

Education

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EXPERT VIEW

The Budget 2020 must focus on quality, and tax-free education and skill development. There has been a shift in the nature of jobs and career choices amongst the youth. The Budget must incorporate policy revisions to meet future job demands and make India one of the leading higher education destinations in the world.

—Sanjay Gupta, V-C, World University of Design

● **INTERVIEW:** ANANTHA DURAIAPPAH, Director, UNESCO MGIEP

The role of a teacher will have to change

Anantha Duraiappah is the inaugural director of the UNESCO Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP) based in New Delhi, set up in 2014. In partnership with Andhra Pradesh state government, MGIEP recently organised the Transforming Education Conference for Humanity (TECH 2019), which deliberated on the role of digital pedagogies in building sustainable societies. “We want to brand the TECH not only as a premier conference for knowledge generation, but also for capacity building and, in particular, teacher training,” says Duraiappah. In an interview, over email, with FE’s Vikram Chaudhary, he adds that education systems, the world over and not just in India, need to pay attention to equip learners with emotional intelligence. On the increasing use of artificial intelligence in the education sector in India, he says it implies the need for regulations over the use of student data and, in particular, to protect students from misuse of their data by external parties. Excerpts:

Do you think the current Indian education system needs to be reformed?
I always ask this question to myself: Does the current education system prepare young learners to develop more peaceful and sustainable societies? Sadly, the answer is ‘no’. A majority of education systems, the world over and not just in India, focus on building cognitive intelligence, which is largely aimed at further building human capital. Instead, education systems also



need to pay equal attention to equip learners with emotional intelligence.

They can do this by inculcating social and emotional skills such as mindfulness, empathy and compassion. Such skills, in fact, can help learners appreciate and

And how can they do so?

understand different cultures and issues, and enable them to interact respectfully with each other.

What are the prospects of the use of digital technologies in the education sector from a policy perspective?

I am an optimist and a futurist. The young are digital citizens. They learn fast on digital devices. The challenge is to provide the hardware, but again I see countries allocating budgets accordingly for the purchase of hardware. Another important player are IT companies. They have been instrumental in supplying schools in India with infrastructure to narrow the digital divide. The same goes for bandwidth availability and the link with the internet. It is becoming widely available, and I believe within the next 10 years every one of us will be connected.

But with the use of the internet, comes challenges. Data privacy and ownership is an important issue. The rise of the use of artificial intelligence implies the need for regulations over the use of student data and, in particular, to protect students from misuse of their data by external parties. This is why we had a whole track in the TECH 2019 conference on this issue, and UNESCO is leading the initiative on the ethics of artificial intelligence.

What was the idea behind holding the TECH 2019 conference?

The aim was showcasing the role of digital technologies in enabling a shift from “transmissive pedagogies” to “transformative pedagogies”, to create more peaceful and sustainable societies.

How important is it to teach the teachers in India?

Social and emotional training must be mandatory in teacher training. A teacher is seen by many students as a mentor, a person who is well-read and is a guide to help students expand their horizons. Teachers act as advisors for students’ future careers. To live up to these expectations, the teacher must first be able to regulate her/his emotions, have the attention/focus that is needed when listening to students, be able to understand the student from her/his perspective, and last but not least have compassion and be kind. These are the qualities a 21st century teacher must have because the access and delivery of information is now easily done through digital forum. The role of a teacher will have to change going forward, from that of a person who merely transmits knowledge to a person who is more of a nurturer and life guide.

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● **UNION BUDGET 2020**

Let's grow both edtech and skill-tech

What do B-Schools expect from this year’s Budget?

VIBHAVA SRIVASTAVA

IN UNION BUDGET 2019, finance minister Nirmala Sitharaman proposed the New Education Policy (NEP) that acknowledged the importance of promoting skill development through schools as well as higher education with an emphasis on technology, including machine learning, artificial intelligence, big data analytics. The draft NEP 2019 envisioned preparing students not only to seamlessly merge with the workforce of tomorrow, but also to be in sync with evolving needs of Industry 4.0.

However, the said draft has a number of missing dots. It neither addresses current challenges (structural unemployment, decreasing job security, rise of gig economy), nor it suggests any mechanism to overcome these challenges. The upcoming Union Budget is an opportunity for the government to right its past wrongs.

B-Schools, and the education industry in general, expect Budget 2020 to offer robust remedial solutions that are aligned with the vision of creating a thriving education ecosystem. We hope the government will roll out incentives to provide impetus to the activities and subsequently to the growth of edtech as well as of skill-tech enterprises. Such incentives along with funding provisions will create space for collaboration amongst the eminent B-Schools and industry. This will provide a boost to the industry’s sluggish growth.

The author is assistant professor, Marketing, MDI Gurgaon

The year to reskill yourself

LAKSHMI MITTRA

THIS YEAR WILL witness organisations placing greater emphasis on transparency, agility, culture and purpose-driven leadership. As per a recent study, 54% of the world’s workforce will need reskilling and upskilling by 2022. Some of the key reskilling trends of 2020 are:

Emerging technologies: RPA, artificial intelligence, data analytics are reshaping how organisations do business, engage with customers, and manage their operations. Gartner predicts 70% of organisations will integrate AI to assist employee productivity by 2021. So, there is a pressing need for global businesses to focus on future skills and talent management.

Data-driven culture: A McKinsey survey reveals data-driven organisations are 23 times more likely to acquire customers, six times as likely to retain customers, and 19 times as likely to be profitable. This year will witness enterprises integrating data and analytics in business strategy.

Reskill: As new-age technologies are disrupting traditional business models, employees need to reskill themselves to stay productive and relevant. Reskilling doesn’t always mean going back to college. Instead, one can benefit from company-run training programmes also. But where options aren’t easily available, employees must be proactive and take steps towards reskilling themselves.

The author is head, Clover Academy

Reduce GST rates for those upskilling

With digital transformation, we’re witnessing a tremendous change in the job market scenario in India, says Mohan Lakhamraju, founder & CEO, Great Learning. “Support by the government in the form of tax breaks/financial incentives for the ones who upskill themselves in the areas critical for today’s digital economy will help create a future-ready workforce. In the Budget, reducing GST rates for individuals opting for upskilling will benefit the economy,” adds Lakhamraju.

New upskilling course by upGrad

Edtech platform upGrad and IP-driven incubation lab BridgeLabz Solutions have introduced a new full stack development course for nurturing engineering talent and ideas in the emerging technology space. This 20-week upskilling course, upGrad says, offers placement assurance in deep tech roles with annual salary packages starting from Rs 7 lakh onwards.

FE BUREAU

Science & tech

● **EAVESDROPPER**

Mirror, mirror...

If Samsung sheds its Snow White paradox, NEON can become more than a personal AI assistant

ISHAAN GERA

SAMSUNG’S ANNOUNCEMENT OF artificial humans comes after a decade of Apple Siri’s existence. In 2010, when Apple announced AI-powered Siri, it was one of the most advanced bots of the time. It was also only 50 years since MIT professor Weizenbaum had created the first chatbot called ELIZA. While, in 2001, Richard Wallace created the first programme, this was also the time that SmartChild was released, a chatbot available on AOL IM and MSN Messenger.

Artificial intelligence has progressed leaps and bounds over the last decade. Samsung’s latest is the culmination of old AI technology. The first bot to clear the Turing test—where a machine could trick a human into thinking that it is one—was in 2014, since then each year many bots have cleared Loebner and Turing tests. Many have come of age and helped countless people come out of depression.

Mitsuku is one example. The bot is used by millions to fight depression and to discuss things. When it started in 2013, Mitsuku could not hold a conversation for more than a few minutes. Now, it can do more than five minutes, and even longer in some cases.

Samsung’s technology is one step further. While Apple and Google have focused on creating personal assistants, Samsung, after Bixby’s failure, has created an artificial human. Residing on a large screen and with many human-like avatars, Neon is more than a personal assistant. It is a friend, a confidante. A person can walk up to the virtual human and start talking.

But the biases are inherent, and if Samsung wants its bots to become suc-



The Queen and her mirror (Walter Crane, 1882)

cessful—in time, they will—it will need to shed these biases. More importantly, it requires training, and this is a pain point for Samsung. While virtual humans have many avatars and can talk in many languages, there are limitations to Samsung’s reach. Apple has more users of its services, and Google has an extensive network of devices. If any of these services come to compete with Samsung, it

will not have the resources.

That may all be good for the world, but it would mean an early death for Samsung’s virtual humans. So, what Samsung needs is a project outreach. While virtual humans can stay on large screens, it needs chatbots for its mobile. It may also need to prep up its personal assistant Bixby. Chatbots will help Samsung achieve the scale that it wishes to

reach. And, an app will make them platform agnostic. This shall also mean millions of data points.

A personal assistant—Samsung may be contemptuous of Apple, Google and Amazon for building these—will help it learn conversation styles. People, whether Samsung likes it or not, will still converse with a personal assistant more than they would with a chatbot. After all, there is also distrust about Samsung and big tech learning secrets.

2020 is a promising year for technology. This will also be the year when we get to know if the bot experiment—Japan has deployed hundreds of these for Olympics—will work or not. It is also the year virtual humans will be tested. While there is still much more innovation to come from other players in the coming years, Samsung’s failure or success will show how far away are we from a *Her* like future before we can rely on technology not just for answers, but questions.

Hopefully, others will not make the same mistakes as Samsung has about appearances. Digital humans are, indeed, essential to talk to, but Samsung would have done better not to play to biases. All the virtual humans are good-looking and aesthetically pleasing like actors and actresses. There are no fat virtual bots and nearly no realism. The Indian version, for instance, looks like someone from a Bollywood drama, while the Korean version is typical K-Pop.

Overtime Samsung and others need to realise people will be more comfortable talking to a regular person than a movie star look-alike.

The magic mirror can work wonders, provided Samsung does not stay confined to the beauty of its product.

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eSIM, on the other hand, is just a chip on the board and will eliminate the need for a sim slot. More important, it is beneficial for small devices, say a watch or speakers. Apple Watch, for instance, comes with an eSIM allowing to have its ecosystem if the user wishes. More important, one can programme both, sim in the iPhone with the watch, and take advantage of data plans sans a device connection.

As devices get smaller eSIMs can serve a purpose, primarily, as there is expected to be a multiplicity of devices. Home security and locks can be configured to a separate service, then the regular WiFi, for instance, ensuring better security.

Is it available in India?

At present, Airtel and Reliance Jio offer eSIMs, that too only for iPhone users. But as more phones become eSIM compatible operators will have no choice but to provide eSIMs. For this, though the lower end phones need to sport the technology or people need to be connected with more devices. As 5G takes over and there is a proliferation of devices, eSIMs are going to gain currency.

There is some scepticism amongst net-

● **TECHSPLAINED@FE**

Slot free

ERICSSON, LAST WEEK, announced that it had launched eSIM technology. Quoting various research and studies it highlighted that embedded SIM market shall grow manifold as it has use-cases in connected devices, and for operator portability. Ericsson is not the only company betting on eSIM. It is reported that the new Samsung flagship S20 may also feature eSIM. While Apple introduced eSIM support in Watch 3 and second-generation iPad Pro devices in October 2017, Google announced its Pixel phones featuring eSIM, Apple and Microsoft followed this with eSIM for iPhone XS and Windows 10, respectively.

What is eSIM?

Embedded SIM or eSIM is a standardised SIM chip. It eliminates the need for companies to include a SIM card slot, as the chip is programmable and can be set to any of the network operators. Two, one does not need to switch sim cards once they



change an operator as the chip can be programmed for the other operator. eSIMs can also accommodate multiple accounts at once, but, at present, this is not possible.

How is it helpful?

Although sim sizes have decreased using less and less space on the phone, even the current slots take up space. An

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