce back.

Plan extensive "work from home" periods. These can be challenging for the most disciplined; and a teenager with time, Internet and privacy may need superhuman willpower to work consistently.

The writer is the author of The Ultimate Guide to 21st Century Careers. She leads Inomi Learning, a Gurugram-based career and college guidance firm. info@inomi.in

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■ WALNUT KNOWLEDGE SOLUTIONS

Q1 '83 is an upcoming biographical Bollywood film being directed by Kabir Khan. It talks about an event that took place on June 25, 1983, that changed India's history forever. However, due to an ongoing strike at the time, the BBC missed the opportunity to cover it. Ranveer Singh portrays the role of the leader who helped achieve this feat along with his 'devils'.
What feat, that was repeated in 2011, does the movie portray?

Q2 In 2009, Rohan, one of the children of a very famous personality, started the brand _____ Coffee. He sources coffee beans from his 52-acre property in Jamaica. He promotes sustainable farming practices and discourages the use of pesticides. He says, 'My father used to say that one day he was going to stop playing music and just farm. I am the other side of my father, the completion of his dream to return to farming'.
Name the eponymous brand of coffee, and the famous personality.

Q3 The Antarctica Service Medal is awarded by the U.S. Government to personnel who have served in Antarctica. The medal has a ribbon which consists of a 3⁄16-inch black stripe on each edge and graded from a white stripe in the center to a pale blue, light blue, greenish blue, and medium blue. While the outer bands of black and dark blue represent five months of Antarctic darkness, the center portion, by its size and colours, symbolises seven months of solar illumination and a certain natural phenomenon.
What is the natural phenomenon from which the band takes inspiration for its colours?

Q4 In 2016, the Government of Telangana initiated Mission _____, a project to provide safe drinking water for every village and city household in the state. It was aptly named after an Indian mythological king belonging to the Ikshvaku dynasty who led an austere life and performed penance in the Himalayas to bring the river Ganga from heaven to earth to release his forefathers from the curse of saint Kapila.
Name the eponymous project.

Q5 In 2019, Boeing announced a strategic partnership with an American start-up to develop a semi-autonomous flying taxi. This start-up is backed by Google founder and Alphabet CEO, Larry Page, whose mission is to make the dream of personal flight a reality. For this, they released an electric aircraft that weighs only 220 pounds and doesn't require a pilot's license to fly. The name of the organisation is a nod to a 1903 feat at a beach town in North Carolina. Name the organisation.

Q6 Italian sculptor Arturo Di Modica spent over two years and hundreds of thousands of dollars on the creation of an artwork. Variations of the main work are found in Shanghai, and in Amsterdam. When asked to describe the work, tourists use words such as "money", "strength", and "financial power".
What is his most famous artwork, and where would you find it?

Answers
A1. India winning the Cricket World Cup (1983)
A2. Marley, Bob Marley
A3. Aurora Australis, or the Southern Lights
A4. Bhagiratha
A5. Kitty Hawk
A6. Charging Bull/Wall Street Bul., New York

■ KRITIKA RATHORE

ON THE SHELF

Digital Marketing: From Fundamentals to Future

The level of integration of technology in our lives is increasing day by day. This makes certain things easily accessible as they become just a click away. Digital marketing is rising with easy Internet access. *Digital Marketing: From Fundamentals to Future* sheds light on some of the aspects of both digital and traditional marketing and allows the readers to understand the convergence of technologies to stay connected. The book provides information on the usage of digital technologies based on the principles of marketing and aims at motivating and equipping readers to begin a career in digital marketing. The different chapters provide a framework on the working of the virtual marketing process. This helps in understanding the integration of marketplace from brick and mortar to virtual. The book covers the important theoretical structures of traditional and digital marketing relevant to business and academics. It concludes with an exposure to certain technologies useful in marketing and exemplifies digital transformation.

Looking for leaders

Who is a strong leader? Is it the one who protects, or the one who lets you nurture on your own?

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ETHICS AND YOU
MINI KRISHNAN

On view and open to discussion every hour of the day is the behaviour of men and women who lead the world in politics and military power. Seven hundred years ago, King Edward II of England so disregarded the wisdom and advice of his barons that they united to destroy him and his favourite courtier. It was murder under the dining table. Exactly a hundred years ago the lifestyle and attitudes of the Romanovs fired the beginnings of the Russian revolution which ended their three-century rule. Their belief that they owed nothing to the people and that the people owed them everything is astonishing to modern day populations.

Today, the words and deeds of the mighty in public and increasingly in private, which very quickly reaches news circuits, are a matter of concern to the people who put them in charge and therefore feel – quite rightly – that they have the right to demand certain standards from them. If their teenage pranks cannot be held against them, surely they must be made to account for their latter-day near criminal acts or intent to hurt. They are in charge of countries. The power to change other peoples' lives is not a small thing.

Are they, today, living up to the faith and respect we show them? Who is a really strong leader? Is it not one who guides, protects and inspires? A show of strength is not real strength.

Types of leaders
What about positions less grand than leading a country – like the head of an institution or the principal of a college? They too occupy vital positions of responsibility and control. What do we look for in such people when we first meet them or are invited to work with them? And do we not all know people on lower rungs of the ladder who are equally competent, and perhaps kinder to their colleagues? These are the canopy men and women. You can go to them with any problem and even if they cannot solve it they help by being consistent, balanced and empathetic. Like trees filter the air, reverse damage to it and provide food, energy and income, such people support everybody around them. You will find that their attitude is consistent: whether with fellow workers like doormen or peons or functionaries or executives in the office or members of the family at home. These people act like canopies supporting others and helping them by their active aid or mere presence. These canopy people have what we might call integrated personalities.

There is another kind of tree person. The banyan-tree person. It is well known that nothing grows in the shade of the stupendous banyan. The overarching trees and leaves block off sunlight without which nothing can survive. The only things that multiply and do well are the prop roots of the banyan itself which it puts out to support itself as it slowly enlarges itself and the area it occupies. The banyan-tree person is like the leader who fills you with awe, mesmerises you and succeeds over and over again in making you feel inferior. This kind of tree-person neither encourages or permits you to develop.

What is the canopy of a person's support and confidence all of us tend to seek? That indefinable thing called the spirit which lies at the core of everyone's personality is the same. Controlled experiments were done to check the weight of life by weighing people just before and after death. There was no difference at all. Imagine that! What do you think it means?

Why do you think one feels either inferior or superior to others?

The writer is the Series Editor of Living in Harmony (Oxford University Press, India)

Ready to retire for the day?

KNOW YOUR ENGLISH
S UPEBNDRAN

What is the meaning of the expression 'play out of one's skin'? (K Arun, Hyderabad)

A lot of people who watched Simona Halep running from one corner of the court to the other during the recent Wimbledon final against Serena Williams must have thought that the little Romanian was 'playing out of her skin'. The expression is used quite frequently in American English in the context of sports. When you say that someone is playing out of their skin, what you are suggesting is that they are playing brilliantly; they are playing the game with a lot of energy and skill, and their performance is truly outstanding. When someone plays out of their skin, it does not necessarily mean that the person ends up winning – just ask Roger Federer.

Ganesh played out of his skin, but unfortunately lost the match.

Hamsa was truly brilliant. She played out of her skin.

What is the difference between 'retire' and 'hit the hay'? (B Vishwanath, Bengaluru)

Both are normally used to mean 'to go to bed'. The word 'retire' is the more formal of the two. When someone who is tired says he is 'retiring' for the evening, it suggests that he is going to bed - perhaps immediately. The word can also suggest that one does not wish to be in the company of others; the individual who is 'retiring' perhaps wants to be alone in his room doing a bit of reading or writing before actually going to bed.

It's been a really strenuous day; the President plans to retire early tonight.

Sujatha usually retires after dinner. She spends a couple of hours watching TV before going to bed.

The idiomatic expression 'hit the hay', on the other hand, is mostly used in informal contexts to mean, 'to go to bed'.

Rajan had already hit the hay before we arrived.

You look sleepy, Shakul. Why don't you hit the hay?

In the old days, a poor person usually slept on a sack filled with hay – this was his bed. In order to get a good night's sleep, people used to ensure that the hay in the sack had been spread evenly. This was achieved by hitting the hay before lying down on it.

What is the meaning of 'pontificate'? (Rakesh Kumar, Vellore)

The first syllable rhymes with 'con' and 'don', and the final syllable with the words 'hate', 'date' and 'gate'. The vowel in the second and third syllable sounds like the 'i' in 'bit', 'sit' and 'kit'. It is pronounced 'pon-TI-fi-kate' with the stress on the second syllable. The word is mostly used nowadays to show disapproval. When someone 'pontificates', he speaks in a rather pompous way; he believes that his opinion should be the final opinion about a matter because he knows everything there is to know about the subject. Everyone else's opinion is wrong. The word can also be used to refer to one's style of writing.

His son is a crook. Yet the Minister is always pontificating about good parenting.

Is it okay to say, 'pin drop silence'? (Ravi Kiran, Chennai)

Native speakers of English normally say, 'you could hear a pin drop' and not 'pin drop silence'. The expression is normally used to suggest that there was absolute silence – people were so interested or shocked by what was happening that nobody spoke or said anything.

It was so quiet in the meditation hall that you could hear a pin drop.

When Radha announced she was leaving her husband, you could hear a pin drop.

"Sleeping is no mean art: for its sake one must stay awake all day." Friedrich Nietzsche

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EAR SHOT
ASHOK RAJAGOPALAN

WHAT'S NEW?

Study the scarcity

Courses on Water Science and Policy will create professionals who can identify solutions

■ DEEKSHA TERI

Water scarcity is a problem that has been around for a few years now, and the situation is only getting worse with every passing day. States such as Tamil Nadu, Maharashtra, and Kerala have been facing the worst scenario this year, with not enough water to even drink.

It is in times of such crisis that one realises the dearth of knowledge and skills to handle it. To address this issue, Shiv Nadar University (SNU), Uttar Pradesh, is offering a unique master's, postgraduate diploma, and certificate courses in Water Science and Policy.

The programme is a high-level response to the urgent need for rigorous, creative, multidisciplinary and practice-based training in water education in India. It seeks to address the critical gap of qualified professionals needed on ground to manage the significant challenges of reforming India's water sector.

"The programme is a teaching and research programme. It is no silver bullet to the current water crisis, but over time it will build a cadre of professionals with the required credentials. These credentials will give them the understanding of how we got into the current water crisis, and how we can get out of it," says Rajeswari

> The programme...is no silver bullet to the current water crisis, but over time it will build a cadre of professionals with the required credentials.
>
> S. Raina, Professor, School of Humanities and Social Sciences at SNU.

Right mix

The course is a mix of on-site experience and theoretical knowledge which helps in creating future policymakers. Currently, our policy makers use data on water table to understand how much groundwater is available and how its availability can be improved. "Our students see that it is not just the water table but the typology of (rock formation) the aquifer that is to be studied. As future policy-makers, these insights are crucial. With climate change upon us, we cannot afford to repeat past mistakes," adds Prof. Raina.

The students spend an entire semester in the field – covering four chosen modules from a total of five that include Watershed Management, Sustainable Groundwater Management, Participatory Irrigation Management, Sustainable Agriculture, and Rural Drinking Water and Sanitation.

Along with it being a practical semester, it is also a test of how well the students have mastered the basic concepts taught in the first and second semester. They also work with leading NGOs and are taught by the adjunct faculty (experts from NGOs), which helps them keep their theoretical and conceptual tools sharp.

"Our first batch has produced excellent research projects. One of them is a study on drought and the ecosophy approach to understanding the state and its response to drought," shares Rajeswari S. Raina.

"As part of their field-work, our students have participated in the CANALPY programme – cleaning the canals in Alleppy, studying the biotic life in Surajpur wetlands in Uttar Pradesh, with assignments for the decentralised septage management study sponsored by the National Institute of Urban Affairs (NIUA), and much more."

For students to apply to the M.Sc programme, and the PG Diploma programme, the minimum qualification required is a B.Sc/BA /B.Tech. or an equivalent undergraduate degree. More information is available on university's website.

https://cpact.snu.edu.in/graduate/masters/certificate-in-water-science-policy

- Shiv Nadar University is offering a master's, postgraduate diploma, and certificate courses in Water Science and Policy.
- The course addresses the need for rigorous, creative, multidisciplinary and practice-based training in water education in India.
- Students get to work with leading NGOs and are taught by experts from those NGOs.

POSTCARD FROM...BELFAST

All the campus is a stage...

...Discovered Shraddha, during her three years at Queen's University, where she had the experience of a lifetime

NAME:
Shraddha Parchani
COLLEGE:
Queen's University, Belfast, Northern Ireland
COURSE:
B.A. Drama

I was always sure that I would travel when I was going to university but I just didn't know where. I had the U.K. in mind, and then I heard Ashish, Regional Manager for Queen's University in South Asia, talk at my school about Queen's University in Belfast. I wanted to study film and as a massive fan of "Game of Thrones", I knew this was a place I needed to find out more about. So, I contacted Ashish and met him to explore more about Queen's University as my possible new study destination.

The more I found out about Queen's, the more I veered towards the possibility of studying and living in Belfast.
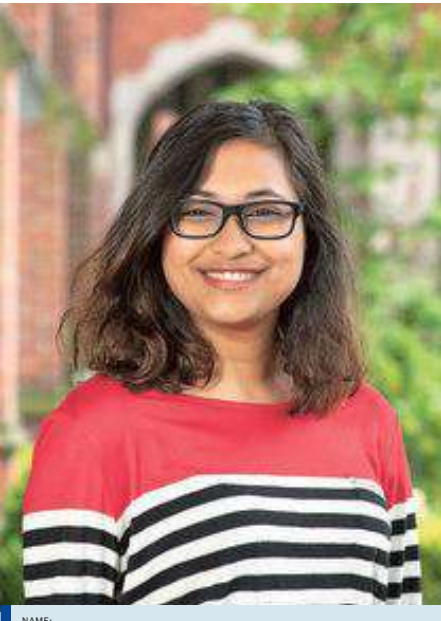
Peer member

I arrived in Belfast in the summer of 2016 to pursue a B.A. in Drama. Everything was so accessible and my university accommodation was close to the main campus, which has a rich heritage, state-of-the-art facilities and is ranked in the top 10 most beautiful universities in the U.K.

During my three years at Queen's, I was a peer mentor and ambassador for drama, leading the way for other students and often giving talks during Open Days.

I was successful in securing a placement at the Lyric Theatre in Belfast as a stage manager, and this gave me opportunities to work on an international stage with shows including "Good Vibrations" and "Huckleberry Finn".

This role opened up the world of stage theatre and working in the real environment of putting a show on stage, from rehearsals to setting up for the main performance. This was an environment I thrived in, and it led on to me working with Queen's Drama Society and at the All Ireland Drama Festival.

Starry-eyed

As a huge fan of Game of Thrones I was delighted to be living in the city where it was all being filmed and produced and studying in the same field. This also opened doors to meet the crew, and on a few opportunities catch a glimpse of the actors.

I have been a part of the famous "Game of Thrones" tour, and another highlight of living in Belfast was visiting the Titanic Quarter and exploring the museum where the infamous ship was built. It is a thriving and exciting city to live and study in. I have also made some life-long friendships. I will be returning to India this summer to work and I hope to fulfil my passion for travelling in the near future.

Shraddha Parchani has completed her undergraduate degree in BA Drama from Queen's University Belfast, Ireland.

ETIQUETTE

Be a smart globetrotter

Travelling is more than just packing your bags and heading out; be respectful to the rules and cultures of the places you visit

■ GEETA PADMANABHAN

A student's essay on international relations had this telling paragraph: "In a US convenience store, I paid for my shopping and left the empty basket near the check-out counter. Without a word, the man behind me picked it up and put it in the stacking rack. I should have done that. I felt ashamed." He must have felt relieved as well. He escaped getting a public lecture on "being considerate."

Been there, felt that? We litter, "cut" our way into queues, push and shove while boarding trains, speak loudly while everyone else is silent. We play music, watch movies on the mobile in quiet trains. And indulge in this unpardonable act – scratch our message on monuments. We seem to believe that breaking the law and getting away with it is "macho", it is occasion to feel like a hero. Apologising when caught is a cowardly act. Instead we say, "Oh, I'm in a hurry", "Are you catching everyone?", "I am new to this place, why pick on me?"

While wilful acts that border on the "boorish" are bad enough in our own streets, they are infinitely worse when exhibited abroad. We forget we operate under a different set of rules, we are in countries where civic rules are followed by all and unruly acts are severely punished. In some countries flinging a beer can in the street invites steep fines or time in lock-up, riding a mobike on the footpath is just not done. Breaking the law and getting punished is one thing. Much more is lost in terms of our nation's reputation and honour. It is hard to fix that damage.

Being mindful

Rotarian B Sridhar, who is compiling stories of his travels across the world, wonders if our young travellers need a crash course in "travel behaviour." "Why do our intelligent, tech-savvy, smart kids turn boorish while away travelling?" he asks. "Will someone tell them they are India's ambassadors abroad?"

He lists specific instances that left him appalled. "Once, Indian youngsters on our coach tour occupied the back seat and began to drink. I wondered how they would manage the tight sight-seeing schedule, and one of them began to throw up. Quite embarrassing." He wishes youngsters would not take off on their own while on a scheduled tour. "At one point, we had to backtrack to pick up people who had gone hang-gliding off schedule."

College student Naren Pradhan, who grew up in California, would like Indian schools/colleges to include travel etiquette in the curriculum. "Lessons should include 'Don't litter, play music at reasonable decibel levels, speak softly and put back shopping items you pull out and don't buy. And don't throw trash into a marsh.' This is a serious violation in California."

Young people are travelling more than ever before. Their social media pictures show them in places once considered "remote." Many of these places like the ones in the North-East look pristine, but will they remain so? Will we resist the temptation to chuck trash around, carve our love stories on protected surfaces, stop to let animals cross in forested areas? And definitely not enter areas barred for human entry?

> Will we resist the temptation to chuck trash around, carve our love stories on protected surfaces, stop to let animals cross in forested areas?

Here are some do's and dont's of travel:

1. **Learn as much as you can about the place you're visiting.** In Vatican you are expected to cover your knees and shoulders. Always tip the tour bus driver.

2. **You are a visitor!** Do not disturb the locals. Don't expect them to make space for you on the train/tram/bus. Be courteous when you ask for information.

3. **Follow rules.** Read the sign-boards carefully. "No swimming?" Don't.

4. **Learn a few words/phrases of the local language.** Instead of nodding vaguely, use native words for "yes", "no", "thank you", "good-bye." Find out the right way to greet. Is shaking hands okay?

5. **Watch out for where you can take selfies.** Selfie etiquette dictates that you should be mindful of whom you include. Find out if using a selfie stick is okay in places like museums and churches.

6. **Mind your manners in restaurants.** Order carefully and don't leave a mess. Find the rules of tipping. Take advice from the tour guide.

7. **Dress appropriately.** Avoid offending local dress sensibilities. Ask: Are flip-flops ok in a place of worship?

8. **Stand in queues, always.** Walk through the queue corridors marked, don't jump across the ropes.

9. **Bargain only where it is allowed.** Buy what you can afford, to help local economy. Don't launch a haggling match.

10. **Be polite.** Made a mistake? Apologise!

ADMISSIONS

Bachelors, Masters and Diploma Programmes in Fashion Design

INSTITUTION: International School of Design, New Delhi

ELIGIBILITY: Class 10 pass for diploma, 10+2 for bachelors and diploma and graduates for masters degree or diploma (any stream).

DEADLINE: July 31

http://www.insd.edu.in/apply-online.html

MA Landscape Architecture

INSTITUTION: University of Sheffield, the U.K.

DURATION: 2 years

ELIGIBILITY: Undergraduate honours degree or equivalent qualification in a relevant subject. Overall IELTS grade of 6.5 with a minimum of 5.5 in each component, or equivalent.

FEE: £21,100 for overseas student for 2019

DEADLINE: Prospective students are encouraged to apply as soon as possible prior to the commencement of the course in September.

https://www.sheffield.ac.uk/landscape/mastudents/masterla or contact - landscape-admissions@sheffield.ac.uk

OFFBEAT... SCIENCE

■ ARCHANA SUBRAMANIAN

Forging a niche path

This week we look at some offbeat courses that try to fill the gap in STEM

Sustainable career: In solid waste management GETTY IMAGES/ISTOCK

While we are familiar with the core and regular subjects and specialisations in Science, there are a number of niche and off beat courses introduced by colleges across the country that we may not be aware of. Here is a look at a few such courses...

Environmental studies

The Municipal solid waste management is one of the major challenges that cities in developing countries are facing. Bengaluru, for instance, generates around 4,500 tonnes of waste per day. Out of this, only 550 tonnes is processed in a day, as per a report in *The Hindu*. Sustainable ways to process waste is the need of the hour, and for those interested in the subject, Bangalore University's **M.Sc in Solid Waste Management** would be the right choice. It is a master's degree programme covering environmental science, zoology, botany, chemistry, agriculture, horticulture, and forestry. Students who have a BE in Environmental Engineering can also apply. A minimum of 50% marks in undergraduation is required to be eligible. Students will get to study the chemistry of the environment which will be the basis of the course. They will also learn how waste is generated, it's different categories and characteristics, and how it can be processed. After graduating, one can work with the local bodies of the state government, allied governmental agencies and NGOs, or as a consultant to public and private enterprises.

Learn more: http://bangaloreuniversity.ac.in/

The United Nations General Assembly drew up a set of 17 goals that need to be achieved by the year 2030. These goals are called Sustainable Development Goals (SDGs). One of the SDGs is Clean Water and Sanitation: Ensure availability and sustainable management of water and sanitation for all.

This is a high priority for the Indian government too, especially with the Swachh Bharat Abhiyaan Mission. Capacity building in this area is an important task and the International Water Association (IWA), an association of water professionals around the world, has predicted the requirement of professional capacity in this regard.

The **ME programme in Sanitation Science, Technology and Management**, offered by the Birla Institute of Technology and Sciences, Pilani, is a step in this regard. Students can apply on the basis of marks obtained in the BITS HD admission test or based on GATE / GPAT score.

For details: https://www.bits-pilani.ac.in/

Aviation expertise

With the aviation sector's prospects taking off, more jobs have been created, thus creating a demand for skilled personnel. SRM Institute of Science and Technology, Chennai, has introduced a **B.Sc. honours programme in Aircraft Management**. Students who have completed IO+2 with physics, chemistry, and math as their core subjects or have a diploma in engineering, having a minimum aggregate of 50% in physics, chemistry, and math can apply for this course.

Jobs are aplenty in the airlines and Indian Maintenance, Repair and Overhaul (MRO) industry. Job portfolios include aviation maintenance manager, aviation maintenance technician, QC inspector, and aviation sheet metal mechanic besides many others

Jobs are aplenty in the airlines and Indian Maintenance, Repair and Overhaul (MRO) industry.

related to the operations of planes and other airborne vehicles.

For details: http://www.srmuniv.ac.in/

Optical science

Our eyes are bearing the brunt of the rise in popularity of devices like smartphones and tablets. This calls for better equipments to deal with improving vision and maintaining the health of our eyes.

NSHM Knowledge Campus, Kolkata which is affiliated to Maulana Abul Kalam Azad University of Technology (formerly known as West Bengal University of Technology) is offering a **Bachelor's degree programme in Optometry**. Students will get to learn in detail the basic sciences like ocular anatomy, physiology, optics, and biochemistry. The second and third year consists of clinical sciences and pre-clinical labs such as visual optics, binocular vision, instrumentation, ocular diseases, clinical refraction, low vision, contact lenses, with an integrated internship during the final year. On completion of the course, one can choose to become a clinical optometrist in government and private hospitals, or set up their own practice. There are also options to become a lecturer / professor, research assistant, research associate and research coordinator.

For details: http://www.nshm.com/

Tech specialisation

Actuarial science is the discipline that combines mathematical and statistical methods to assess risk in insurance, finance and other industries. Actuaries are professionals trained in this discipline. Students can study this course in order to pursue a career in finance, insurance, technology and data analytics sector. Mumbai University is offering **B.Sc. Actuarial and Data Science**.

For details: http://www.mu.ac.in/

Visvesvaraya Technological University (VTU), Belgaum, is set to introduce a course – **B.Tech in Artificial Intelligence (AI) and Machine Learning (ML)**, from this academic year. The move comes in the wake of increased demand for AI and ML related skills in the job market and a vacuum in finding the right course in state universities. As of now, only premium institutes like the IITs and IIITs along with a few regional universities offer an exclusive course on the subject. The opportunities after pursuing this course include jobs as a software analyst and developer, computer scientist, and algorithm specialist.

For details: http://vtu.ac.in/en/

With inputs from Liffy Thomas (Bangalore); Saradha Udayakumar, Kritika Rathore (Kolkata)

TECHNOLOGY

Time management tomatoes

Segment your time effectively to be productive

■ RADHA VARADARAJAN

GETTY IMAGES/ISTOCK

Life hacks – they are like flash cards for the test of life. Sometimes, figuring out life feels like knowing enough and varied life hacks to deal with different situations. One such hack is the Pomodoro Technique. The time management technique was developed by Francesco Cirillo, way back in the 1980s. Cirillo had a timer on his kitchen counter, in the shape of a pomodoro (a variety of Italian tomato), which served as an inspiration to for the name of the technique.

A seemingly mammoth and impossible task may seem simpler if it is broken down into small segments. If you go further and bind each segment of work to be completed in a certain time, the task becomes even simpler, and its magnitude may not weigh you down. This is where the magic of Pomodoro comes to play.

Interval-based

The technique is simple. In a given half hour, you do productive work for 25 minutes, take a break for five minutes, and repeat the same all over again. This way, instead of doing a particular task for 100 minutes, you do it for four pomodoros (100 minutes of work and 20 minutes of break). This proved to boost productivity considerably and improve concentration.

Shreya, a student preparing for the UPSC exam said, "Pomodoro helps me measure how distracted I am because I get to see how little or how much work I am able to accomplish, in one pomodoro. It helps me compartmentalise my tasks and keep my anxiety at bay."

"The technique can help you crank through projects faster by forcing you to adhere to strict timing. The constant timing of your activities makes you more accountable for your tasks and minimises the time you spend procrastinating," said Akansha*, a HR manager.

Famous psychologist Dr. Marty Lobdell explains in his YouTube video that a three to five minutes break is necessary and considered ideal, as it gives your eyes and mind some rest, but avoid stopping for so long that you lose track of what you are doing. Suitable break activities could include going for a short walk, getting yourself a drink, doing some light stretching, or playing a tune on a musical instrument.

This technique especially caters to the millennial (and zillennial) trend of being obsessed with productivity. The time division does not have to be 25 and five minutes. It can also be 45 and 15 minutes, or 60 and 20 minutes. Determining the time division is a personal decision. Some people can work undisturbed for a longer period than others. It also depends on practice. One doesn't do intensive workout at the very beginning. Just as exercise is physical training, Pomodoro is mental priming.

Despite its many glories, the technique does not accommodate multitasking. "Multitasking is a wasteful way to work. Instead, you will achieve more if you choose one activity at a time," Dr. Lobdell can be quoted saying, in his popular YouTube video 'Study Less, Study Smart.' He, along with popular YouTuber Thomas Frank promote the usage of the Pomodoro Technique to become a more effective student.

*- Name has been changed to protect privacy

TREND

Aspiring for global recognition

Why do parents want their wards to prepare for International Boards?

■ NEHA RUPEJA

GETTY IMAGES/FREEPIK

A growing preference for international boards in India has been pointed out by the Regional Director of South Asia, Cambridge International, Ruchira Ghosh. This has come to notice that more than 45,000 admissions were made to the Cambridge IGCSE board in the March 2019 series, which indicated a 17% growth over last year's admissions.

International boards familiarise students with a multicultural environment, and an option to choose courses from varied disciplines which imbibe the required qualification suited for globalised work environment. According to Hillary Hinchliff, Principal, GEMS Modern Academy, Kochi, "Many parents choose international boards as they aspire for a global career for their children". With the rise in opportunities to study and work abroad, international recognition is highly valued.

"When it comes to IGCSE in the country, students are offered the advantage of flexibility and choice. They are not bound to study subjects under compulsion and can choose their focus according to their true inclination, right up to class XII. Moreover, they can also choose the level of difficulty of the courses," says Ruchira. An additional advantage is that the examinations are conducted in time for students to appear for admissions in foreign universities.

Employability and skills

International boards prepare students for employment as they focus on developing skills and attributes along with knowledge.

"In many international boards, skill-oriented subjects such as marine science, travel and tourism, enterprise, fashion designing, journalistic writing and translation studies have been included. However, they are not exclusively categorised as vocational courses," says Ruchira.

Emphasising the urgency for a skill-orient curriculum, Lina Ashar, Founder of Billabong High International School says, "Due to the fourth industrial revolution, technology has disrupted the job landscape, but our education system has remained under-invested and is fundamentally inadequate for the future, which needs to change."

The Indian boards need to be at par with the international boards to help students gain a worldwide currency. "To merge the gap, Indian boards need to shift the focus of pedagogy from teacher-centric model of instruction to a learner-led teaching method. They must provide the opportunity for students to choose from a broader range of subjects and study them in-depth," adds Hillary.

According to Renita Handa, Founder and Director-Academics, Redbricks Education Foundation, Ahmedabad, the current approach is focused on a proclivity towards fetching marks where students lose out on important cognitive and application skills. Assessment pattern needs to be modified for students to be able to apply their high order thinking skills.

IN BRIEF

Smart India Hackathon

Seven teams from Sri Sivasubramaniya Nadar (SSN) institutions were declared winners at Smart India Hackathon, 2019 hardware edition. The winners were selected from over a thousand teams and more than one lakh students participated from across the country. This was the second time that the public and private sector companies became a part of this event.

Convocation of IITDM

Around 280 students, including 13 PhD students, recently graduated from IITDM Kancheepuram. This was the university's seventh convocation ceremony. A total of 31 medals were presented to students under various categories for their outstanding performances. The chief guest of the occasion was Dr. Koppillil Radhakrishnan, Chairman, Board of Governors, IIT Kanpur, and Former Chairman, Indian Space Research Organisation.

Graduation ceremony

UpGrad and International Institute of Information Technology Bangalore (IIIT-B) marked their third graduation ceremony recently with 864 data science graduates. This also marks the first graduation ceremony for 189 machine learning and AI graduates, along with 44 software development graduates. Rishikesha Krishnan, Professor, IIM Bangalore, ex-Director IIM-Indore was the chief guest.

Socially synchronised

Indian Institute of Technology, Delhi (IIT-D) based start-up Quaff Media Pvt. Ltd. recently launched a new social media management app called "My Social Handle". This app allows users to connect with various social media accounts with one unique ID. It helps the users to create their customised digital card and share with anyone following some steps. This app allows users to synchronise their accounts with one username, and on meeting someone new, they can simply share their social handle username and give access to multiple accounts.