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ho would have thought in June 2019 that an invisible enemy would upend the normal way of living? Then, in December that year came the corona virus, which is still ravaging; keeps mutating with new variants such as Delta jeopardizing our normal way of living in cities like Sydney and Dhaka. Tackling such a pandemic and other major global issues require broader skill sets, not merely field specific expertise.

Since the 1980s countries like India have focused on enlarging their higher education base in engineering and technology. States such as Tamilnadu set up several engineering colleges. Such initiatives paid rich dividends by timely feeding of skilled engineers and technologists to

the world during the Y2K issue and far beyond till the current COVID-19 times, where "ZOOMing" is the new normal. A smooth transition to a virtual world of learning and work happened thanks to decades of investments in IT education and infrastructure.

Global Skillsets

Given the base we already have, it is time now to focus on other skills such as effective communication, analytical ability, handling problems and finding solutions. In other words, in addition to imparting technical skills, the importance of soft skills has emerged. "Universities must remain committed to their fundamental missions of education and research. At the same time, challenges provide special opportunities to reflect on how we can better address issues that affect our world and be prepared to respond in novel ways," stated Dr. Lawrence Schovanec, a mathematician by training and the President of Texas Tech University, USA. These sentiments were echoed by Professor D. Saravanan, Principal of Coimbatore-based Kumaraguru College of Technology, who stated,



"Higher education should build the confidence among students and the public to address the geographical requirements in terms of socioeconomic mobility, minimizing intellectual disparities and aiming at cost-effective solutions to global issues such as climate change, pandemic, etc. More importantly, higher education should instill the concept of Education for Wellbeing, aim for sustainable and holistic development."

Broader Training

Global investments in fields like molecular biology, genetic engineering, advanced computing and robotics are playing important roles in saving lives and improving the economy. Genetic medicine, artificial intelligence, sustainable wearable electronics materials. are just scratching the surface. R&D investments in these fields are needed, and at the same time areas that enable the laboratory discovery to be reality need support. Again COVID-19 has reinforced such needs. For example, without expertise in supply chain, logistics, marketing and entrepreneurship and communication, mass immunization would not be possible.

In countries like the United States and United Kingdom where there is no vaccine shortage, it is vaccine hesitancy that needs to be addressed. In such a scenario interpersonal skills and effective communication skills are needed to boost the immunization rates. "Students need to be provided with fundamental skills and ways of thinking that give them the flexibility to work in jobs that do not exist today





and to graduate with a mindset that their learning has just begun. A basis for this type of education and learning resides in very general liberal arts experiences as opposed to specific discipline knowledge," emphasized Professor Schovanec

National Centers for Excellence established in many countries which focus on specific fields such as technology, molecular biology, etc., must pay attention to these realities and engage in broader education and training. Comprehensive research universities that have business schools, engineering, human science, liberal arts, law and medicine will have an edge as it allows cross fertilization of ideas and interaction of students and experts in different disciplines. These are modern "Nalanda and Takshashila," and can make the world a better place to live. "Population growth is explosive and hence we need solution makers, to meet up with the demands raised to create smart answers for the problems," stated Professor Sridhar Naravanan, Founder of Chennai-based Grand Alliance for Management Excellence.

Modern Academia

It is long accepted in the academia that elite liberal arts colleges train next-generation scholars to be leaders and global citizens. Flexibility in the curriculum which allows students to take some credit hours in areas they enjoy and those that can enrich their global understanding, while dedicated efforts in core curriculum in targeted fieldswill be the best option going forward. American Universities have this structure as their basic framework, where admissions are based on holistic performance. Additionally, the degree structure offers flexibility in choice and deciding the major disciplines which the student wants to graduate. Such a structure is becoming more and more the need of the hour and offers broad scope for a fulfilling career. India's



Prof. D. Saravanan

new education policy is aimed at such a flexibility. It is important that the stakeholders clearly delineate the advantages of such an educational system so that students and parents can make right decision that suits the interest and the needs of the students. "Technology, management and arts should be a mix in which a student is groomed. Problems are going to be complex and hence we have to train minds to think on a holistic approach," stated Professor Sridhar Narayanan.

Global Citizens

and foremost. academic institutions exist solely to educate and train next-generations citizens. Looking at the current and future scenarios, next generation cannot be just a workforce, rather they must be global citizens scholars. The flatness of the world not only enriches trade and wealth, but it also leads to complex issues. We are witnessing this in the ongoing pandemic. The spreading of the highly contagious Delta variant has shown how travel and interconnectivity can cause havoc. At the same time, global collaboration and connectivity help to solve problems, as is the case with global organizations like the United Nations, WHO, International Energy Agency, etc. Problems and solutions are global and hence



Prof. Sridhar Narayanan

apart from subject matter expertise, human understanding, cultural openness, communication skills are needed. COVID-19 has reinforced the emphasis on interpersonal skills and humane attributes. Educational curriculum right from high schools should pay attention to improving soft and hard skills.

Way Forward

With the advancement in technology, there comes positive and negative outcomes. People are getting more and more isolated focusing on individual accomplishments, which leads to complex problems. Soft skills are needed, such as dealing with family and societal issues, while advanced technical skills are needed to find solutions to scientific and technological problems. "Comprehensive education across disciplines provides a sense of perspective and flexibility that helps students respond to the interdisciplinary nature of the grand challenges that the world is dealing with," articulated Dr. Schovanec.

COVID-19 has highlighted advantages and disadvantages in our ecosystems and lessons learned will help to chart out new ways forward. Education should build the total personality of a person and provide a comprehensive skill set to survive in a complex world.