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—DR KESHAB PANDA
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SOME WAY TO GO

L&T Technology Services has 472 patents filed for 51 of the Global Top 100 ER&D spenders. Here, Dr Keshab Panda, CEO & MD of L&T Technology Services, tells us what T-Schools in India should be doing

How is the Indian industry collaborating for infrastructure and education?

The Indian technology industry cannot work in isolation. There is a need for leaders in research to collaborate with leaders in education and academia for a common cause - the advancement in science and technology and upskilling the next generation. Fortunately, India already has the crème de la crème in terms of talent pool. The need of the hour is for us to come together and tap this young talent pool.

The Indian ecosystem players particularly relevant to the STEM domain, are proactively exploring value chain partnerships to engage with stakeholders including students and academia. Campus connect initiatives have been redefined to now attain a more strategic nature. For instance, at LTTS, we have successfully activated an academia-industry connect program that allows students to work on real-life business challenges and thus be better geared up for future career related pursuits. The other avenues include joint co-operation on areas of research & development as well as engineering hackathons.

One underlying observation is that the engagement has become much more enriched and mutually beneficial. With the technology boom, the way a company functions have changed drastically. This has also significantly changed the workforce qualification requirements. The new-age digital technologies have trigged a level of inclusiveness that was never witnessed before. Thus, there are now a larger number of people benefiting from technology as compared to before. This is expected to rise even more as the unconnected communities come within the purview of digital disruption.

In a country like India, technology can be successful only when it reaches the masses, the majority of whom reside in Tier II and Tier III cities and villages. For any technology to succeed in India, low-latency and high-performance Internet is essential to process a very high volume of data and scale faster. Also imperative is the need for any technology to be cost-effective. The upcoming technologies like machine learning, 5G and nanorobotics are still in its early stages, but with huge potential and essential for the benefit of the people. It is up to the Government, the private sector players and the academia to make sure the power of such technologies is tapped for the greater good.

In these disruptive times, people are embracing newer models of learning such as remote learning and online certification programs as the universities and colleges globally now ensure that such learning programs have equal credential as campus-based programs. Anyone, from any part of the world can access these programs – that is the true power of technology.

How are the academia, the industry and the employers transforming the education quality?

The rapid pace of change around the globe has forced Academia-Industry collaboration towork together to tackle some of the major challenges facing the technological landscape. Some steps in this direction have been taken, namely, NASSCOM's ER&D Council, which holds roundtables on University curriculum and upgrading technical education. Other industry bodies like the Confederation of Indian Industry (CII) and FICCI also play important roles in transforming higher education. To sum it up, there is a lot of effort being made by various prominent industry bodies.

The question is, have employers done everything possible to improve education quality? I would say, no. We still have some way to go. It will take time, effort and more collaborative work. We will get there soon. While the new-age engagement models were elaborated earlier, the ecosystem players are indeed playing an increased role in the transformation journey.

> ARE OUR YOUNGER GENERATION ENGINEERS SKILLED IN SUCH TECHNOLOGIES? WE CONDUCT TRAINING PROGRAMMES ACROSS THESE DISCIPLINES AND ENCOURAGE YOUNG ENGINEERS TO SPEND TIME IN OUR R&D LABS TO FACILITATE FASTER LEARNING AND DEVELOPMENT

Is what being taught in the technical colleges enough?

India has its share of outstanding engineering colleges, which are doing tremendous work in scientific progress and related curriculum for students. The problem is, there are still not too many colleges or Universities which can prepare Gen-Next in the latest, updated technologies and help in upskilling them.

So, the need of the hour is to mould the present education system with futuristic skills. This can only be achieved by first, updating curriculum, in close association with industry bodies. Secondly by raising more tech-based colleges and empowering the existing colleges to expand further in their research. This is the one important area where the Government and the academia can collaborate. The primary focus is on niche engineering knowledge amongst the fresher. There must be a healthy mix of theoretical learning as well as practical application implementation opportunities. Such an approach will ensure and lead to India's position as a global hub for tech talent.

Are they in line with the ongoing processes across the various industry verticals?

They are in-line with contemporary requirements. However, the problem is with the ever-increasing and evolving demands across industry verticals every year. So, the emphasis is on the industry and the academia to unite and discuss these problems to keep up with the times. AT LTTS, we see technologies like AI, ML, engineering analytics and 5G becoming common horizontals for a range of industries.

Are our younger generation engineers skilled in such technologies? We conduct training programmes across these disciplines and encourage young engineers to spend time in our R&D labs to facilitate faster learning and development.

How are the various happenings across the world finding their way into the national curriculum for colleges in India?

Several initiatives under the leadership of The Ministry of Human Resource Development, Government of India, are underway to promote research in the fields of science and engineering. These are: Prime Minister Research Fellowship, Junior Research Fellow (JRF)/Senior Research Fellow (SRF), Research Associate, National Initiative for Technology Transfer (Establishment of Research Parks) andImpacting Research, Innovation and Technology (IMPRINT).

To empower educational institutions and to help them in becoming world-class teaching and research centers, the Government has also declared 20 institutions (10 public and 10 private) as 'Institutions of Eminence'. These institutes will pursue multi-disciplinary initiatives, world-class research, global best practices and international collaboration – with financial assistance up to Rs. 1000 crore, provided to government institutions over the next 5 years.

The goal of all these programs is to increase access to high-quality education, foster equality, and enhance educational efficiency. As technological shifts transform the nature of work, freshers will have to be skilled and made employable to meet the needs of the industry, globally. India's Government-Academia-Private Sector need to align together to drive more such unique initiatives to convert its demographic potential to fuel this unprecedented growth.

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NEED FOR COLLABORATION

In this exclusive interaction, M Lakshmanan, Chief Human Resource Officer, L&T Technology Services, has some advice for T-Schools

What are you looking out for this year?

While qualification and degrees are important in our hiring process, at LTTS, we also place considerable importance on intangible attributes like innovation, inquisitiveness, passion to deliver and efficiency in the workplace. Engineering and innovation are embedded in our DNA. Being at the forefront of technology-based innovations, our focus at LTTS is to tap promising talent who are passionate to bring about breakthrough disruptions. We are always looking out for innovators and skilled engineers who solve specific industry problems in the areas of healthcare, manufacturing and telecommunications.

The total volume of graduates hired by the company has increased over the past year and will continue further, with engineering students being the key focus. As is the trend within the industry, freshers will form a key component of our overall considerations.

Do you think T-Schools are doing enough in education? What more should they do?

India is a global leader in engineering services and IT, with companies pursuing the best and brightest college graduates.

T-schools are making valiant efforts to stay ahead of the times. The education sector is focused on recognising the needs of the industry leading to the introduction of specialised technology skills in the graduates. There is also scope for the industry to contribute towards the interests of the academia community. Partnerships and co-operation in areas of strategic importance are the need of the hour. To ensure India's position as a leading hub for talent, upskilling on digital engineering will also be a welcome step.

So, it is not just about what they should do, it is also about what we can do. For example, we have recently partnered with IIT-Kanpur to collaborate and brainstorm on industrial cybersecurity. Unless there is collaboration, it will be difficult to build the skilled workforce required to meet the demand for strong, sustainable and balanced growth of the sector.

How do you choose talent, especially from T-Schools?

At LTTS, we look for a mix of various factors. First is performance and merit – both have no substitute. Second are attributes like innovation, spirit of curiosity, passion, and commitment– these are very important in today's ever-evolving industry. As a recruiter, I or anyone in my team also look for specific industry background or a degree of expertise that only candidates from the required field can possess. We are also very keen on promoting our female engineers and making the work environment more inclusive. Finally, we look for motivation in talent.

Our unique academia-industry initiative, TECHgium is an important platform for the bright engineering graduates to showcase their talent and solve real-world engineering problems. The finalists of TECHgium are eligible for employment in LTTS based on the strength of their concepts and solutions. TECHgium has been playing a role for the past few years in tapping India's engineering talent pool.

Apart from these, we regularly partner in campus placement programs of leading engineering institutes of the country.

Are you looking at online colleges as well?

The rise in demand for talented workforce has also paved the way for online learning, which has led to a change in perception. Online colleges and degrees are now nearly as valuable as their traditional counterparts.

The authenticity of online degrees has been a question. However, more and more renowned schools and universities such as Stanford and MIT provide online courses, which are excellent secondary qualifications. Companies are now factoring such secondary qualifications, while making a final selection of candidates. So, yes, we are open to hiring eligible candidates with specialised qualification acquired from online courses from reputed Universities.

How are the happenings across the world finding their way into the national curriculum for colleges in India?

The Indian business ecosystem has seen enormous development in the technology sector with the start-up boom, emerging as one of the fastest-growing hubs for STEM-related careers. Employers who are open-minded and willing to invest in the knowledge and skillset of an applicant have seen successful outcomes. The task before us is to help future generations learn skills that will allow them to succeed at the global workplace.

Over the years, LTTS has been in close contact with prominent colleges, universities and academia members in India to gather the best of technology and resources. Thanks to the academia, interdisciplinary courses are being introduced in the curriculum, which are well-designed for the talent pool to help corporates in their requirements.

What more needs to be done, with new technologies coming in all the time?

Advancement in digital technologies, along with advances in healthcare and genomics, has been helpful in boosting business productivity, redefining how services are delivered, and contribute to better living standards for millions. Demand for professionals skilled in AI, ML, natural language processing, robotics and blockchain has increased substantially in just the past 5 years.

Preparation for a skilled Gen-Next should be encouraged and facilitated. Access should be available for research in advanced technology and its implementations. Stronger collaboration between industry and academia through initiatives such as internships, faculty training programs will also be very useful.

For India to emerge as a technological superpower, the existing silos and boundaries need to be removed. An ecosystem of excellence must be created where all technology companies, industry bodies and academia need to come together and help the engineer with the change.