FEATURE

Laying the foundation for the future of work in India
Insights from the 2019 Deloitte Deans’ Summit

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India’s growing young population gives it an edge. But to capitalize on it, the education system needs to ramp up to meet the demands of the future workforce for multiskilled professionals and those who can use smart machines, data, and algorithms to get results.

W**HEN IT COMES** to the future of its workforce, India is experiencing forces of change that are similar to the rest of the world, driven mainly by technological transformation. India is also facing different challenges given the size of its young population and rapid changes in its economy. This makes the future of its workforce more important for the education sector in India than in other parts of the world. Participants in the Deans Summit Lab sessions (see the sidebar “Understanding the Indian higher education sector”) felt that technology may likely render current jobs obsolete in three to five years, and 42 percent of employees surveyed by Deloitte believe the same will happen in the next five to 10 years.

**UNDERSTANDING THE INDIAN HIGHER EDUCATION SECTOR**

In April 2019, Deloitte conducted a Deans Summit, attended by deans, directors, principals (all will be referred to as deans in this article) of 63 top-tier institutes in India. The deans from various institutions including business, engineering, and other undergraduate schools took a deep dive into the challenges faced by the higher education sector and discussed ways to address them. In addition to the deans’ roundtable discussion, Deloitte surveyed the 63 deans, more than 900 alumni, and over 3,000 current students from these institutions. The insights gathered from the Solutions Lab and the survey have been captured in a series of four articles covering the following topics:

- Future of higher education
- Future skills of educators
- Reengaging alumni
- Future of work

This article focuses on the “future of work in India” and is a culmination of research, conversations with the deans, and a survey of different stakeholders in the higher education market.
India’s workforce is estimated to grow from 473 million in 2018 to 600 million in 2022. Moreover, the gig economy—short-term work relationships between workers and companies for a specific assignment and time—is growing fast in India, encouraged by a rise in the number of start-ups, coworking spaces, and crowdsourcing platforms.

A combination of these factors—exponential technological change resulting from artificial intelligence (AI) and automation, coupled with the growing talent pool and the gig workforce—will likely shrink the shelf life of skills, due to which the nature of jobs will change. Industry experts anticipate that 65 percent of the 4 million jobs in India’s IT and ITES industry today will likely change over the next five years.

This raises the question for both educators running the Indian higher education institutions and universities and for graduating students: How to cope with these tectonic shifts? For students, core professional and technical skills alone will not be adequate; softer human skills—those that cannot yet be automated or replaced by advanced technologies or AI—will become even more critical. Such skills include critical thinking, negotiation, problem solving, and ethical judgment along with an entrepreneurial mindset. In essence, the workplace of tomorrow is looking for multiskilled professionals, which calls for the design of new types of higher education courses/curricula to enable students to develop new types of skills.

THE EVOLUTION OF THE INDIAN EDUCATION SYSTEM

In India, the education system has come a long way from the first schools established under the British rule in the early 19th century (1820–1850). The priority then was to provide quality education, with English as the medium of instruction. This stage can be categorized as Education 1.0. Between 1850 and 1900, large universities and colleges were established in India with the aim of providing higher education and driving research. At these universities, aspiring students could pursue further education in their area of interest and aim for specialization. This stage can be categorized as Education 2.0. In the mid-1950s, after India gained independence, the Government of India established national level professional institutes that aimed to provide professional education to the youth of the country while exploring the domain of multidisciplinary skills. This stage in the evolution of education in India can be categorized as Education 3.0. From the 1970s, rapid growth in technology continually created the need for talent that can integrate multiple disciplines. India is now witnessing the emergence of “institutions of eminence” that cater to the need for the development of multidisciplinary skills. This stage is categorized as Education 4.0.

Education 4.0 demands that as educational institutions and academicians prepare their students for future jobs, they transform the existing curricula and consider offering integrative-disciplinary courses. Integrative-disciplinary courses create learning experiences that encapsulate and integrate multiple disciplines and/or curricula together with overarching themes. Further, they will need to focus on research-based partnerships with businesses across industries. Accordingly, students will need to be trained for jobs that do not exist today but will be in demand in the future.
In this article, we have presented how Education 4.0 will pan out and affect three main stakeholders in the broader higher education landscape, namely,

1. Present-day educators (with a focus on how they can effectively transform into Educators 4.0)

2. Students and the future workforce

3. Business leaders and the industry

Through the lens of educators: The changing face of the future workforce

THE NEED FOR EDUCATOR 4.0
To create and implement a vision for the future of higher education and workforce, the role of Educator 4.0 would be pivotal and requires a leader who can rise above the day-to-day operational activities of the administrative head. The role of Educator 4.0 is expected to create and implement broad strategies for developing an integrative discipline-based curriculum, reconfiguring faculty training, and cultivating the values of lifelong learning.

DEVELOPING AN INTEGRATIVE DISCIPLINE-BASED COURSE CURRICULUM
With the rapid evolution of technologies, the adequacy of universities’ existing curricula is coming into question. Job profiles are changing, and the new jobs available call for knowledge and experience around multiple areas, as they are founded on solving business problems through collaboration, learning, innovation, and automation.

Further, jobs are evolving from traditional profiles to “hybrid jobs”—jobs that combine technical and analytical skills with soft skills. These profiles are highly sought-after and high-paying. Consequently, several professional courses at the undergraduate and postgraduate levels in India have been training students in soft skills. Another category of jobs—"super jobs”—takes these profiles a step further and integrates productivity gains and efficiencies, with professionals using smart machines, data, and algorithms to get results.

The Educator 4.0 needs to find ways to guide students to tap into capabilities such as creativity, imagination, curiosity, and social and emotional intelligence—which will potentially enable them to operate at enhanced levels once they join the workforce. Further, it is imperative that the Educator 4.0 develops students’ problem-solving abilities for them to perform and contribute across multiple industries and disciplines. The Educator 4.0 will need to focus on nurturing multiple skills among students while developing capabilities to apply those skills across multiple disciplines. More importantly, the Educator 4.0’s role should foster a mindset and culture around integrating multiple skills among both students and faculty. Adopting an integrative-discipline approach can make this possible. The integrative-discipline approach focuses on the ability to bring together not only technical and soft skills but also on tying together multiple and diverse disciplines to offer a comprehensive solution. The Educator 4.0 is expected to play a key role in creating a suitable environment for the design and implementation of an integrative discipline-based curriculum.

RECONFIGURING FACULTY TRAINING AROUND INTEGRATIVE DISCIPLINE-BASED STRATEGIES
While the skillset expectation from the workforce continues to evolve, existing faculty need to be trained and empowered with skills that are aligned with the integrative-discipline curriculum. Accordingly, the faculty profile and career path of educators should considerably evolve to reflect the change toward an integrative mindset. This also reinforces the need for the Educator 4.0 to have a growth mindset and keep a finger on the pulse of
the changing industry landscape—providing faculty platforms for reskilling and multiskilling. Also, the current boundaries and frameworks of existing curricula need to be redefined in a manner that can foster transition from traditional classrooms to virtually-enabled ones while focusing on the use of real-world scenarios. This will bring in different perspectives and application of skills during on-the-job trainings and live internships.

CULTIVATING AND NURTURING THE VALUES OF LIFELONG LEARNING
For the existing workforce and the workforce of the future, work entails not just reskilling, but multiskilling and lifelong learning. This belief strongly resonates with the majority of employees Deloitte has surveyed. Further, about six in 10 employees believe that current jobs will become obsolete in the next 10 years, highlighting the need for reskilling and multiskilling. This requires students and the workforce to continually immerse themselves in learning.

The Educator 4.0 role will need to focus on encouraging faculty to instill among students the values and mindset of lifelong learning. For this purpose, the Educator 4.0 will need to bring together government, universities, and corporates to invest in and create a culture that nurtures lifelong learning and break subjectwise departmental silos.

Through the lens of students: The changing nature of work and jobs
The number of people seeking jobs is likely to increase by 27 percent and bring additional pressure on the job market between 2019 and 2020. This is attributed to millennials and GenZ, who constitute the largest and fastest-growing demographic group in India. At the same time, The Deloitte Global Millennial Survey 2019 finds that the millennial population is more optimistic about the market in emerging economies like India than in more mature economies.

THE MOVEMENT TOWARD HYBRID AND SUPER JOBS
As discussed above, jobs are evolving into hybrid jobs, which combine technical and analytical skills with soft human skills, and super jobs, which bring in efficiencies from integrating smart machines and data analytics.

Approximately 97 percent of employees surveyed by Deloitte believe that it is important for the existing students to upskill and reskill themselves. Further, 45 percent of students who are likely to join the workforce in the next couple of months believe that they need additional certifications apart from their university education to ensure placement. For the existing workforce and for the workforce of the future, the focus should be on not just reskilling, but also multiskilling and lifelong learning. The workforce has to prepare for a dynamic workplace that will comprise of hybrid and super jobs.
MULTIPLE SKILL SETS MAY HOLD THE KEY

In Deloitte’s Deans Summit Survey, deans, students, and employees expressed a clear need for multiple skills and for including lifelong learning to stay relevant in the changing industry. The survey revealed that deans and employees believe the existing batch of students to be only moderately ready from an industry preparedness point of view. Deloitte’s Global Millennial Survey has revealed that only 20 percent of millennials and Generation Z feel that they have all the skills and knowledge needed for a world being shaped by Industry 4.0. Moreover, while 30 percent of millennials feel businesses have greater responsibility for preparing workers (followed by educational institutions), Gen Z feels that colleges, universities, and secondary and vocational schools need to bear the onus for shaping the workforce. On a brighter note, in Deloitte’s dean survey, more than 90 percent of deans, students, and employees believe that technology adoption is likely to create more diverse jobs. These findings resonate with other similar studies at a global level. As per Deloitte’s Global Millennial Survey 2019, approximately 49 percent of millennials believe that new technologies will augment their jobs. These findings hint at the need for students and employees to cultivate a mindset of being continually on the lookout for learning and acquiring multiple skills. Further, on an ongoing basis, both students and employees will have to learn and relearn ways of applying and integrating multiple skills at work.

Through the lens of businesses and industry: Fostering relationships

The role of Educator 4.0 is pivotal to fostering collaboration between the industry and universities. This may likely create a landscape where Indian corporates invest time, money, and resources in redesigning course curricula and developing skills for the future, not only for their employees, but also for the future workforce—university and college students. A case in point is the Futureskills program developed by NASSCOM. Futureskills focuses on over 150 skills spanning more than 70 roles in emerging technologies such as artificial intelligence, blockchain, big data analytics, cloud computing, cybersecurity, the Internet of Things, and robotics. The program aims to reskill and upskill about 2 million professionals, potential employees, and students in five years. The Educator 4.0 will need to facilitate a strong relationship between the university, industry, and government. The objective of this relationship is to develop an industry-ready curriculum, expose students to industry through apprenticeship programs, enable a dynamic relationship between the industry and universities through information-sharing, create better job opportunities, and regularly upskill and reskill employees.

Laying the foundation for the future

Leaders in the visionary Educator 4.0 role of the Indian higher education institutions need to explore these strategies to not only better train existing and future students, but also provide options to upskill and reskill professionals to prepare them for the future. Taking the applicable steps in this direction will help lay the foundation for a future-ready multiskilled Indian workforce. To help today’s students to effectively adapt to the dynamic workforce and skills landscape of the future, academicians and educators, employees/alumni, government bodies, and businesses need to join hands and work toward charting the path forward.
Endnotes

1. Based on primary inputs/conversations captured during Deans Summit Lab sessions with deans of Indian universities and professional institutes as a part of the Deloitte’s Deans Summit 2019.


5. Today, India is among the top 10 countries for freelancers, and around 70 percent of corporates in India are likely to have used gig workers at least once in 2018. FICCI, *Future of jobs in India—2.0*, accessed August 29, 2019; PTI, “Gig economy on rise; 70% firms used gig workers in 2018,” *Economic Times*, March 1, 2019.


7. Gupta et al., *Breaking the mold*.

8. Gupta et al., *Shaping the future*.


12. Based on Deloitte survey fielded in the run-up to Deans Summit 2019 and primary inputs/conversations captured during Deans Summit Lab sessions.


16. Based on analysis of findings of Deloitte’s survey of deans, students, and employees in March 2019.

17. Ibid.


20. Based on Deloitte survey of deans, students, and employees fielded in the run-up to Deloitte’s Deans Summit 2019 and the primary inputs/conversations captured during Deloitte’s Deans Summit Lab sessions.


22. NASSCOM, “futureskills.”
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