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Conference Report

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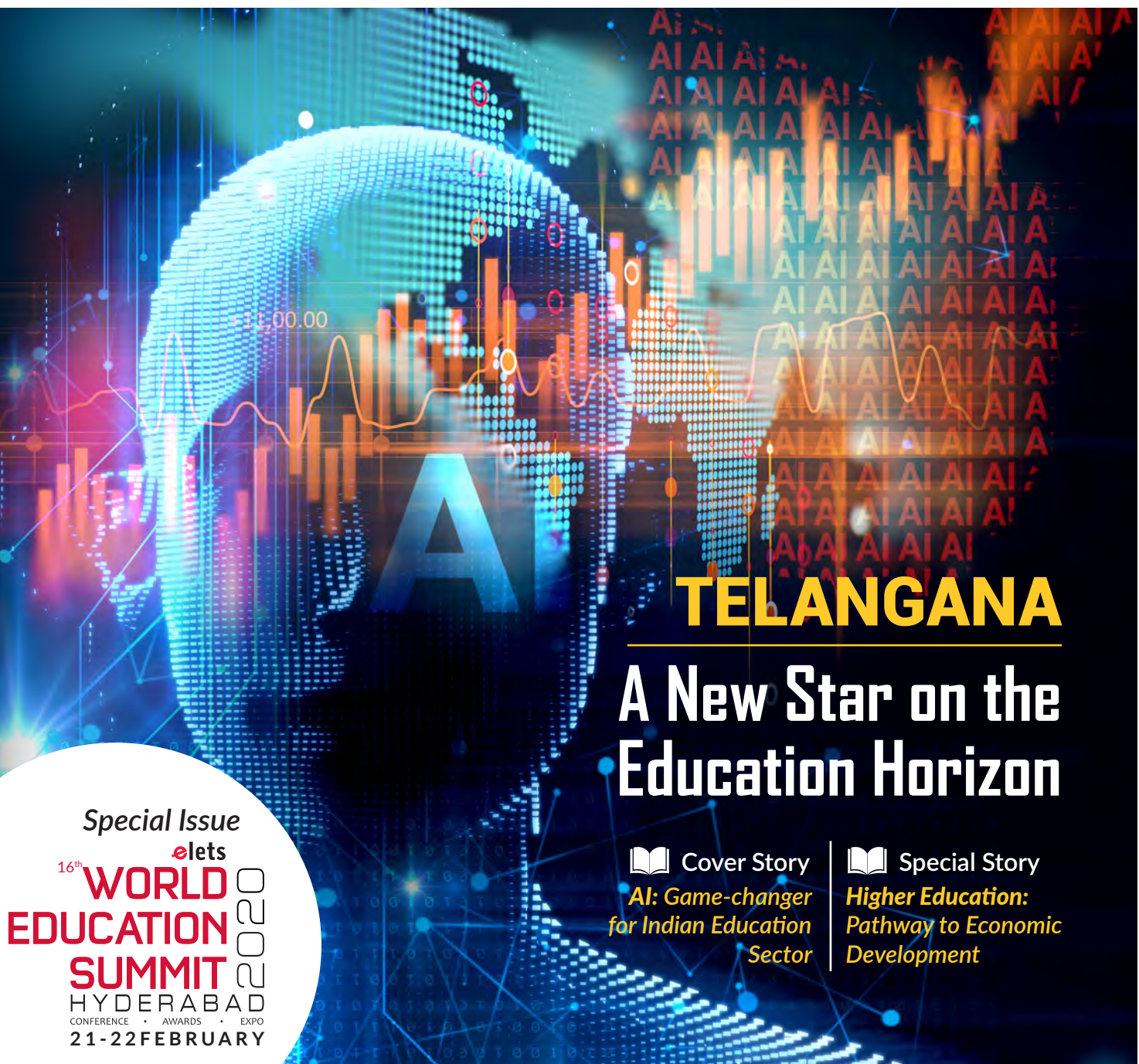

TELANGANA

A New Star on the Education Horizon

Cover Story
AI: Game-changer for Indian Education Sector

Special Story
Higher Education: Pathway to Economic Development

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CONTENTS

FEBRUARY 2020 | VOLUME 16 | ISSUE 02

eLets DL digitalLEARNING INDIA

COVER STORY

NAVIN MITTAL
Commissioner
Collegiate and Technical Education
Government of Telangana

DR R S PRAVEEN KUMAR
Secretary
Telangana Social Welfare and
Tribal Welfare Residential
Education Institutions Society
Government of Telangana

SYED OMER JALEEL
Secretary and Commissioner
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Education
Government of Telangana

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संदेश

मुझे यह जानकर प्रसन्नता हुई है कि शिक्षा विभाग, तेलंगाना सरकार एवं इलेट्स टेक्नोमीडिया संयुक्त रूप से 16वें विश्व शिक्षा सम्मेलन का आयोजन कर रहे हैं।

मानव सभ्यता के मार्ग पर तेज़ यात्रा करते हुए यदि जीव-जगत का सिरमौर बन सका तो शिक्षा की इसमें महती भूमिका है। शिक्षा के द्वारा मनुष्य की चिंतन-प्रक्रिया का परिष्कार हुआ है, उसकी विचार-भूमि उर्वर हुई है, दृष्टि प्रखर हुई है और वह नीर-क्षीर विवेकी बन सका है। उसने शिक्षा के माध्यम से जीवमात्र के कल्याण के लिए अनेक संभावनाओं को जाना-समझा है, उनके लिए अनेक प्रयोग किए हैं और तब कहीं अपेक्षित परिणामों अथवा निष्कर्षों तक पहुंच पाया है। शिक्षा से मनुष्य मात्र ने रोग का समाधान करना सीखा, उन्नत खेती के तरीके ईज़ाद किए, कलाएं सीखीं, आधुनिक संसाधनो पर यात्राएं कीं – दुनिया की भी और अन्तरिक्ष की भी...। भारतीय प्रज्ञा ने तो शिक्षा को अपने अंतर्जगत की यात्रा का भी साधन कहा है। यह सब संभव हो सका है, शिक्षा के माध्यम से। शिक्षा के बारे में स्वामी विवेकानंद के विचार थे – "मनुष्य की अंतर्निहित पूर्णता को अभिव्यक्त करना ही शिक्षा है।"

शिक्षा की बृहत्तर अवधारणा में जागतिक और पराजागतिक सत्य का साक्षात्कार करना, उनके गुण-धर्म का विवेचन करना तो है ही, स्वयं को बौद्धिक, शारीरिक और आत्मिक परिष्कार की नई ऊंचाइयों पर पहुँचाना भी है। शिक्षा को प्रत्येक युग में समय-सापेक्ष परिवर्तन की आवश्यकता रही है और आधुनिक शिक्षा भारत में उपनिवेशकाल से अब तक नए-नए रूपों में ढलती गई है। वैश्वीकरण के युग में शिक्षा को सूचना-संचार, प्रोग्रामिंग और नई वैश्विक अवधारणाओं से जोड़ा जाना अपरिहार्य हो गया है। 'डिजिटल इंडिया' नए भारत की छवि प्रस्तुत करता है और इस नए भारत में शिक्षा को तकनीकसम्पन्न और वस्तुनिष्ठ बनाने के साथ-साथ आधुनिक विज्ञान के निकष पर खरा सिद्ध करना जरूरी हो गया है। भारत सरकार की प्रस्तावित राष्ट्रीय शिक्षा नीति, 2020 इस दृष्टि से शिक्षा-प्रणाली और शैक्षिक-सामग्री पर आलोचनात्मक दृष्टि से विचार करते हुए ज्ञान के नए गवाक्ष खोलने की तैयारी कर रही है। मुझे आशा है कि इस विश्व शिक्षा सम्मेलन में शिक्षा के क्षेत्र में नवप्रवर्तन की संभावनाओं पर विशद विचार-विमर्श हो सकेगा।

16वें विश्व शिक्षा सम्मेलन के आयोजन पर मैं आयोजकों एवं प्रतिभागियों को अपनी शुभकामनाएँ देता हूँ।

(रमेश पोखरियाल 'निशंक')

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EDITOR-IN-CHIEF

Dr Ravi Gupta

Editorial & Marketing Correspondence

digitalLEARNING – Elets Technomedia Pvt Ltd: Stellar IT Park Office No: 7A/7B, 5th Floor, Tower-2, Annexe Building, C-25, Sector-62, Noida, Uttar Pradesh - 201301, Phone: +91-120-4812600, Fax: +91-120-4812660, Email: info@elets.in

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EDITORIAL

AI: Game-changer for Indian Education Sector

Artificial Intelligence (AI) is seen evolving over the years. It has now spread its existence in various business sectors. The remarkable advancements can be seen in the education sector which is blooming with the inclusion of technologies like AI and others.

With the increasing demand for AI, it is necessary to ensure that students understand the required skills for the same. AI will surely turnaround the current education system and will result in a positive environment.

Our latest issue of digitalLEARNING magazine has tried to focus on How AI is proving to be a game-changer for the Indian Education sector in a comprehensive manner. The idea is to underline all possible angles, consistently developing the state as a hub of knowledge and learning.

Our cover story 'AI: Game-changer for Indian Education Sector' justifiably tries to explore how AI can be leveraged as an innovative approach to build a robust education ecosystem in the country.

A special story on 'Higher Education: Pathway for Economic Development' presents a narrative on the role of Education in bolstering the Indian Economy. Another feature on Telangana's State Council of Educational Research and Training (SCERT) takes a closer look at the organisation's various functions and achievements so far.

We have also featured interviews of Navin Mittal, Commissioner, Department of Collegiate & Technical Education, Government of Telangana; Syed Omer Jaleel, CEO & Secretary, Telangana State Board of Intermediate Education, Government of Telangana; Dr. R S Praveen Kumar, IPS Secretary Telangana Social Welfare and Tribal Welfare Residential Educational Institutions Society, Government of Telangana, among others, spelling out their vision and highlighting varied dimensions of higher education space in the country and in the state of Telangana.

The 16th World Education Summit, Hyderabad, aims to initiate discussions and deliberations on the finest practices and challenges to the country's education landscape. The confluence of top decision-makers from the government, academia and the corporate is hoped to pave the way for formulating a more effective industrial ecosystem needed for employment and harnessing a culture of entrepreneurship.

We hope that this bouquet of special features, articles and interviews would thoroughly highlight the emergence of Telangana as a major education hub of the country and we await the valuable feedback of our esteemed readers.

Dr Ravi Gupta
Editor-in-Chief, Elets HR Magazine
and Founder Publisher and CEO
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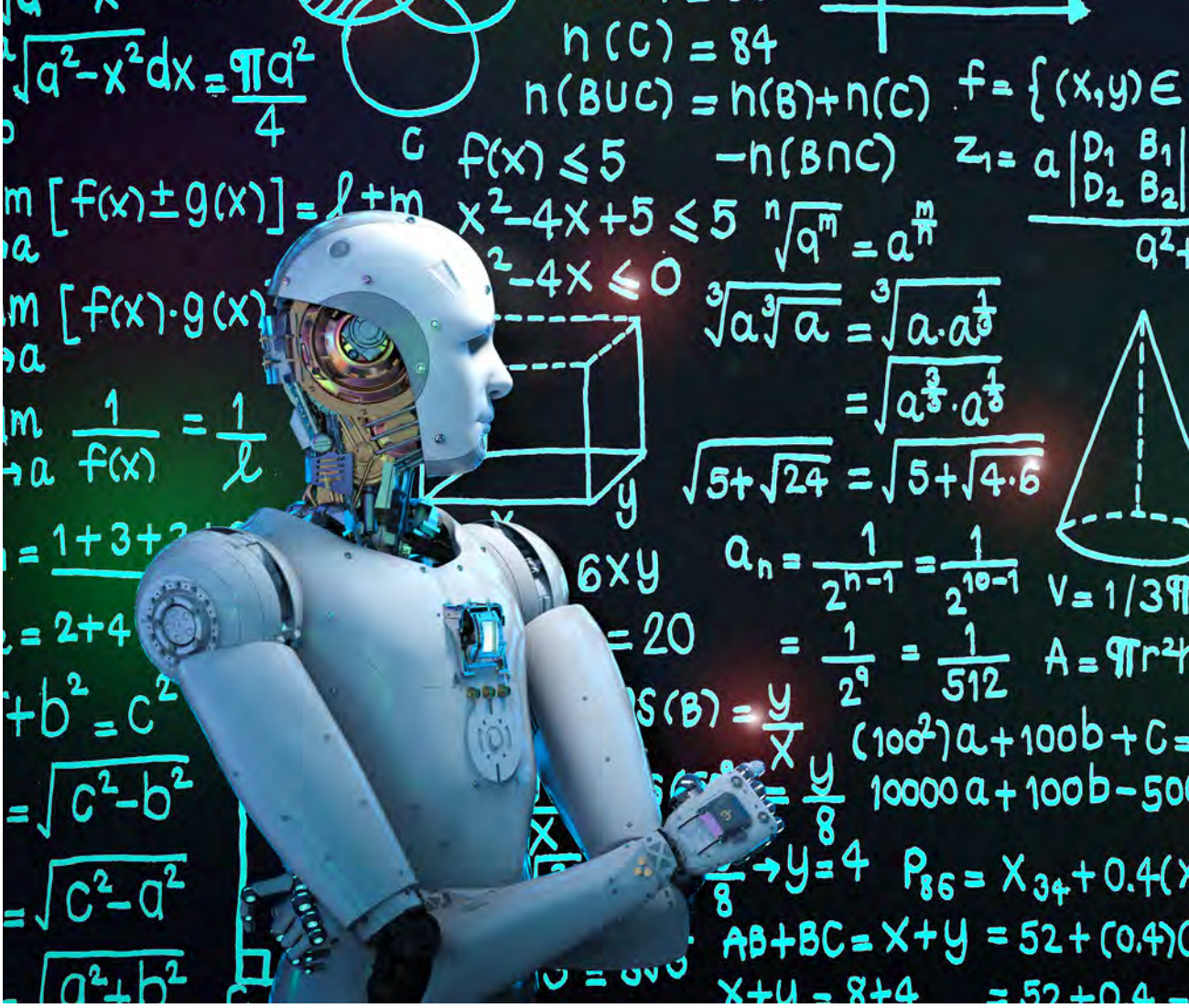
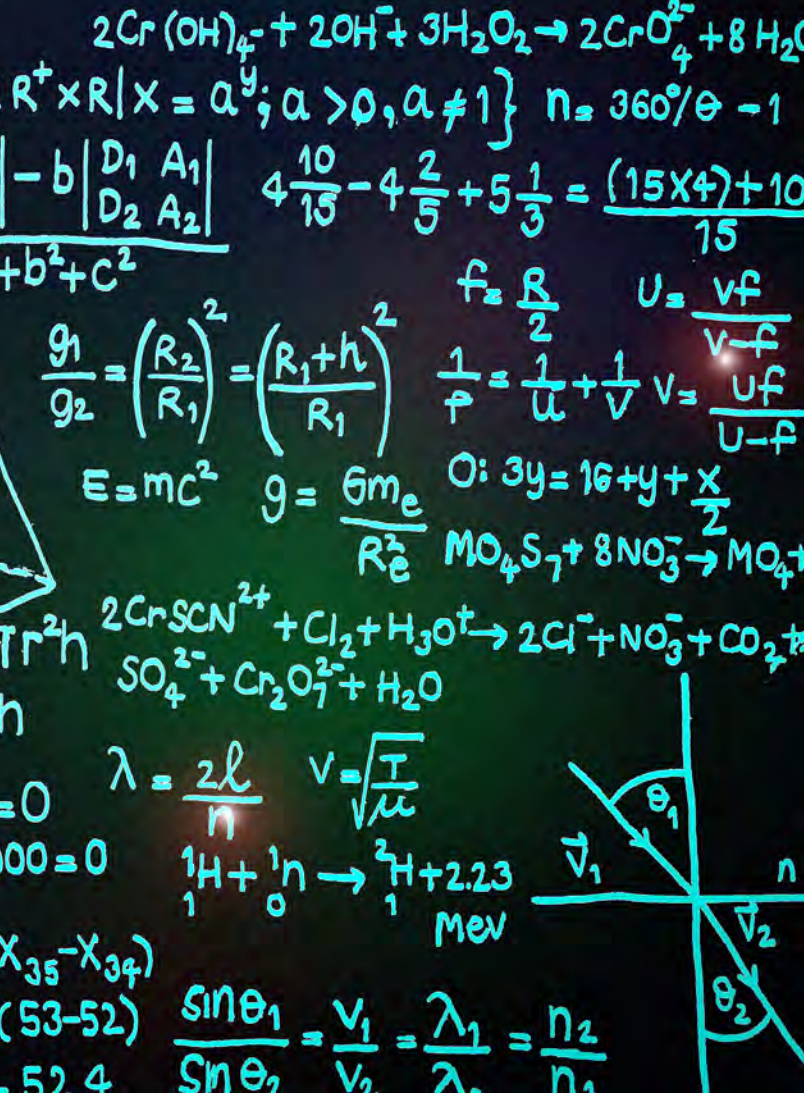


AI: GAME CHANGER for INDIAN EDUCATION SECTOR



Artificial Intelligence (AI) is spreading its wings almost everywhere. Starting from the businesses to even the agricultural fields, AI is powering the world in many ways than one. There have been various discussions surrounding the fact that AI has the potential to impact the education sector as well. There seem to be various possibilities that AI is expected to spur innovation in the field of education. On the basis of experts' opinions, **Anupama Suresh Mehra** of **Elets News Network (ENN)** explores how AI will be a game-changer in the educational industry.

> *Education is not just bookish knowledge but making a child all-rounder with life skills.*
> *— Dr. Geetha Venkat, Director, Geeta High School, Hyderabad.*

Artificial Intelligence (AI) might just be the single largest technology revolution, with the potential to disrupt almost all aspects of human existence.

Artificial Intelligence, with its digital and dynamic nature, is progressing at an accelerated pace. A profound impact is also seen in the nature of services within the education sector.

Today, AI has left no sector untouched with its innovations and novelty. For the educational sector, it is the most beneficial as education forms the basis of all knowledge and progress. Hence, it is the need of the hour to empower and update our educational systems with technologies like AI.

An effective education sector has the ability to transform a country through the development of human resources and increased productivity. In the context of emerging countries particularly, levels of education and literacy of the population play an important role in the development and overall transition to an advanced economy.

"AI holds the key to the revolution in education. If leveraged consciously it could be the single driving force behind making education for all a reality. The only way for teachers to fight the threat of AI replacing them is by embracing technology and upgrading their skill set to handle AI complementing their existing knowledge and skillset. It is the moral responsibility of educators and educational reformers to make it work for the collective good of humanity," says **Dr. Jyothi Reddy Ghanta, Founder, Principal, The Shri Ram Universal School, Hyderabad**.

We are not far behind from the day when the printed books will be entirely replaced by digital learning tools. So, does it mean that the internet and technology will be really a game-changer for the education sector? The answer is yes.

"Large scale incursion of AI into the classrooms of schools and colleges will drastically change the teaching-learning process in the coming days. This AI disruption accompanied by 5G would provide learners quick access to the latest information and help them better understand the concepts to apply in real-life situations. Facilitators can pool and analyze huge volumes of data on various aspects of learners' activities and find the learning gaps to help up-skill their talents and make them market-ready as an entrepreneur or as a skilled professional," says **Radhakrishnan C, Principal, Hillside School, Hyderabad**.

From Artificial Intelligence, Machine Learning to automation and digitization, the global learning

sector has been among the segments most benefitted from technology. For decades, the changes in human life were speculated with the advent of AI and technology, and now they can be experienced for real by anyone around them.

As the adoption of digital means of gathering data increases, it is important that these methods are effectively leveraged to deliver improved education and teaching.

While we may not see humanoid robots acting as teachers within the next decade, there are many projects already in the works that use computer intelligence to help students and teachers get more out of the educational experience.

"In recent decades not only has the meaning and context of education has changed significantly but also the mode and mechanism to disseminate it. Education of the new era will need more collaboration, relevant skills, and strategies to use those skills and educational leaders to engage students meaningfully and productively. Schools should be integrated with society and technology without losing out the essence of values and integrity," says **Anjali Razdan, CEO, GD Goenka School, Hyderabad**.

Academia worldwide is implementing and utilizing AI in administration, learning, tutoring, grading, and assessments. The outcomes of amalgamating technology with innovative learning processes have absolutely revolutionized education systems across the globe.

> *Large scale incursion of AI into the classrooms of schools and colleges will drastically change the teaching-learning process in the coming days. —- Radhakrishnan C, Principal, Hillside School, Hyderabad.*

"AI in education in India for the majority has relevance only when the natural intelligence of each and every student is realized/tapped in the early stages of education. This can be made possible only by the mindful education by schools. AI should be increasingly used to do the mandatory routine work of the teacher to reduce her workload and she can use her time towards more humane needs with her students. For example, AI can be of help to do the job of a teacher like an answer paper assessment. Along with the elite and the middle-class students, there is an urgent need to address the educational needs of the underprivileged and first-generation learners that form almost 50 percent or more of the population of India. India is the youngest country in the world and if we do not act fast we will be wasting an entire generation of youth to nothingness, leading to more unemployment, addictions, and crime," says **Dr. Sangeeta Srivastava, Principal, Sardar Vallabhbhai Patel Vividhlakshi Vidylaya**.

While AI may not ever be able to truly replace human grading, it's getting pretty close. Teachers spend a lot of time simply grading papers rather than introspecting on ways to make learning a

more engaging experience in-sync with what is happening around us.

It's now possible for teachers to automate grading for nearly all kinds of multiple-choice and fill-in-the-blank testing and automated grading of student writing may not be far behind.

Today, essay-grading software is still in its infancy and not quite up to par, yet it can (and will) improve over the coming years, allowing teachers to focus more on in-class activities and student interaction than grading.

AI can reduce wastage of time and resources at the grading stage because it allows each student to know how they are performing in real-time from both the lens of proficiency level and expertise. This critical information can motivate students to try harder throughout, rather than at the end when they see a final grade and it is too late to do anything.

In India, the Central Board of Secondary Education (CBSE) has recently signed partnerships with Microsoft India and IBM to focus on tech re-skilling for teachers and AI curriculum in schools.

In its partnership with Microsoft India, CBSE is looking to conduct capacity building programs for high school teachers with an aim to integrate cloud-powered technology in K-12 teaching and inculcating digital teaching skills in educators through the curriculum as well as extra-curricular training. The program for teachers of grades VIII to X will be conducted in 10 cities across the country.

The school education in India has seen substantial progress in recent decades, with efforts at both the Central and State levels, and substantive gains in enrolment have been achieved – Gross Enrolment Ratio (GER) is 97% at the elementary level and 80% at the secondary level, as per recent figures. However, low retention rates and poor learning outcomes may impact gains in enrolment.

Speaking about it, **Dr. Geetha Venkat, Director, Geeta High School, Hyderabad**, said "Education is not just bookish knowledge but making a child all-rounder with life skills. Higher education cannot be fulfilled without basic pre-primary education. Through child-centric interactive education, a child will go out with a sack full of knowledge to lead the society. Every child is born lively we only need to facilitate with all the things needed. He himself will explore and do innovative things, we are binding him in the cage of the school capturing his flow of thoughts."

India, being one of the leading developing countries, is following the trend and adopting innovative technology and AI in the education sector as well.

Although the path is long and full of obstacles, yet the education pioneers of the country have vowed to take the national education system at par with the global level. **DL**

> *"The only way for teachers to fight the threat of AI replacing them is by embracing technology and upgrading their skill set to handle AI complementing their existing knowledge and skillset. — Dr. Jyothi Reddy Ghanta, Founder, Principal, The Shri Ram Universal School, Hyderabad."*

HIGHER EDUCATION: PATHWAY FOR ECONOMIC DEVELOPMENT

A nation's capability to utilise its physical capital is a function of its human capital; and if the human capital does not increase in proportion with the physical capital, economic development stalls, writes **Debajyoti Mohanty** of **Elets News Network (ENN).**

In the ringing words of Nelson Mandela, "Education is the most powerful weapon you can use to change the world". This expression of wisdom reminds us the importance of education in eliminating gender inequality, reducing poverty, creating a sustainable planet, preventing needless deaths and illness, and fostering peace.

Additionally, education is important to raise people's productivity and creativity and to promote the latest technological advances among the populace. It also plays a crucial role in securing economic and social progress and improving income distribution.

Economic development depends on a variety of factors and economists have had a difficult time in identifying the fundamental ones. At its core process, economic development involves combining financial and human capital in a productive way, which is why some countries advance faster than others.

More than two centuries ago, Adam Smith, otherwise popularly known as the father of Economics, described 'human capital' as one of four types of fixed capital that contribute towards the advancement of a nation's economy. This theory gave rise to a speculation among other notable economists that poor countries remained poor because they lacked human capital. It was theorised that a nation's capability to utilise its physical capital, is a function of its human capital. And if the human capital does not increase in proportion with the physical capital, economic development stalls. Furthermore, foreign investors are more eager to invest in physical capital and as a result, human capital is more likely to be a constraint to development.

DRIVING THE CONTEXT HOME

Coming to the present, economists all over the world now accept

that investment in education (or human capital) is essential for economic development. Investments made in primary and secondary education are important for the formation of a strong base. It is because an educated labour force is more mobile and adaptable. They can learn new tasks and skills more easily, use a wider range of technologies and sophisticated equipment, and are more creative in their thinking.

Education, higher education in particular, is a technology and innovation driver. Furthermore, it is a driver of growth, prosperity and competitiveness in national and global economies. Universities and other institutions not only provide the latest education and skills training, but also present an active research environment that can be utilised to produce innovations with varied commercial and societal applications. Many important technological advances in recent times, including cloud computing, augmented reality, and self-driving cars, came out of research taking place in universities. The research and innovations coming out of universities benefit the wider economy, as it drives local and global investment, enhances exports, and makes the economy more balanced.

HIGHER EDUCATION VIS-A-VIS INDUSTRY COLLABORATIONS

Higher education will stand to be meaningless without quality publications and research. In the last decade, there has been a substantial growth in the number of research deals between the industry and universities. Businesses are increasingly turning towards universities to carry out pertinent research, as they provide access to the best scientific minds and equipments in specialised areas. At the same time, reduced public funding for academic research has made universities more open to industrial collaboration and the private investment which comes along with it.

It also helps if the universities and their collaborative industry partners are geographically close to each other. A good example of this concept is the collaboration between Stanford University and Silicon Valley. Highly successful and globally active companies like Apple, Alphabet (Google), Twitter, Facebook, AMD, Intel and Cisco have set up their headquarters in the areas and make full use of the academic research potential available in the vicinity, which has produced some of the most fascinating technological innovations in recent times.

Similar collaborations take place in India as well, with many big corporations taking advantage of research facilities and talent available in premier Indian universities and engineering institutions.

> *The much-awaited New Education Policy (NEP) has a lot of hopes for the betterment of education in India. Telangana has taken a few impressive decisions ahead of NEP, including "Intinta Innovator", an innovation drive to identify innovators from the grassroots level and give them the opportunity to realize their true potential.*
> **- Sunil Sathyavolu, Co-founder, EdSense.**

UNRAVELLING THE CRUX

Education is an important tool which contributes to the economic growth and development of a nation. Moreover, rapid expansion of education accelerates economic growth which eventually leads to national development. In fact, today's incessantly evolving world demands a robust education system that will lead to employability.

The status of education can be measured using different indicators such as the Gross Enrollment Ratio (GER), education budget, literacy, etc.

By 2030, India is expected to have the largest number of college-age people in the world – a staggering 140 million. India's current GER, standing at 26.3 percent, is yet to meet the Ministry of Human Resource Development's (MHRD's) target of 30 percent GER by 2020. Moreover, even if the target of 30 percent GER is achieved, India would still be considerably behind countries like China (43.39 percent) and USA (85.8 percent).

According to the latest All India Survey on Higher Education (AISHE) for 2018-19, the Gross Enrolment Ratio (GER) in India's higher education sector has increased from 25.8 percent in 2017-18 to 26.3 percent in 2018-19. Besides, the number of universities have grown from 903 (2017-18) to 993 (2018-19) and total higher education institutions (HEIs) from 49,964 to 51,649 in the same period.

Despite witnessing a four-fold increase in the number of Higher Education Institutions (HEIs) since 2001, India would need at least another 800 new universities and 40,000 new colleges by 2030 to accommodate this huge number of youth

In fact, Telangana is one of the Indian states that have recorded a GER which is way above the national average. The State in 2018-19, recorded a GER of 36.2 percent, as against the national average of 26.3 percent.

The GER of other states like Sikkim and Tamil Nadu - which are top performers - stands at 53.9 percent and 49 percent, respectively.

Meanwhile, **Mr Sunil Sathyavolu, Co-founder of EdSense** points out that the much-awaited New Education Policy (NEP) has a lot of hopes for the betterment of education in India. As far as the southern state of Telangana is concerned, he said, it has taken a few impressive decisions ahead of NEP, including "Intinta Innovator", an innovation drive to identify innovators from the grassroots level and give them the opportunity to realize their true

potential.

Commenting on connecting education to the industry, Mr Sathyavolu added that it has always been a challenge and various initiatives are in progress for a better tomorrow, all of these are important but the execution is the key. It would be great to bring the Social & Emotional Learning aspect and make use of adaptive learning platforms which will be great in executing the right digital strategy for the education sector.

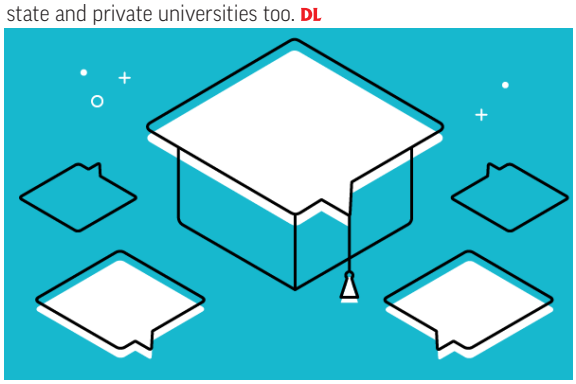
Furthermore, according to **Radhakrishnan C, Principal, Hillside School, Hyderabad**, Telangana has a huge potential to emerge as an educational hub with its critical mass of local and foreign players - including students, education institutions, companies, knowledge industries, science, and technology centers - who can thoroughly collaborate and in some cases co-locate, engage in education, training, knowledge production, and innovation initiatives.

CONCLUDING REMARKS

As far as collaborations are concerned, they are usually mutually beneficial and result in increased profits for the industry; and investment and scientific publications for academia, which in turn increases their global standing. Also, the scope for widening this collaboration is very wide, and could be achieved by undertaking infrastructural changes, among others.

The higher education sector offers training to people at all stages of their careers – from students, fresh and recent graduates to experienced professionals. Skill training has a very positive impact on the wider economy. A well-trained and skilled workforce is better prepared for the challenges and opportunities that are typical of a modern workplace. A workforce with the right expertise works more efficiently and confidently than those struggling to keep up with the changing demands of their roles. Ultimately, a skilled workforce increases productivity and propels growth in the wider economy.

Moreover, countries are putting knowledge at the service of their societies to create a better world. This can be achieved through the training of first-class minds, through major advances in science and technology and by encouraging an interest in learning. To realize its full potential, higher education should maintain a pro-active stance, and strengthen its position as bedrock upon which countries are built. It is time we expanded research from just specialised and premier institutes to Central, state and private universities too. **DL**



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TELANGANA: FOSTERING GLOBAL INNOVATION IN EDUCATION

The department has introduced several initiatives in order to ensure equal and quality education is provided to every child in the state. Some of them are DOST, OSDES, Hybrid Grading System, and others, says **Navin Mittal,** Commissioner, Collegiate and Technical Education Department, Government of Telangana, in a conversation with **Sudheer Goutham** and **Anupama Mehra** of **Elets News Network (ENN).**

India is regarded as an education hub globally. Where do you see the growth of the education sector when compared to global needs?

We as a country are growing in size and stature. We are seeing a lot of investment and multinational companies are coming and setting up their base in India. And to meet those demands of global businesses and global entities, we need to also have a global perspective and global education. There are only two ways to do that is: Our universities and institutions reaching to the global level, or world-class universities getting established here, and secondly, our students get to study in some of the best institutions in the world. This will help them to get global exposure in-turn becoming part of the growth story of our country.

For this, the Government of Telangana is also supporting us in a very big way. In fact, there are four Departments who are supporting this initiative: Department for SC/ST Welfare, BC Welfare, and Minority Welfare. All these four departments provide overseas student scholarships. But in some communities, though the scholarships are available, there are not many takers for them. Our aim is to provide quality education to every single individual.

With technology changing rapidly, what steps are you taking to keep your faculties and teachers upgraded at your educational institutions?

There are global Universities that are coming and partnering with us. They have come here and have organised programmes for our faculty on some very relevant topics. The idea is that our faculty should remain upgraded. There are again two ways of upgrading our faculty. One is our traditional Faculty Development Programme (FDP) ,the faculty allotment programmes and the Quality Improvement Programmes (QIPs), and the second way is to expose them to some of the concepts and the technological ideas as well as pedagogical ideas of what is followed in Universities globally.

We are promoting it through specially arranged programmes, as well as through webinars and we are also in touch with a few Universities where they can also open up the access to their faculty programs online or through video conferencing so that our faculty also get trained in a way that global faculty gets trained.

Navin Mittal
Commissioner
Department of Collegiate & Technical Education
Government of Telangana

Telangana inks MoU with MCEME to award diplomas to military personnel after retirement

How are you planning to sustain this whole momentum?

We are forming some committees which are going to sustain

this whole momentum, thinking forward. And on those committees, we are also getting confirmations from many important faculty and university administrators from other countries. That is under process and we are also very excited to see the response which will help to reinforce this partnership further and the power of this collective work can be seen by the fact that one of our career growth partners – 'Harvard Business Review (HBR) Ascend' has opened up 45 days free access to Harvard Business Review for the students and institutions who are a part of this forum. Individually, we would have never been able to do that. That is the beauty of this, where the power of collective action is very visible. I see some very exciting days for this forum ahead. Because it is an ideal partnership of Government or Indian institutes, global Universities, global education players, and the NGOs, like the India Matters Foundation which is supporting this initiative.

What are the key initiatives taken by the department to provide equal and quality education in the state?

The department has introduced several initiatives in order to ensure equal and quality education is provided to every child in the state. Some of them are:

Degree Online Services, Telangana (DOST)

Online Admissions for UnderGraduate (UG) Courses (B.A./B. Com./B.Sc./B.B.A/etc.,) in the State of Telangana since 2016 through a web-based system called Degree Online Services, Telangana (DOST). DOST was introduced to conduct Online admissions for UG Courses by following the merit cum rule of reservation in all the Degree Colleges, like University Constituent Colleges, Government Degree Colleges, Private Aided Degree Colleges, and Private Unaided Degree Colleges, etc. It is a student-friendly and effortless way to apply for UG courses. It helps the student in selecting his/her choice of courses at the UG level with all the information he/she wishes to have.

It minimizes the efforts and maximizes the students' choices to opt for a UG course. It is a web-based system that enables the UG admissions seeking students to take admissions in UG courses through web portal https://dost.cgg.gov.in. Online admissions for UG courses were successfully conducted for the last four Academic Years from 2016-17 to 2019-20 through DOST-2016, DOST-2017, DOST–2018 and DOST-2019 respectively.

- E-Office has been established in the Department linking with all Government Colleges and Government Polytechnics for online speedy disposal of files and for transparency in the administration.
- Aadhaar Based Bio-Metric attendance system has been implemented in all Polytechnics and colleges to infuse discipline among staff and students.
- The degree curriculam has been revised from 2019-20 onwards by making co curricular activities and employability skills also as part of the curriculum.
- Grading System has been revamped in the evaluation of students by introducing Hybrid Grading System which is combination of relative and absolute grading system, as it will minimize misclassification of students on the basis of marks, will reduce societal pressure and will provide the learner with more flexibility.
- On-Screen Digital Evaluation System (OSDES) has been implemented in Osmania University and also Diploma examinations in State Board of Technical Education & Training, Hyderabad for quick and error-free evaluation of the answer scripts.
- Government Colleges & Government Polytechnics have been ISO 9001: 2015 certified to enable world class processes in those institutions.

Do you feel India will be a destination for International Research in the coming years?

Regarding research, I fundamentally believe that India is going to be a future destination for international research.

A lot of research part where manpower is involved, there is no better destination than India globally.

But for this, we need to train our faculties and teachers. We talk about Artificial Intelligence (AI), but how many of our faculties are trained in Blockchain, Machine Learning or AI. In some of the nano-technologies, even data analysis, and analytic techniques, our faculty is not fully trained. Cryptography, Cybersecurity are important field and a new field that is emerging is quantum computing. Google has already successfully demonstrated quantum computing. These are the things that unless our faculty have international exposure, we will not be able to keep pace. Hence we have to constantly keep upgrading our faculty to meet the needs and possibilities of ancient times and future. **DL**

VOCATIONALISATION IS NEW MANTRA OF THE DECADE: SYED OMER JALEEL

Telangana State Intermediate Education Institutions are making efforts to include in their curriculum those practical subjects which are likely to generate among students some basic knowledge, skills, and disposition that might prepare them to think of becoming skilled workers in future, says **Syed Omer Jaleel,** Secretary and Commissioner, Department of Intermediate Education, Government of Telangana in conversation with **Aupama Mehra** of **Elets News Network (ENN).**

> *These student counsellors will be trained by our psychological counsellors in order to train students to face stress, exams, and overcome their fear of failure.*

Tell us about the steps taken by your department to improve the education sector in the state.

Telangana, the youngest state in the country, has been taking unique initiatives in the field of education. One of them is the introduction of Information Technology in Intermediate Education, via which now students can do everything online, starting from their admission to taking their pass out certificates. Telangana State Board of Intermediate Education is providing this

service to avoid any personal interface and easy access to the students.

We are also processing our association with the Institute of Chartered Accountants of India and Centurion University to upgrade and make our syllabus, and courses in tune with today's industry needs.

We have introduced new schemes for students' welfare. We know that all students are not equal when it comes to learning. There are students who are slow learners and for them, we are taking some special initiatives.

Board examinations are around the corner. In 2019, soon after the State Board results were announced, 27 students had committed suicide. What steps are you taking to ensure that no such incidents happen?

Today, students take extreme steps when they face failure. To psychologically counsel and give them the support, we are planning to first appoint student counsellors. These student counsellors will be trained by us in psychological concepts. They will help and guide students to overcome their fear, so that, they can appear for their examination confidentally without any kind of stress in their mind. This initiative will hopefully help students to overcome their fear and in-turn will reduce cases of suicide in the state.

What do these counsellors do? And what kind of inputs do you give to them?

We have appointed student counsellors from the government colleges. Similarly, we have requested private colleges also. This is being done in order to identify the lecturer who is more popular and interactive with the children. So, students can have more access to them. These student counsellors will be trained by our psychological counsellors in order to train students to face stress, exams, and overcome their fear of failure. This is done to help them cope with the problems they are facing not only related to exams, but also in life.

You are looking after 2,000 + colleges in the state. What is your vision to make them different from other states?

There are more than 10.8 lakh children, 2,500 colleges and the system of administration to run these colleges, to prescribe them to conduct exams and get the results. We have fixed the snags that appeared last year. This has been under CGG (Centre for Good Governance). Other than that, we are also looking at the syllabus and trying to modernise it to make it up-to-date and industry-friendly.

> *Considering, the rapid change in technology like Artificial Intelligence, Machine Learning, Blockchain, and others, we need to equip our children with it.*

Right now, we have streams like Commerce where the 1956 Act is being taught, whereas the Act has been changed in 2013.

Similarly, there is a need for vocationalisation, which we are working on. Along with Centurion University, some changes in course content, subjects, and other things, as well as in combinations, will be made available soon. Similarly, the Institute of Chartered Accountants of India has suggested us to upgrade our course content.

What steps are you taking to fill the gap between Government and Private colleges in terms of quality education, teaching methods, etc?

We are a bi-furcated state, after which we also had Presidential order. Certain lecturers have to be appointed for which we have already made a proposal. We are waiting for permission from the government, so we can recruit quality lecturers. Once the recruitment is over, the deficiency of lecturers in government colleges will be over.

The second thing we are concentrating on to fill the gap is training our lecturers to take care of our student needs. Vocationalisation is the new mantra of the decade. Telangana State Intermediate Education Institutions are making efforts to include in their curriculum those practical subjects which are likely to generate among students some basic knowledge, skills and dispositions that might prepare them to think of becoming skilled workers in future.

Considering, the rapid change in the technology like Artificial Intelligence, Machine Learning, Blockchain, and others, we need to equip our children with it. For that also we are taking steps. DL

SOCIO-ECONOMIC UPLIFTMENT IF NOT NOW, WHEN?

As educated and emancipated persons, we should contribute to the cause of socio-economic upliftment and self-liberation of the most disadvantaged sections of the society by carrying forward the payback to the society movement. Only our imagination imposes the limits on our achievements, says **Dr R S Praveen Kumar,** Secretary, Telangana Social Welfare and Tribal Welfare Residential Education Institutions Society, Government of Telangana in conversation with **Sudheer Goutham** of **Elets News Network (ENN).**

Tell us about the case study of your organisation that's been taken up by Harvard University?

Due to its invincible position in the global public residential education map, the Telangana Social Welfare Residential Educational Institutions Society (TSWREIS) continues to attract many educators and official delegations from different parts of the country and the World. In a major acknowledgment of the TSWREIS' initiatives in the field of education for marginalised students in the country, Harvard University, USA, made a case study on 'How Telangana Social Welfare Residential Educational Institutions are disrupting the status quo in the education sector in India ?'.

Students and faculty of International Educational Policy Course run by Professor Fernando Reimers of Harvard Graduate School of Education critically analysed the various path-breaking programs (like summer samurai camps, super students lecture series, tab labs, robotics, coding, leadership development, English language, and communication improvement programs, club activities, youth councils, etc.) and functioning of specialised schools like School of Fine Arts, Sainik school and Armed Forces Preparatory Degree College for Women in providing quality and equitable education to students from the most deprived sections of the society in the state of Telangana.

Perhaps this is the first time that any such intervention in education for the marginalised being noticed by the world-renowned Harvard University. The students and faculty of Harvard University also analysed the challenges in the professional development of teachers and school leaders against the background of acquisition of the 21st century skills by the students.

DR R S Praveen Kumar
Secretary
Telangana Social Welfare and Tribal Welfare Residential Education Institutions Society
Government of Telangana

How are TTWREI & TSWREI Societies emphasising on Sports Education and Sports activities for the students leading to achievements and success at the National and global platforms?

In a first of its kind move, the TSWREI and Telangana Tribal Welfare Educational Institutions (TTWREI) Societies have established Sports Academies (Golf, Rubby, Kho-Kho, Weightlifting, Water Sports, Kabbadi, Cricket, Softball, Football, Handball, Chess,

Athletics, Wrestling, Judo, Boxing, Swimming, Martial Arts) to nurture young talent and build a new generation of sportspersons from marginalised sections of the society.

The TSWREI & the TTWREI Societies conduct talent scouting camps from school level to state level to spot young talent in different sports disciplines. The budding sportspersons will be shortlisted based on their performance, merit, physical, mental and psychological attributes and these shortlisted candidates will be admitted into sports academies. The academies offer flexible academic program in combination with world-class sports training programs.

Students in sports academies undergo rigorous training under the watchful eyes of experienced coaches of National and International repute. Highly nutritious and personalised diet is given to the students as per the recommendations of Sports Authority of India (SAI). The societies also have tie-ups with famous sports academies in the state of Telangana to train the students for National and International level.

In recent years, TSWREI and TTWREI Societies produced some of the finest sportsmen and women in martial arts, yoga, chess, sailing, athletes, handball, adventure sports among other disciplines, thanks to continuous exposure of sportspersons to various state, National and International competitions/ tournaments, and incentives will be awarded to the medal winners.

Tell us about the recent achievements of your institution?

The lives of social and tribal welfare students took a transformative turn as our institutions have been leaving no stone unturned to provide right coaching, supportive faculty and environment to translate poor students' dreams into reality.

About 2 lakh deprived children have been exposed to a world of new opportunities hitherto unheard of in the annals of the government public education sector in India. Thanks to the government of Telangana for giving major impetus to welfare residential educational institutions under the prestigious KG-PG Mission. In recent years, our students have come out with flying colours in National level entrance exams and secured admissions in renowned IITs, NITs, Delhi University, Indian Maritime University, IISER, Azim Premji University, Tata Institute of Social Sciences (TISS), Indian Navy School, Goa, among other prestigious Universities/Institutions in large numbers every year.

In this academic year alone, a whopping 103 social and tribal welfare residential students joined Delhi University. By all means, this is the largest contingent a single state has ever sent to Delhi University. 74 students have joined renowned medical colleges and 55 students have qualified for Indian Maritime University, Chennai. Ms. Kandi Shresta of TSWREIS clinched all India 1st rank in Indian Maritime University entrance exam, 2019.

What do the parents of these students do? They are daily wage laborers, vegetable vendors, tenant farmers, roadside tea sellers, security guards, masons, domestic maids and auto drivers.

The success stories of these students stand testament to the fact that poverty is not an impediment to success, if right opportunities are provided. The TSWREI & TTWREI Societies also widened their footprint globally under International student

exchange programs. So far, 18 students have secured CCIP & KL-YES fellowships offered by the Government of the United States of America and are pursuing studies at community colleges located across the USA. 50 students visited countries like Holland, Poland, Greece, Vietnam, Cambodia, Nepal and Srilanka under the International student exchange program.

The average pass percentage figures in SSC, Intermediate and Degree have been 20% higher than the state's average pass percentage over the years. Degree colleges set a new record by securing an average pass percentage of 78, whereas the state's average pass percentage just stood at 36.

Mountaineering

Recently, 18 years-old Malavath Poorna has conquered Mt. Aconcagua (South America, 2019) Mt. Cartsnez (Oceania region, 2019) and Mt. Vinson Massif (Antarctica, 2020). With these remarkable feats, Poorna has become the first and youngest tribal woman in the world to set foot on the six tallest mountain peaks across six continents. Earlier, Poorna have scaled Mt Everest (Asia, year 2014), Mt. Kilimanjaro (Africa, 2016) and Mt. Elbrus (Europe, 2017).

Launch of Atmospheric probes

15 member team of social welfare residential educational institutions scripted history by launching 'SWAEROSAT-I & II (tiny atmospheric probes) into the stratosphere along with the payloads of France and United States of America to study cosmic radiation and ozone layer concentration at various altitudes.

Summer Samurai Camps

TSWREIS created a unique record by engaging more than 40,000 children in summer camps in 58 themes in 77 centers across Telangana, in themes ranging from leadership skills to horse riding to folk arts to Western music to self-defense to kathak dancing to computer coding to hospitality. This is perhaps the biggest ever state-run summer student campaign in the country.

What are the plans and visions of your institution for next 5 years?

TSWREI & TTWREI Societies are on the path of great educational transformation under the prestigious KG-PG mission of the government of Telangana, and laying a strong foundation for putting thousands of Scheduled Caste (SC) and Scheduled Tribe (ST) children on the orbit of higher education and career advancement.

Both the Societies deeply believe that marginalised children, like any other children, have an inalienable right to continue their education till the end. Every student is getting exposed to a world of new opportunities beyond the textbook and classrooms in an endeavour to break the shackles of poverty, early marriage, neglect and underdevelopment. In line with this noble mission, the Societies are planning to scale up its activities and programs on a massive scale in the coming five years.

Any message you would like to give for the digital Learning Magazine and elets TV?

I strongly believe that exposure, opportunity and attitude take

the people out of poverty and ignorance. Concerted efforts must be made to free poor children and communities from all sorts of inhibitions, inferiority complexes, negative stereotyping and enslavement. My point is "If not us, who? If not now, when"?

As educated and emancipated persons, we should contribute to the cause of socio-economic upliftment and self-liberation of the most disadvantaged sections of the society by carrying forward the payback to the society movement. Only our imagination imposes the limits on our achievements. If we can dare to imagine the beyond, we can achieve anything under the Sun. Poor children have dreams and we need to give wings to their dreams. Children from poor family backgrounds have tremendous inner potential and all we need to do is tap and harness this potential so that they reach the best of their capabilities in various spheres of life.

One must consciously strive to discourage the discriminatory words like Dalit and backward since these are all the stereotypes that are recklessly and negatively imposed on these communities.

Your identity must be a reflection of your aspirations and not a reminder of your painful past. I have launched Swaeroes movement, what we call 'Identity Re-engineering' and usage of words like dalit is consciously discouraged in swaeroes ideology. Swaeroes primarily helps the marginalized communities to discover their inner potential and surge ahead in life. I strongly believe in role model ideology and we need to expose children and communities to the lives of role models, so that they get inspired and know what road they can take to achieve something big in their lives.

How is the institution deploying IT and other emerging technologies in its daily functioning and also in the curriculum of students?

The Society recognises that employability skills should be imparted at the school level itself to the younger generation, so that they are equipped with skills to work in diverse settings in a technology driven global economy.

The Societies launched Robotics, Tab Labs and Coding to provide children with computer programming and coding skills and make them innovators in the fields of Science, Technology and Engineering. Coding is introduced as a fourth language in the academic curriculum and ICT instructors teach C++, PHP, Pytho, HTML, etc and problem solving, logical and critical thinking skills to students of the class 5th to 9th classes.

All institutions are provided with computer labs and internet connectivity. Entire attendance of students, teachers and financial transactions in the society are done online. Office files are processed through online e-office application to bring transparency and accountability in administrations.

How is TTWREI & TSWREI Societies collaborating with the corporate and other National and International organisations/ institutions for the up scaling training of the students making them industry ready individuals and employable?

In collaboration with Gigaqwal, we trained students on data analytics and have placed 60 students in Cognizant, HGS, TCS, Nihar etc., further we have also developed a MOU with Cognizant to equip them with the soft skills required.

We have initiated the Summer Undergraduate Research Fellowship (SURF) Program for 2nd year undergraduates B.Sc/B.A/B.Com to inculcate a research interest during Under Graduation. As part of this we have established collaborations with the University of Toledo, Harvard University (USA) and premier institute in India like Jawaharlal Nehru University, Hyderabad Central University, Azim Premji University, Centre for Human Security Studies etc., and successfully deputed 200 students to experience research based learning. We encourage holistic development beyond the confines of the classroom.

Therefore, we have collaborated with AIESEC, Bridge Institute, Kalinga Institute of Social Sciences (KISS) and Chezuba to provide the students with an opportunity to explore beyond the boundaries of the state and nation. We have been successful in deputing more 100 students to Morocco, Egypt, Srilanka, Nepal, Poland, Vietnam, Turkey, Cambodia, Bahrain, Greece and Russia to work and volunteer at NGOs working towards sustainable development goals.

Under the International Cultural Exchange (ICE) program, we have collaborated with the Bridge Institute and through this 10 students visited Singapore to ideate and voice 'tackle the plastic and poverty crisis'. Through the partnership with Chezuba organisation, 25 students, currently deputed in Bangalore, are volunteering with orphanages, old age homes and homes for the disabled. The Kalinga Fellowship (2018 & 2019) allowed the students to understand the need for a united effort to combat sexual violence and assault. This also gave them a platform to interact with individuals from different walks of life form across the world.

We always strive to create an environment conducive to entrepreneurial thought. In an attempt to encourage this, we partnered with V REAP Foundation to educate the students towards developing credible business ideas. **DL**

TASK: PROPELLING SKILL DEVELOPMENT & EMPLOYMENT FOR TELANGANA'S YOUTH

To make it an attractive proposition to the investors in the state, Telangana Govt. offers skilled and trained entry level resources through TASK, without the investors incurring recruitment and training cost as well as benefit from a workforce that is productive from the first hour itself, says **Shrikant Sinha,** CEO, Telangana Academy for Skill and Knowledge (TASK), Government of Telangana, in a conversation with **Sudheer Goutham** of **Elets News Network (ENN).**

Shrikant Sinha
CEO
Telangana Academy for Skill and Knowledge (TASK)
Government of Telangana

The Government of Telangana has announced 2020 as 'the year of Artificial Intelligence (AI)' and the World Education Summit also revolves around emerging technologies in AI. Can you please tell us about TASK's initiatives on a similar theme and how it is moving forward??

The announcement made by the Telangana government in 2020 being the year of AI is a step in the right direction. And while the industry is gearing up for it, it is important for the youth to be trained so that theycan get the right kind of skilled and industry ready manpower as and when required.

TASK is working in this direction in three different ways. The First Step was training the faculty in December 2019, through a five-day training programon AI with focus on Machine Learning (ML) and Deep Learning (DL), thus making them competent to train and guide students in this emerging area.

The Second Step, is conducting multiple events such as Technology days, where we will invite industry people to mentor our studentsin various colleges across the state.

The Third Step, is working closely with corporations like, CISCO, Intel, Oracle, SalesForce, AI-First Academy, and many others to ensure that our students benefit the maximum from the training, and are prepared for any job that the industry today has to offer. We would also be working with all the leading technological institutions like IIT-H, IIIT-H, BITS Pilani-H and NIT Warangal.

As you said, Intel, Oracle, CISCO and other organisations have collaborated with you for this initiative. Tell us about other collaborations you are looking forward to in this line?

Collaboration is the best way of moving ahead. As the world comes closer, and distances become shorter, collaborations become more important, and that is why we are looking at collaborating with multiple partners. Recently, we have signed a Memorandum of Understanding (MoU) with about 20 such partners, out of which a considerable proportion is focusing on AI, Big Data, Cloud, Virtualisation, IoT and other emerging technology areas.

For instance, we have partnered with Manipal ProLearn on AI and ML. We have also partnered with AI-First Academy, where we will be working on how students can develop projects on AI, ML, and DL. Other than this, there are different kinds of partnerships that we are looking forward to.

As our focus is not only limited to IT/ITeS, we are also exploring and expanding collaborations in the field of RPA (Robotisation & Process Automation), AR/VR, AVGC, Life Sciences, Pharma, Aerospace, Robotics, Smart Manufacturing, Infrastructure sector and many others.

As a wing of the Telangana IT Department, TASK is said to be an integral and connecting bridge between industry and academia. Please give us an overview of it.

TASK works in a unique way. We have 676 colleges registered with us, which essentially means that there are 676 TASK centers across 33 districts of Telangana so that interested students can register with us easily. As of date, we have 60,000+ students registered with TASK. Apart from students, there are college pass outs and others, making a total of about 1,87,000 people registered with TASK. I would further like to mention, that out of all the students registered with TASK, 64.7 percent belong to the underserved communities.

Furthermore, close to about 6,000 faculty members have been trained by us on different topics including courses on Technology, Pedagogy and also Psychology of the Gen 'Z'. We also have been running some unique programs for the faculty members to prepare our students to work in the Global Industry. A lot of big corporate like Infosys, Oracle, and Salesforce have come forward to run these programs for our faculty members, who are then mandated to conduct similar programs in colleges in various district across the state.

Our emphasis and focus is to train our students from the job perspective, hence along with industry and domain skills we also train studentsin essential skills like critical thinking, problem solving, working in a collaborative environment, communication, data interpretation, and interview skills, which enhance their employability quotient.

Have you quantified the number of youth employed so far due to the initiatives of TASK?

TASK conducts job fairs and placement melas, apart from which we help colleges host placement drives in their premises. Rough estimates show that around 40 to 50 percent got a job, around 30 percent went for higher education and the rest 10-20 percent went for self-employment or joined their family business.

One unique thing about the TASK is that the corporate advertise their entry-level job requirements on our portal. Hence the portal is updated with all the job opportunities available for our students, and they can apply from the portal itself.

Since you are familiar with the industries that are investing and getting established in Telangana, what you think would be the state's employment rate in the next five to ten years?

According to a recent Jones Lang LaSalle (JLL) report, Telangana comes second in ease of doing business. Getting land and money to set up an industry is an easy part, but getting the right kind of manpower is difficult and crucial for the industry to survive. To make it an attractive proposition to the investors in the state, Telangana Govt. offers skilled and trained entry level resources through TASK, without the investors incurring recruitment and training cost as well as benefit from a workforce that is productive from the first hour itself. In case we don't have the required equipments or expertise, we seek help from the industry. For example, in aerospace we don't have the required equipment, so we depend on the partner organisation, which is also the recruiting organisation, to work with us and co-create a curriculum; and that's how we improvise and implement the program.

It is well known that one-third of the world's vaccine are manufactured in Telangana Genome Valley in Hyderabad and hence a lot of jobs exist in that sector as well. In collaboration with the industry, we are also conducting programs on vaccine skill development and other pre-requisites in the pharma industry.

With more investment coming into the state, more companies and industrial parks like LED, Pharma, Life Sciences, Multi-modal Logistics and Textile getting established more youths will get jobs. I think the industry ready & skilled youth of Telangana is extremely well-positioned to take advantage of all these facilities. DL

TELANGANA: LEVERAGING EMERGING TECHNOLOGIES FOR A BETTER FUTURE

Jayesh Ranjan
Principal Secretary
Department of IT, E & C, Industries & Commerce
Government of Telangana

Rama Devi Lanka
Director
Emerging Technologies, Officer on Special Duty (OSD)
IT, E & C Department,
Government of Telangana

Telangana is the first state in the country to focus on leveraging emerging technologies for delivering citizen services, enhancing the efficiency of the overall functioning of the government and also to explore ways to increase the government's exchequer.

Government of Telangana's vision is to become a leader in Emerging Technologies. To realise this vision, the Information Technology, Electronics & Communications (ITE&C) Department of Government of Telangana has an Emerging Technologies Wing which enables an ecosystem for emerging technologies, and most importantly, leverages these technologies to develop innovative solutions for government departments.

The government has created a vertical for emerging technologies and the objective is two-fold. One is to develop the ecosystem required for the industry and the other is to make the government departments leverage or adopt emerging technologies. Furthermore, the government has come up with specific policies for Internet of Things (IoT), cyber security, data analytics, drones and blockchain, among others.

The objective of implementing emerging technologies was to solve certain challenges, pain points, improve service delivery, enhance citizen experience and improve internal efficiency of the departments. The initiatives were also selected on the basis of the government's short term and long term vision.

Before implementing these novel technologies, multilateral dialogues were held with Ministry of Electronics and Information Technology (Meity), State eGov Mission Team (SeMT) department, other government departments and the industry as a whole, to understand the challenges faced and technologies that can be used to plug the gaps. Moreover, other countries were studied for solving governance related issues using technology.

The study identified some key areas of focus such as big data and analytics, blockchain, Artificial Intelligence (AI), drones, and cyber security, to achieve holistic improvements in the system.

The Government of Telangana has also adopted blockchain technology in its functioning when it comes to verifying student credentials, property records management, credit cooperatives, chit funds, anti-counterfeiting for pharmaceuticals, civil supplies public distribution system, P2P energy exchange use case, flexibility aggregator use case, vehicle lifecycle management, and law enforcement.

The problem in verifying student credentials is that the student record data stored using traditional methods can be tampered,

which leads to fraud in educational sector so data is required to be immutable. In this regard, blockchain gives the benefit of immutability and being a distributed ledger, it facilitates data sharing between departments.

Property Records Management (PRM) is another key area of concern. It involves problems like double registration, people producing fake documents for registration, and insider attacks or traditional database related attacks (DB Modifications). Implementing blockchain in PRM will result in benefits like forming a trustworthy and transparent system using shared and distributed ledger, immutable and irreversible transactions using cryptographic hashes (integrity) and timestamps, and resistance to malware attacks using distributed ledger and cryptographic hashes, among others.

Piloted for Shamshabad District of Telangana, the PRM blockchain solution is designed as a parallel system and consumes the near real-time transactions from the existing application.

To improve financing and supplement credit flow from the banking sector, the government has launched a credit cooperative called Streenidhi. The cooperative provides timely and affordable credit to the poor SHG members as a part of the overall strategy of Society for Elimination of Rural Poverty (SERP).

According to surveys, about 40 percent of global microfinance activities take place in India, serving around 30 million borrowers at an average interest rate of 25 percent. In such a scenario, over-indebtedness and high defaults are common, and lack of trusted credit history of borrowers in the microfinance industry is one of the major reasons for it. Blockchain's decentralised nature can assist microfinance institutions to remove the need for mediators, thereby increasing transparency. Recording the economic history on an immutable distributed ledger can help build credit scores which can be verified in real-time based on the borrower's on-chain activity.

Medicine is a critical aspect of health. Yet, it kills over 1 million people annually due to counterfeiting.Reports from World Health Organisation (WHO), Federation of Indian Chambers of Commerce and Industry (FICCI), India Brand Equity Foundation (IBEF), Associated Chambers of Commerce and Industry of India (ASSOCHAM), and Pharmexcil estimate that over USD 110 billion has been lost in revenues for Pharma industry and in spite of various security techs in place 25-40 percent of medicines in the market are counterfeit. In this regard, blockchain's Distributed Ledger Technology (DLT) brings trust to the system due to its immutability so that people can trust the information coming out from RealMeds, whether to buy/take ownership of a medicine or not. The platform can also be used at point of administering and at Point of Sale (POS) in-store or online.

The Civil Supplies Department buys and uses 11 crore gunny bags each year to distribute rice at subsidized price to poor citizens. To prevent irregularities in this public distribution system, and tracking the grade quality of paddy across the supply chain, the Telangana State government is deploying a blockchain platform to track the gunny bags all the way from Paddy Purchase Centers(PPCs) to Fair Price(FP) Shops.Using blockchain technology will result in effective auditing, increased efficiency by eliminating middlemen, ensure transparency of records, provide accessibility to stakeholders, and ensurethe quality and safety of goods.The pilot will demonstrate a working model of blockchain based track and trace solution for public service delivery.

Concerns are arising due to increasing energy consumption on one hand, and high cost of Energy on the other hand. Consumers generate surplus energy, but lack options to sell it to peers in their network. As a result, theconsumers seek energy autonomy from unreliable energy services. Use of blockchain eliminates counterparty risks related to Peer to Peer (P2P) transactions in an

untrusted network. The utility of blockchain for energy sector can be demonstrated through P2P energy trading and flexibility aggregator use cases.

Blockchain also has uses in Vehicle Lifecycle Management (VLF). Presently, registration requires the same redundant process at dealer and RTO office, leading to high traffic and long queues at RTO, poor experience of the citizen, possible corruption, and increase in agents' fraud. Use of blockchain technology will ensure transparency in document sharing, and 'know your customer' (KYC). It will also help in RC creation, easy ownership transfer, and immutability in document storage and reduction of fraud.

Use of blockchain in Crime and Criminal Tracking Networks and Systems (CCTNS) and law enforcement is also gaining ground. A use case has been identified with the scope for pilot including transactions broadcast to all the nodes in the blockchain. Further, the historical trail of transactions will be tracked and stored in blockchain.

For the department of agriculture, a pilot is being run in precision agriculture using drones. Data from the satellite, water availability, climatic conditions and drone data about the crop characteristics helps in releasing advisory to farmers on when and which crops to sow.

As an end to end solution to survey, drones can be used to monitor and manage the mining leases/quarry leases located in various parts of Telangana State. The state has empaneled drone service providers, who shall conduct drone surveys, process the data, generate volumetric and extent analysis reports, generate output in a prescribed standard format and populate the drone data onto a dashboard through a computerized interface. Through this activity, the agencies would help the Department by deriving useful insights for the mining activity including planning and preparation.

Integrated Crop Management System using Drones (Precision Agriculture) is another initiativeto provide farmers with superior solutions using emerging technologies to address challenges of during crop growth and to improve output quantity and quality parameters. To understand the problems during crop growth with precision and immediately advise the farmer, it was proposed to use Unmanned Aerial Vehicles(UAVs) mounted with Red Green Blue (RGB) and Multispectral sensors be used for monitoring crop growth. This option was chosen due to its much better image resolution, ability to collect specific images for small cropped areas and flexibility to fly under the clouds and capture images as per crop growth phases when compared to satellite imagery.The pilot resulted in overall yield improvement and income enhancement compared to control plots of nearby farmers. The yield for the cotton plot increased by 33% from 12 quintals to 16 quintals and income increased by 21 percent from Rs 25,043 to Rs 20,661. Similarly, in Paddy the yield went up by 8.5 percent to 1650 kilograms from 1500 kilograms and income from the same increased from Rs 10,973 from Rs 6,910 per acre compared to control farmer plot.

Furthermore, Government of Telangana, World Economic Forum and Apollo Hospitals have collaborated to come up with an initial report, which will be used to run India's first drone medical delivery project in Telangana.

Drones can also be used for forest surveillance. Emerging Technologies (ET) Wing will be funding two separate pilot projects for the same with the Forest Department of Telangana.

Cyber security is another key area of concern. Complications from cyber-attacks may threaten lives, economy, and national security. Rapid identification, information exchange, investigation and coordinated response and remediation can mitigate the damage caused by malicious cyberspace activity. In this regard, the Telangana ITE&C Department in partnership with Data Security Council of India (DSCI) has established a Centre of Excellence with an investment of Rs 22 Crore to build a cybersecurity innovation ecosystem and safeguard citizens.

The Government of Telangana is also working towards controlling e-waste through the use of emerging technologies. In 2016, India ranked among one of the top five countries in e-waste generation, with an estimated 1.85 million tonnes generated annually. E-waste causes toxic emissions and poses several health hazards. As a solution, the ITE&C Department, in partnership with MeitY has established a Centre of Excellence of e-Waste in C-MET, Hyderabad, with an investment of Rs 36 Crore, to nurture innovation, entrepreneurship, and capability building in e-waste management, 40 percent of the project is funded by Ministry of Electronics and Information Technology (MeitY), 40 percent by the ITE&C Department and 20 percent by the industry. **DL**

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DST: CREATING SCIENCE AND TECHNOLOGY ECOSYSTEM IN EDUCATION SYSTEM

While school education is not a mandate of DST, we do want greater introduction to and participation of schools students in generation of creative ideas, in innovation etc. The base of the knowledge and innovation pyramid needs to be broadened, not just its height. The culture of innovation has to be seeded in schools, says **Prof Ashutosh Sharma**, Secretary, Department of Science and Technology (DST), Government of India in an exclusive interview with Sanghamitra Mohanty of **Elets News Network (ENN)**.

Prof Ashutosh Sharma
Secretary
Department of Science and Technology (DST)
Government of India

You talked about strengthening the academic institutions through the latest equipments, funding for research and everything. There is a parallel system emerging of private universities. Is the DST also engaging in them?

The DST focuses very tightly on two or more different things. One is competitiveness; other is quality and the third is relevance. Now we are agnostic to who is competing for this. Of course, some of the private universities are bringing greater emphasis on research, and they deserve the support. But they have to compete with the rest, both public and private. If the scientific advisory expert committees find their projects competitive, we do fund them in PPP mode. We do encourage and support research in the best of universities including private universities, to enhance the quality of teachers, teaching, and students. Scientists need to be creative, they need to be fired a little bit, need to be excited, and so if they have all of that, their energies will find fulfilment in contributing to socio-economic growth rather than petty mischief.

A lot of Council of Scientific and Industrial Research (CSIR) organisations exist all over the country, how do you link the university system with them?

While CSIR is primarily focused on supporting their labs, DST's funding is agnostic to who applies for it, competitive excellence and relevance being the only criteria. Even CSIR scientists apply for funding from DST. Clearly, research is best not done in silos. One of the things we are encouraging continuously is also to seed research which is not based solely on a discipline or tool. The historical way of funding research was in chemistry, physics, mathematics, biology, chemical engineering, material engineering, etc. Now a lot of our recent efforts are in addition also focused on the problem centric research. Sometimes you call it discovery research versus solutions research. Now what is important about solutions research is that it is interdisciplinary. Suppose there is a problem with water, it cannot be solved only by Chemistry. You need different people with different backgrounds working together. So we are also encouraging this kind of research with

programmes and missions in water, renewable energy, cleaner fuels, management of energy, manufacturing science, waste processing, etc.

There is a mission on Science and Technology of Yoga and Meditation (SATYAM) which started about four years ago. It is an interdisciplinary subject, which uses the best of the tools and processes of modern science to probe the underlying biology behind traditional wisdom. There is a plethora of clinicians and scientists from places such as All India Institute of Medical Sciences (AIIMS), National Institute of Mental Health and Neuro-Sciences (NIMHANS), Postgraduate Institute of Medical Education and Research (PGIMER)-Chandigarh, who are working together on these projects by use of tools such as the Functional Magnetic Resonance Imaging (FMRI) to map the brain in neurology investigations.

Coming back to the point, how do you integrate scientists with diverse backgrounds and expertise to work on significant interdisciplinary problems? You encourage them by offering huge stimulating challenges, so by working together, one can do extraordinary things at a scale not possible by a single group. So we set aside some funding in order to form these networked groups. This is solution science, and I gave you some examples.

These examples are also important because these are some things for which earlier there was no funding. For example, there was no programme for manufacturing science. Beyond the traditional silos of S&T such as chemistry, physics, engineering of various kinds, etc. there is another way to categorise all of S&T as being made up of five M's of doing science! These are Mechanics, Materials, Machines (devices, systems, etc), Manufacturing (and fabrication) and finally, Man! This is something I like to share in lectures and conferences. It doesn't really matter whether one is a chemist or a physicist, or whoever, basically there are these five Ms that one usually focuses on: Mechanics, which is the understanding of how and why of things and phenomena; Materials, one needs appropriate material to be able to do anything; Machine, System or a device which is a synthesis for a purpose or function; and Manufacturing, which is requires taking into account inputs from the other Ms. This is the last mile connectivity of research with society. The last M signifying Man or Woman is something special. It is about taking into account the relation of S&T with the needs and priorities of Society in all its forms. This is indeed the prime mover of all applications of S&T keeping in view their context, relevance and usefulness. An easy way to appreciate it to see that the concept and practice of Industry 4.0, powerful as it may be, has to be a sub-set of Society 5.0, which keeps the Man, rather than technology, at the centre.

You are only talking about increasing the manufacturing sector in the country but we haven't yet had a focused research area.

We have seeded a R&D programme in advanced manufacturing science, which together with the Hubs of Cyber-Physical

Systems (Industry 4.0) and Technology Business Incubators and SATHI Centres form the pillars of support to manufacturing. Earlier, focus has been rather exclusively on materials and mechanics, and little bit on machines, which requires a synthesis of knowledge. Actually much of what we do in college and universities education is mechanics and others are relegated to specialised courses. So while we do need to focus on mechanics or materials for very compelling reasons, that focus cannot be exclusive, because we also need to close the circle of knowledge by inclusion of manufacturing and innovation. So there can be five Ms for doing any kind of science: Mechanics, Materials, Machine, Manufacturing and Man/Woman.

An example of the cutting-edge manufacturing science is in a recent Railways Technology Mission, where DST is partnering with the Railways to equip one of the Coach Factories with the processes and resources of Industry 4.0 based largely on indigenous technologies.

It's almost like re-inventing DST, in last five years.

It is a re-positioning owing to the rapidly changing landscape of S&T globally. Nothing should be static! The basic mantra has been to enhance quality in basic research; improve relevance, connects and delivery in applied research; add solution-science areas that need attention; and seed emerging disruptive areas in time to secure our future.

Fortunately, in the last five years, DST's budget nearly doubled, which has been rather unprecedented. So we are able to maintain our support of quality basic research and in fact its scale up in view of the increased number of scientific institutions. A new scheme to encourage profound and disruptive science has also been introduced that allows scientists to undertake high risk research based on exceptionally novel ideas. In fact, the budget of Science and Engineering Research Board (SERB), an arm of DST for basic research, has also doubled allowing it to initiate new needed schemes for national post-doctoral fellowships, young scientists etc. while increasing its support for PI-centric projects.

The new programmes on emerging relevant technologies from manufacturing to clean energy to water to environment to transport to cyber-physical systems to quantum systems to other disruptive areas all have a compelling basic science component. The new ingredient is not to simply stop with that, but allow our processes to go beyond to technology, innovation, to industry and societal connects. Fortunately, bringing in new areas and elements has not been a zero sum game owing to substantial increase in the budget.

How are you envisioning the schools?

While school education is not a mandate of DST, we do want greater introduction to and participation of schools students in generation of creative ideas, in innovation etc. Our PM has

often pointed out that although we have millions of problems, we also have a billion minds to address them! The base of the knowledge and innovation pyramid needs to be broadened, not just its height. The culture of innovation has to be seeded in schools. Today we have maybe about 10,000 tech based start-ups, but with the size of India, we need not 10,000 but 100,000 or even 1000,000 start-ups! How are we going to add these extra zeros with speed? It's not going to happen only from the elite and higher education institutions. That is only the tip of the iceberg. We need to take the gospel of innovation to every corner, to young minds, for the culture of problem-solving thinking to take roots. So this is something we can do by firing up the imagination of school students.

DST thus started a new programme, Million Minds Augmenting National Aspirations and Knowledge (MANAK). The idea is to reach out to five lakh schools in the country to have competitions for innovative ideas and select the top one or two ideas from each school which can be submitted in any of the 22 languages of the country on an online portal. So we start with five to 10 lakh ideas from which an army of evaluators sift through to select 50,000 top ideas. Each of these students gets an Rs 10,000 prize, part of which is to be used to convert the idea into a prototype. Thus, using their hands and brains, workshop facilities, mentorship and so on; we introduce two key elements of innovation:respecting the power of independent innovative ideas, and then the desirability to convert a good idea into reality.

These selected prototypes then compete on district levels, state level, and national level; 10 percent of the ideas going forward at each level. Higher levels attract greater rewards, mentorship, motivation, inspiration and so on. This is a step in building the future of innovations with numbers. I have talked to so many of MANAK awardees. It is very interesting because the nature of ideas one meets here will not come from a PhD student or from me! For example, a girl in 7th standard came up with the problem of the drinking water taps in her school being mounted very high for her height. Her solution was to give a tilt to the pipe on which the taps are mounted, so that she can drink from the lower side and the taller students can drink from the other side. These kids have appreciation of both the problem and the possible solutions. We need to scout, encourage, reward and mentor them. Another girl made an interesting design of a multipurpose mechanised toilet cleaning gadget appropriate for the design of rural toilets, which was inspired by seeing the difficulty of her mother's work.

Now, National Innovation Foundation (NIF) at Hyderabad, which implements MANAK, is creating a data bank of these ideas. In terms of its scale and ambition, this is probably the largest programme that DST has ever launched.

What is the feedback?

It has been beyond our expectations since the programme is only two years old. Not only the feedback, we also did an analysis of outcomes on the lakhs of ideas that we got last year. The analysis covered demography of the winners, their composition in terms of gender, in terms of what kind of school they come from (Municipal Corporation supported versus Central Government supported versus private), where do they come from geographically (rural, urban), etc. How many

are from the socially weaker sections? It turns out that the composition of winners parallels the demography of the country very closely. This is without any preferences built into the programme itself. This is very heartening in that it confirms that innovation, innovative thoughts, creativity are equally distributed across all sections of society, regardless of the gender, location, nature of school, socio-economic strata etc. So this is very heartening, because it means that this programme has a good future and it would be able to select and inspire young students equitably from among all the sections of society.

There is an IIT and NIT system, government universities system, there are science colleges where people are doing B.Sc., but somehow they remain less engaged with the IIT level stuff.

One of the reasons for that is, with many of the colleges, we don't have students and teachers to do research, we don't have the required infrastructure, and we don't have a priority or culture or systems needed for research. In the absence of these, merely providing money for research is not an optimal solution. Capacity and culture for research needs to be created. So what are the possible solutions? While many of the interventions are envisaged in the new Education Policy of the MHRD, one modest beginning was made in a SERB/DST programme called Teacher Associate for Research Excellence (TARE). The idea is to create a fertile soil and seeds for research in colleges.

There are of course lots of colleges with excellent young faculty, who have done good research during PhD, but are not able to pursue research because of the reasons that I pointed out. How do engage this latent research manpower? This TARE programme gives a fellowship to the faculty with a proven research track record, with research potential and a deep desire to pursue research. So this fellowship and some research money allow them to work in a neighbouring institution or university with a relevant research group.

It could be an IIT, IISER, Central University, R&D lab like CSIR, wherever they find a host group, which can provide them the infrastructure and advise to allow collaborative work in the evenings, on weekends, in holidays, etc. Now, already 500 of these fellowships have been given in one year. As long as these researchers continue to engage meaningfully with progress, they will continue in the fellowship. Anyway, upto 5,000 such people should eventually be pursuing research. It is hoped that some of them may be sufficiently empowered to write grant proposals and succeed.

There are also programmes for universities and colleges to strengthen their research infrastructure. One such programme is Promotion of University Research and Scientific Excellence (PURSE). Those universities that have good research performance are given a one- time grant for creation of scientific infrastructure. This grant could be up to Rs 30 crore. There are many state universities that are greatly helped by this mechanism.

You have been in the academia; you have been a researcher and a teacher, new to administration. Your job right now is policy making. How do you handle that?

Management of DST requires deep insights into our entire science and technology ecosystem, including education. My job as a professor provided deep insights into the ground realities of higher education, scientific research, human resources, technology development, intellectual property, and even start-ups.

Professors are for life! These experiences and insights have been invaluable in identifying the challenges and opportunities and in formulations of schemes that identify and address the gap areas in an effective manner. So essentially, our new directions in DST came from the evidence-based analysis of strengths, weaknesses, challenges, opportunities, needs and gaps and how to systematically address them. So I think in a ministry like this, it is necessary to have a scientist.

We have two new needed policies under the final legs. The first one is on the Scientific Social Responsibility that we discussed earlier and the other one is on Management of Scientific Infrastructure including its creation, maintenance, effective use, sharing and disposal. Two other policies are in the pipeline on Geospatial Data and a comprehensive umbrella policy on S&T and Innovation.

And there is another thing, one of the weaknesses have been in our science communication. The scientific community as a whole is not very strong in communications of various kinds, like in scientific journals, in popular media. **DL**

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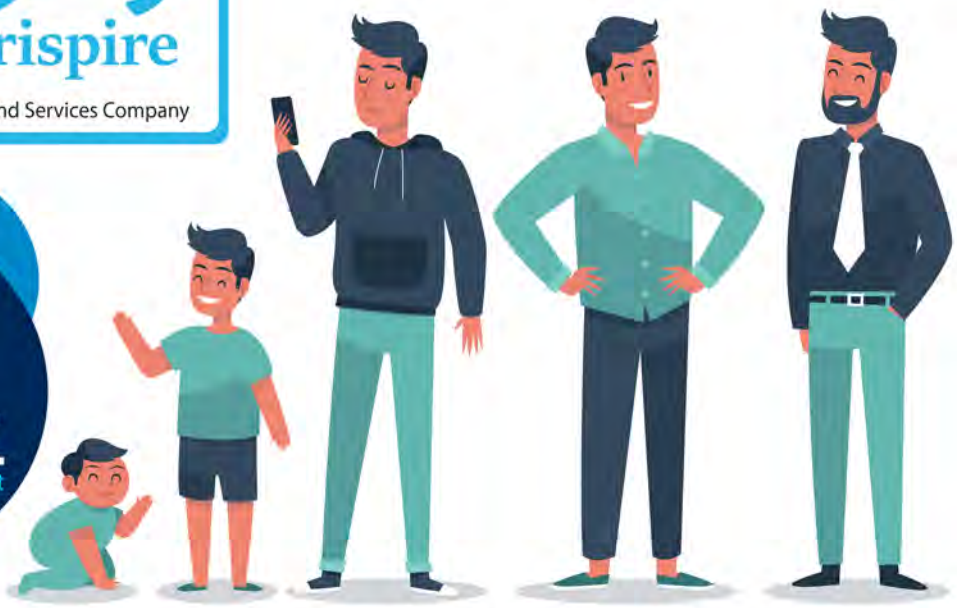

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MGNCRE: PROMOTING RESILIENT INDIA THROUGH CURRICULAR INTERVENTION

Dr. W. G. Prasanna Kumar
Chairman,
Mahatma Gandhi National Council of Rural Education

There are two aspects of our mandate - one is to reach out to the students who are in the Universities and second is to the students who are studying in schools. Students in the Universities are reached out through curriculum, which is rural engagement and rural management based, says **Dr. W.G.Prasanna Kumar,** Chairman, Mahatma Gandhi National Council of Rural Education in a conversation with **Anupama Mehra** and **Shivani Babbar** of **Elets News Network (ENN).**

How is Mahatma Gandhi National Council of Rural Education (MGNCRE) reaching out to the rural youth & children to provide quality educational skills?

MGNCRE has two aspects on its mandate - one is to reach out to the students who are in the Universities and second is to the students who are studying in schools. Students in the universities are reached out through curriculum which is rural engagement and rural management based.

Students in the schools are reached through Nai Talim Experiential Learning based curriculum and Teacher Education. For school education, as part of our mandate, we promote Gandhiji's Nai Talim, Work Education, and Experiential Learning.

We focus on five professional streams: management education; social work education; mass communication; teacher education; and general engagement of educational institutions through various National schemes like Swacch Bharat Abhiyan, Ek Bharat Shreshtha Bharat, Jal Shakti Campus, Jal Shakti Gram Abhiyan, and others.

So, we promote and support this with the curriculum inputs , both in terms of academic aspects, which are texts and video lessons and also non-academic aspects relating to manuals that help students to practice it.

Gandhiji's Nai Talim or basic education is a holistic approach of developing body, mind, and soul (hand, head, and heart), by making a productive art, craft or community engagement activity as the center of learning. This we do through the teacher's education institutes, through the curriculum which addresses the teacher's education including: Diploma in Teacher Education, Bachelor of Education, and Masters of Education. All of these are teacher-oriented courses. This is how we reach the students, both at the University and school level.

How are you collaborating with the state's education department for the courses you offer?

MGNCRE works with the State Council of Educational Research And Training (SCERT) in every state. So, we work with their curriculum and textbook division at the state which handles the curriculum and textbook from Class 1-12. We also conduct workshops and training programs for the SCERT curriculum developers.

For University education, we have collaborated with state universities. We also conduct curriculum development workshops,

faculty development programs, round-tables with the faculty on the curriculum aspect covering the rural concerns.

Is MGNCRE confined to only Telangana and Andhra Pradesh? Please tell us about your team and how it functions.

MGNCRE is a national council. We cover all 28 states, Union Territories (UTs) and different administrative departments. We form teams within Universities in each state, where we deploy our own curriculum development experts who are consultants.

These consultants conduct workshops on varied subjects including effective curriculum development in each of these Universities. Through this, we reach them rather than calling them to the Central office. This ensures larger participation of the teachers, teaching communities, curriculum development and transaction aspects.

In the age of modern technology and digital transformation, what initiatives have you taken to upgrade the MGNCRE?

Our curriculum inputs are posted on our websites so that people can access them. To announce various programmes, we also use social media platforms like Facebook, Linkedin, and Twitter. We also use WhatsApp and other communication channels to connect with people for a programme.

We also make video lessons that we upload on our website and we share them with all our partners. Apart from this, we are also working on developing MOOCs-based courses. We are going to have experts on rural management, engagement, and development speaking from various locations. Those materials will be made available through MOOCs.

We also have an e-resource centre, where we shoot videos of experts that are webcast and shared through our official website.

How MGNCRE is creating a network with government bodies and institutions to develop human resources which in turn will help the socio-economic development of the rural areas?

We are working with Education councils, State councils of Higher Education of each state, SCERT, Vice Chancellors of various Universities, and Governors of different states.

With SCERT, we are working on curriculum and textbooks. With Governors, who are also the Chancellors of state Universities, we share our projects, concerns, and inputs.

We also share our manual, curriculum with different states, Education Ministers and Secretaries, who in turn, share it with government colleges within their state.

Any message for our digitalLEARNING magazine readers?

digitalLEARNING magazine helps the readers to remain updated about the education sector, not only in our country, but across the world. It also helps in sharing of information and knowledge.

digitalLEARNING magazine gives opportunities for networking, helping us to lay hand on the resources of various institutions. It also gives us the opportunity to have transnational perspective around innovation in education across the globe.

DigitalLearning magazine needs to be encouraged, adopted and supported. It is a great medium of information dissemination in the education sector. **DL**

ACCREDITATION IS THE BENCHMARK TO ENSURE QUALITY EDUCATION: PROF RAJIVE KUMAR, MEMBER SECRETARY, AICTE

Indian technical education has improved substantially in the past few decades. However, the quality of education has been a major cause of concern. **Prof. Rajive Kumar,** Member Secretary, **AICTE** in a candid conversation with Elets News Network's (ENN's) **Chandan Anand** and **Anupama Mehra** shares accreditation is the benchmark to ensure the quality of technical education, adding that National Board of Accreditation (NBA) has provided benchmarks for evaluating the quality of education in India. Prof. Kumar further points out that Margadarshan and Margdarshak schemes have been launched to improve the quality of education by encouraging both students and teachers. Additionally, he throws light on teachers' training program, AICTE's future plans, and shares pearls of wisdom for teachers and students.

Prof. Rajive Kumar
Member Secretary
AICTE

All India Council for Technical Education (AICTE) has made it compulsory for all faculties in technical institutes to undergo training as well as an internship. Could you please shed some light on the initiative?

We have recently introduced a mandatory teachers' training programme. There are eight modules in the programme. Before joining the formal teaching in technical institutions, every teacher has to qualify these eight modules. These modules deal with pedagogy, ethics, IT tools, how to set question papers and conduct classes. Apart from that, there are four National Institutes of Technical Teachers' Training & Research (NITTTRs) that have been established in the country as the Technical Teachers' Training Institute (TTTI).

To that end, we have prepared Massive Open Online Courses (MOOCs) and these MOOCs are available for all the teachers. Around 40,000 teachers have already registered for these courses. After qualifying these courses, teachers will teach under the mentorship of senior teachers besides doing an internship in some industries. Having completed these components under the course, they will be awarded a certificate confirming that he/she is a certified teacher of the Government of India, AICTE. The certification is done by AICTE and NITTTR. So, this is a big programme as far as teacher training is concerned. AICTE has taken this step forward.

How many teachers will be benefited from this programme?

Around 30,000 teachers are appearing for the teaching professional development programme as far as technical education is concerned. For their promotion to the next stage including incumbent teachers, we are also preparing training programmes. When they qualify for another level of programme, they will get the next promotion. That exercise is going on. These are mandatory programmes, and we have already gazetted this scheme of teachers' training in our mission.

AICTE has included SASTRA – a deemed-to-be University, and

many other universities under AICTE – as the hub under MHRD's Margadarshan scheme. Can you please elaborate?

The motto of AICTE is that if you want to bring quality into technical education, accreditation is the benchmark. As far as India is concerned, the National Board of Accreditation (NBA) has set the quality benchmarks.

We select good institutions, which are already accredited either by NBA or National Assessment and Accreditation Council (NAAC), to mentor relatively newer 10 to 12 potential institutions. That is the Margadarshan scheme. Many more institutions, apart from SASTRA, have been selected and we provide handsome funds for mentoring.

Besides, we have another scheme namely, the Margdarshak scheme for individuals. For instance, I am a retired teacher of IIT; I have ample time, so to speak. Also, I have expertise and experience, so I am in a position to mentor institutions. Likewise, we attach such type of experienced faculty to the institutions directly. In addition, we attach the well-performing accredited institutions to the mentee institutions. These two schemes are being carried out side by side. In fact, these are big initiatives taken by AICTE.

How was the year 2019 for AICTE? What are the new projects and initiatives that AICTE plans to undertake in 2020 and beyond?

We started a 10-point quality agenda in 2017 including division of curriculum, teachers' training, induction programme, accreditation, innovation in start-ups, perspective plan and exam reforms, to name a few. Then, we made several policies including teachers' training and induction programme policies, prepared perspective plans, and the curriculum, which has been made available to all technical universities across India. To be precise, in 2019, we could implement all the initiatives taken by us in 2017 in our technical education system.

Apart from that, the Ministry of Human Resource Development (MHRD) and AICTE have taken a joint initiative to inculcate a culture of innovation and start-up. We have an MHRD Innovation cell at AICTE which conducted the 2019 edition of Smart India Hackathon – an annual affair – that proved to be the world's largest open innovation competition. In fact, we have established these innovation cells in other colleges as well.

Now every institution is conducting its own Hackathon events.

Moreover, seeing the success of this Hackathon, we got proposals from Singapore also. For the last two years, we have been conducting Hackathons with Singapore. We took our students there and all expenses were borne by AICTE. This year, we conducted Hackathon at IIT Madras, and Prime Minister Narendra Modi graced the event and addressed the participants.

Then, we got an offer to conduct Hackathon with ASEAN countries. Now, we have approved a budget for this. We also got another offer from Portugal, and we are conducting Hackathon in Lisbon. So, not only India, but the world has also recognised our Hackathon. Besides, we are getting offers from all over the country. And to expand our horizon, we are going to extend it.

Tell us about the awards that AICTE gives out to students and deserving institutes.

There are many awards. One is the Chhatra Vishwakarma Awards. The theme of Chhatra Vishwakarma Awards 2019 was "How to enhance the income of Village". We conducted regional events and selected around 118 teams. There is another award called Utkrisht-Sansthan Award. We holistically see how one institution can be called Utkrisht Sansthan. All types of parameters are there. We have selected some institutions, and we are giving out awards to them. Apart from that, we have a Green and Clean Campus award, as well as launched 'one student, one tree' initiative. This year, we planted around 30 lakh trees, and the students have had their photographs with the trees posted on our website. We are involving students and faculties in these big initiatives.

What is the present status of giving approval for the inclusion of Artificial Intelligence and Data Science in B. Tech? and other engineering courses?

We prepared a perspective plan for technical education and the plan was prepared by industry bodies like NASCOM, CII, FICCI, and ASSOCHAM. They were all part of the preparation of the perspective plan. They came out with a short- and medium-term perspective plan for the technical education at AICTE and also recommended that AICTE should not permit new engineering colleges from the academic year 2020-21. That was the first recommendation of this perspective plan committee.

It has identified certain thrust areas including IoT, Data Science, Blockchain, Augmented Reality, Virtual Reality, Robotics, 3D printing, quantum computing besides AI being one of them. Eminent experts, IIT Directors, and Professors recommended that we should not start exclusive programmes in AI, IoT, Data Science, or 3D printing. And that we should not start B. Tech. programmes in these either. But one can do specialisation in AI or IOT or any of the areas and can earn 16 to 18 extra credits in such areas and can be awarded a degree in Computer Science with specialisation in AI. However, one can start a programme in B. Tech. in AI and Data Science, and approvals are given to only good performers, not to each and every college. The college must have good infrastructure, faculty, and laboratories. This year, we are implementing it. We are not going to start new colleges in traditional branches, except AI and Data Science and specialisation can be done in any of these areas.

Once a student gets admission in any of the engineering institutes, he/she eyes for a job in corporate or some companies. What are the initiatives AICTE has taken in skilling the students as well as making them eligible for entrepreneurship?

AICTE has a start-up policy, and we are mentoring our students. Our MIC cell has been mandated to give training and to encourage this start-up culture. We conduct Hackathons to encourage innovation and reward the problem-solving skills of the students. Also, we financially support them to commercialise their ideas, or if they want to start-up, we are connecting them with experts.

Any message you would like to give to students and institutes?

My message to the colleges, faculties and the students is that students should not sit in the classes all the time. Students should be allowed ample time to cultivate out-of-the-box thinking, which in turn will help them to explore themselves. In the age of the internet, better contents in the form of e-contents are easily available to students, which poses a great problem for the teachers. Therefore, teachers are now expected to think differently and learn to engage the students. For that, they have to study and understand industry problems also. **DL**

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MHRD INNOVATION CELL: IDENTIFYING AND SOLVING PRESSING CONCERNS

Idea generation is the most crucial step for innovation. We are trying to inculcate the habit of thinking out of the box, looking at things from different perspectives and keeping the curious quotient alive by bringing in lot of interesting and different programmes, says **Dr Mohit Gambhir,** Innovation Director, Ministry of Human Resource Development (MHRD) Innovation Cell, Government of India, in a conversation with **Chandan Anand** and **Debajyoti Mohanty** of **Elets News Network (ENN).**

MHRD Innovation Cell (MIC) has made some big strides in promoting student innovation and entrepreneurship in the country. How has been your journey so far?

Our journey has been phenomenal so far. It has been almost one and a half years and the initiatives that MIC had started since August 2018 are making waves in the existing ecosystem. I believe we have been successful in penetrating the system so as to have a multitudinous impact on our education system.

India has improved its Innovation ranking from being at 86th place, five years ago, to 52nd place in 2019. How far do you think is the target of Top 30?

Firstly, I must congratulate all the stakeholders who are working day in and day out to improve innovation ecosystem in the country and in turn making strides in Innovation rankings. I believe that these rankings are the validation of our efforts to improve the overall innovation landscape of the country. Now, as far as the question of coming in Top 30 is concerned, it may take us two more years to reach that mark, following our consistent practices at par with global innovation ecosystem.

Idea generation is crucial for innovation. How do you handle this aspect?

Idea generation is the most crucial step for innovation. We are trying to inculcate the habit of thinking out of the box, looking things from different perspectives and keeping the curious quotient alive by bringing in lot of interesting and different programmes such as Smart India Hackathons, establishment of Institution's Innovation Council (IICs), and Leadership talks to motivate our youths in higher education institutions.

Dr Mohit Gambhir
Innovation Director
Ministry of Human Resource Development (MHRD)
Innovation Cell, Government of India

The past three Smart India Hackathons (SIH) have been a grand success. What are your expectations from the 4th SIH 2020?

The Smart India Hackathon (SIH) is a kind of initiative that has become a rage among students. Just to give you some background, the first edition attracted around 40,000 registrations. In the second edition, we had around 70,000 registrations and in the last edition, we had around three lakh student registrations. You can imagine at what humongous pace this is growing. And I referred only to the registered figures, the actual impact and reach would be much more. This year we would be hosting the 4th edition, which will be conducted in two parts just like last year, viz. software and hardware editions. Software edition event is slated for April 4-5, 2020 and hardware would happen sometime in the first half of July 2020.

This year we have encouraged all Higher Education Institutions (HEIs) to organise internal hackathons so as to attract and impact more students, developing these activities as a culture among all the students, expecting much better ideas from the student community for problem statements. In the 4th edition, which is being jointly organised by All India Council for Technical Education (AICTE), MHRD Innovation cell, Persistent and i4C, we have a gamut of associate partners supporting us in this initiative, like Bureau of Police Research and Development (BPRD), Doordarshan, Amazon AWS, Cisco Devnet, KPIT, and Suma soft.

I believe we have come to a stage where we should start looking at better ideas and solutions for a much better tomorrow and that is the basic essence of this year's SIH.

MIC has encouraged creation of Institution's Innovation Council (IICs) in Higher Education Institutions (HEIs). What is the potential of this initiative and how do you see it going into the future?

Establishment of IICs is one of the path breaking initiatives of MIC. Through IICs we are trying to develop a strong framework in order to provide students in HEIs with various cutting edge technologies and new age thought processes such as Design thinking, Cognitive skills development, Pre-incubation, Entrepreneurship, Intellectual property rights etc. IICs have immense potential in building a strong and vibrant local innovation ecosystem and ultimately, I believe it is need of the hour for all the HEIs to establish IICs and develop a robust start-up and entrepreneurship support mechanism.

How is MIC approaching student entrepreneurship and job creation, keeping the target of a USD 5 trillion economy in mind?

MIC is working with a clear mandate to encourage, inspire and nurture young students by supporting them to work with new ideas and transform them into prototypes while they are in their formative years. There are few other initiatives that MIC brought in such as International Hackathons, Atal Ranking of Institutions on Innovation Achievements (ARIIA) and National innovation and start-up policy. Through NISP, we are trying to bring in a fundamental change in modus operandi of majority of our educational institutions by recommending them to have a concrete start-up and entrepreneurship policy framework for not only their students but their faculty members as well.

We also know that everyone cannot become an entrepreneur but at least an individual can try so if they do not become a successful entrepreneur, they may become successful an intrapreneur. So, once this ecosystem start showing the results of the efforts we are putting in today, I am sure lot of new ventures would be formed, ultimately generating lot more jobs thereby contributing to achieve the target of becoming a USD 5 trillion economy. DL

UP: FORGING PATHWAYS FOR NEW-AGE EDUCATION

For a nation, development and education go in tandem. In fact, no nation can progress without investing in educating its citizens. Education is the only medium through which the young generation can be empowered with knowledge and values. At a time when higher education is becoming highly competitive in India, it is the best-in education system at the elementary level that can make the children future-ready.

The focus of the current government in Uttar Pradesh on strengthening the 'basic education' is the right step in the right direction. The idea of making quality education accessible to one and all with the best-in infrastructure and facilities is highly appreciable given that it's the need of hour.

In its effort to improve learning outcomes at the school level, the UP Government has built a Quality Assessment Framework (QAF) that focuses on foundation learning, Remedial Teaching, Capacity building of teachers through Nishtha Programme and Diksha Platform, and supportive supervision by Academic Resource Groups (ARGs). With Prerna app and Manav Sampada portal in place, the Government aims to check teacher absenteeism at school and maintain Personal Management System for Teachers, respectively. Here, we attempt to give a low-down on various such initiatives that the Government has taken to cut a pathway to new-age education in Uttar Pradesh.

OPERATION KAYAKALP

Launched in 2018 by the Government of Uttar Pradesh (UP),

Operation Kayakalp (Rejuvenation) is a campaign to create a positive educational environment in the schools of Uttar Pradesh. The operation involves providing best-in class amenities to the school-going children of the state on a priority basis.

The task of furnishing schools is divided into the first and the second phase. In the first phase, black boards in schools, separate toilets and urinals will be installed according to the number of students and their proper operation will be done along with the provisions of clean drinking water and hand washing facility with drainage system; and repair of walls, roof, doors, windows, and floors. In the second phase, there will be electrification, renovation of kitchen shed, laying of tiles, building additional classrooms, dyeing and painting in the school buildings. Work will be done as per the requirements of the concerned school.

FUNDS

For Operation Kayakalp, funds have been allocated under the 14th Finance Commission, State Finance Commission, and Gram Nidhi. Apart from this, grants have been given to the council schools under Samagra Shiksha Abhiyan which can be used to replace poor equipments, sanitation materials, wall painting and other minor repairs. In most of the schools in the state, this work has been started simultaneously as per the need, so that the schools can be rejuvenated by March 2020.

KAYAKALP MODULE OF 'PRERNA' FRAMEWORK

Furthermore, photo protocol based geo-tagged data is being captured under the Kayakalp Module of 'Prerna' Framework. Live Interactive Smart classrooms have been established in 4000+ schools, and Model Schools are being constructed in various districts. Moreover, convergence with other departments like Panchayati Raj, District Mineral Fund, Urban Local Body Funds, CSR Fund, etc, is also in process.

Operation Kayakalp uses indicators like availability of safe drinking water, water connection/submersible pumps, tap water in toilets, group hand washing facilities, kitchen facility, food material storage, functional toilets for girls, functional toilets for boys, incinerators in upper primary schools, ceramic tiles in toilets and urinals, appropriate blackboard, desk and bench, electricity with light and fan, painted walls with Building as Learning Aid (BaLA), Children with Special Needs (CWSN) toilet with ramp, classroom ramp with railing, and pathways. Other indicators include regular cleaning of toilets, and integration of Kayakalp plan in Gram Panchayat Development Plan (GPDP).

Operation Kayakalp also features a dashboard which shows inter-district variation in values of the selected indicator. The dashboard shows values at state level, and districts with highest five values, and lowest five values.

MANAV SAMPADA

Manav Sampada Online Portal has been started to transition from a completely offline mode to online mode, and all ACRs, Emoluments, Superannuation benefits to be processed through this portal.

All leave applications and approval processes now have to go through an App-based system. A secure database of teachers is being maintained on National Informatics Centre (NIC) servers with one time SMS for authentication. Furthermore, service books of all the employees have been maintained and updated online. An online transparent teacher transfer policy and rational deployment of teachers is also in process. Also, the Uttar Pradesh Teacher Friendly Governance Framework is in place, which includes best-in-class Personnel Management System (PMS) for teachers in all Establishment Services.

QUALITY ASSESSMENT FRAMEWORK

For the enhancement of learning levels in students, quarterly assessment tests on 40 learning outcomes are being conducted with a special focus on Foundational Learning for Classes 1 to 5, Remedial Teaching, Capacity building of teachers through Nishtha Programme and Diksha Platform, and supportive supervision by Academic Resource Groups (ARGs).

MISSION PRERNA

Through its focus on Foundation Learning, Mission Prerna has a clearly defined and ambitious goal in Prerna Talika. For language proficiency in Grades 1 to 5, focus is being laid on word identification (correct sounds per minute), oral reading fluency (correct words per minute - CWPM), and reading comprehension (questions answered correctly - short and long paragraphs).

For numerical proficiency, focus is being laid on number identification (per minute), single-digit identification and subtraction (percentage of questions answered correctly), addition/subtraction with carryover (percentage of questions answered correctly), and multiplication and division (percentage of questions answered correctly). The target is that 80 percent of primary school students should achieve the above objectives by 2022.

ADMINISTRATIVE INITIATIVES

Administrative initiatives are the backbone of Mission Prerna. There are four administrative initiatives being focused on Teacher Transfer/Deployment, Teacher/Student Absenteeism, Teacher- time on Academics and School/Calendar and Time-table.

The Teacher Transfer/Deployment initiative involves equitable distribution of teachers across schools with a priority being given to Grades 1 to 5, along with a transparent and objective teacher transfer policy and modern technology systems to seamlessly implement the policy. Similarly, the Teacher/Student Absenteeism initiative aims to achieve 90 percent teacher and student attendance in classrooms with the help of Geo-fenced app based attendance system, Aadhar-enabled biometric system, and community involvement.

Another part of the Administrative policy, the Teacher-time on Academics initiative aims to increase the percent time available for teachers to teach in classrooms, and involves streamlined online HR processes, and reduction in non-education and administrative work being done by teachers. Likewise, the School/Calendar and Time-table initiative focuses on increasing the number of teaching days and giving sufficient time for language and maths, and involves reduction in number of public holidays, and providing dedicated slots for language and maths in daily time-tables.

ACADEMIC INITIATIVES

Mission Prerna also involves academic initiatives such as Classroom elements, Teaching/Learning material, Teacher training and Teacher coaching/mentoring. The Classroom elements initiative comes with an objective of formulating a pedagogy focused on foundational learning, and involves usage of pedagogy based scientific methods, teacher manuals, student workbooks, graded reading books, and print rich classrooms. Similarly, the Teaching/Learning material initiative aims at timely availability of quality teaching learning material (TLM) in schools, procurement calendar redesign; admin, approval, and fast-tracking; and supply chain optimisation.

The Teacher training initiative aims at training of teachers on the foundational learning pedagogy and associated TLM, and involves incorporation in offline teacher trainings (Nishita, etc), and on-going digital (WhatsApp/mobile app-based) teacher training. Moreover, the Teacher coaching/mentoring initiative aims at ensuring availability of observation based in-school coaching/mentoring for teachers. It involves inculcating a dedicated and trained cadre of mentors, following a perspective mentoring mechanism which can be tracked closely through a geo-tagged mobile app.

ACCOUNTABILITY INITIATIVES

Accountability initiatives are the engine of Mission Prerna. There are four accountability initiatives being focused on State assessments, Third-party assessments, Cascaded reviews and Academic monitoring. The State assessments initiative aims at ensuring improved quality of assessments aligned to the objectives of Mission Prerna, and includes semi-annual/annual standard assessments, improved quality of assessment tools by State Council for Education Research and Training (SCERT) or by a partner, and a streamlined data loop. Similarly, the Third-party assessments initiative involves independent third-party assessments to measure the progress of Mission Prerna, and involves on-boarding of third-party through a transparent tender, and co-working with SCERT to design and conduct assessments.

Likewise, the Cascaded reviews initiative involves keeping a focus on objectives of Mission Prerna and quality roll-out of its initiatives. Finally, the Academic monitoring initiative involves a system for an academic-focused school level monitoring by officials, and includes identification of cadres for monitoring, mobile plus web platform for recording monitoring visits and observations, and reviews based on data.

NISHTHA

In a separate initiative, the Government of UP has introduced a dedicated teacher training programme called 'Nishtha', through which a capacity building of all 5.75 lakh teachers in the state is being undertaken. The training module includes the School Leadership Programme.

ADHARSHILA

Adharshila module on foundational learning has been developed for teachers with focus on Maths and Language.

DHAYANAKARSHAN

Similarly, a Dhayanakarshan-Remedial teaching module has been developed with 18 techniques, along with a teachers' compendium including detailed lesson plans, time-table, teaching kit, learning material and ideas for classroom teaching with monitoring formats.

UP has a long legacy in education, and efforts are being made by the state government to make education accessible and fun for school going children of the state. However, any policy change undertaken does not necessarily translate into practice in schools. The state and department of school education must make a concerted effort to capitalize on the policy changes and to ensure that good quality education is made available to all the children. DL

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TELANGANA: SCERT COMMITTED TO HOLISTIC EDUCATION

Established in 1967, the State Council of Educational Research and Training (SCERT) of Telangana is the apex academic body of the state. SCERT was established after integration of the State Institute of Education (SIE), State Bureau of Education and Vocational Guidance, State Science Education Unit, and State Evaluation Unit. It is functioning as the Academic wing of Department of School Education and as per the RTE Act 2009, it has been specified as an academic authority for the purpose of curriculum development and administration of evaluation process for elementary education in the state. Its scope covers training, research, material development, publications, resource support, networking in school and teacher education.

SCERT's objectives include organising in-service training for teacher educators and teachers of primary, upper primary and secondary schools; providing academic guidance to the schools through extension services; undertaking studies, investigations and surveys relating to educational matters on the appraisal of educational programmes; undertaking and co-ordinating action research projects on instructional practices, and educational problems; undertaking publication of books, periodicals and other literature necessary for furtherance of knowledge for teachers; and undertaking evaluation and research studies to find out the impact of educational programmes in the state.

Moreover, SCERT works in collaboration with national and international institutions like NCERT, New Delhi along with its constituent unit Regional Institute of Education (RIE), Mysore; NIEPA, New Delhi; Regional Institute of English South India, Bangalore; Central and State Universities; UNICEF; and other reputed voluntary organisations like Tata Trusts, TISS, Azim Premji University, and Homi Bhaba Institute, among others.

Furthermore, SCERT has conducted many activities in the session 2018-19, including the National Achievement Survey

(NAS), which was conducted for Classes 3, 5 and 8 during the year 2017 and for Class 10 during 2018. Roadmaps were drawn indicating various interventions for achieving improved performance of the students in NAS 2020 and trainings were planned in collaboration with Azim Premji University (APU) and Tata Institute of Social Sciences (TISS) for conducting training on generic and subject specific areas.

Apart from post NAS interventions, there are certain contemporary issues like safety of the child, prevention of child sexual abuse, gender sensitivity, life skills, health and physical education; value education; and integrating Information and Communications Technology (ICT) in classroom teaching that have created a need to re-orient the teachers and other education personnel towards these issues.

In view of the national programme "Pade Bharat & Bade Bharat" there is a special focus on the lower primary classes 1 and 2. The findings of the NAS and Annual Status of Education Report (ASER) surveys also indicate very low achievement levels in basic skills like reading, writing and simple arithmetic which is a serious concern. As the foundation is not adequately laid at the lower primary classes, the baggage of learning deficit is carried to the higher classes. As a result, the learning deficiencies are accumulated by upward mobility of the student from one class to other class, where underperformance of students in massive number has become a major quality issue. Hence, early literacy and early math programmes in lower primary classes are expected to have a spiral effect on the learning levels of children at the middle school and high school level.

It is also evident that the success of the school depends much on the team work of the teachers and supporting staff, where the role of head teachers is very prominent and crucial in building the team spirit. Many case studies reflect that the visionary leadership of the head teacher has changed the landscape of the education in terms of innovations, quality and created synergy among stake holders of the school viz. school staff, parents and community for the development of the school. Therefore, School Leadership Development Programmes by SCERT also take care of the institutional development and help in creating a visionary leadership among the cadre of heads of major institutions.

Besides, the success of the reforms in the education system depends to a great extent on the leaders of the system at different levels i.e. the officials working in the system. The system leaders should be abreast of the changes brought out in the Academic arena in curriculum, pedagogical processes, and they should be aware of various innovations that are happening in the field of education globally and locally. Carrying out innovations is one of the hallmarks for the development of new generation of Leaders. Creating such an eco-system in different levels of administration is imperative for building the schools to be sensitive and responsive to the aspirations of the Society. Hence, SCERT also plans trainings for Educational Administrators.

The vision of SCERT is that all children should receive high quality education and become responsible citizens with an acute sense of the other. They should be aware of their environment and think about it critically. They should listen carefully and speak fearlessly. They should not only be able to understand what they hear and read, but they should also be able to question it. Teachers should promote these skills, provide meaningful teaching learning processes in a natural and friendly environment that enables children to express themselves freely and ask questions. In a world which is becoming increasingly materialistic and competitive, schools can become a space for reflection, cooperation and promotion of human and ethical values. *(Source: Telangana SCERT)* **DL**

TELANGANA: ENVISIONING EXCELLENT EDUCATION FOR EVERY CHILD

Education is one of the foremost requirements for the development of a state. Imbibing that ideology, the Government of Telangana has taken several initiatives to provide quality education to the youth in the State.

The Government is improving the Education status to enhance the standard of living of the people and also to achieve other goals like overcoming the problem of poverty and unemployment, social equality, equal income distribution, etc.

Education contributes to the individual's wellbeing as well as the overall development. It is not only an instrument of enhancing efficiency, but also an effective tool for widening and augmenting democratic participation and upgrading the overall quality of individual and societal life. Government of Telangana manages 26,040 schools with 1,07,259 teachers and 21,50,626 students.

The following measures are being undertaken to bring the government closer to its goals.

INTEGRATED SCHOOL MANAGEMENT SYSTEM (ISMS)

The School Education Department of Telangana has developed a dynamic web portal, Integrated School Management System (ISMS) in order to digitalize the day to day activities of the department and to ensure a quality education service. This IT solution includes 22 modules covering all major activities (E.g. Students' registration, attendance, teacher information, etc.) at all schools across Telangana.

The Department of School Education, Government of Telangana was presented CSI SIG e-Gov. Award of Recognition for Integrated School Management System by Computer Society of India (CSI)..

AADHAR LIKE UNIQUE ID FOR EVERY STUDENT

Every school-going child in Telangana will have an identity of his or her own in government registers, in the form of a unique number.

Different from the Aadhaar number, this unique ID number is being allotted to every student in government, local body, and private schools so that the government can keep track of dropouts and on students who shift from one school to the other.

The concept, to be called the Student Tracking System, is being planned by the Directorate of School Education (DSE) and will be an online system, which means the academic whereabouts of every student in the state will be available just by a click.

This is being done to ascertain the number of students shifting

from government schools to the residential education system or private schools or from private to government schools in the state.

SCHOOL MONITORING REPORT

School Monitoring Report Card has been developed to verify the real-time information of students, teachers, infrastructure details and attendance of the teachers and students of a particular school.

Photographs of the school buildings, functional toilets, drinking water, electricity and compound wall information are also provided in this report card.

Asset Management online application is collected through mobile App & integrated with the School Monitoring report card. School location in Google Maps has also been integrated with the School Monitoring Report Card.

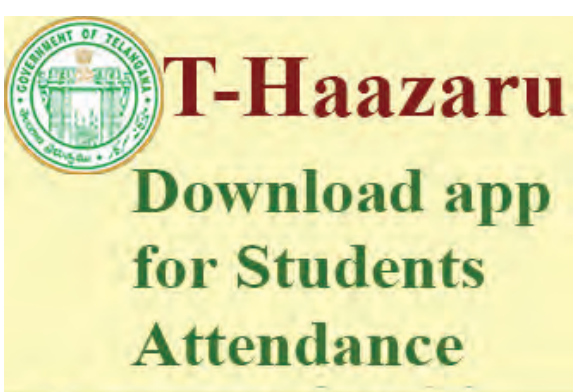
T-HAAZARU

Online Attendance System has been introduced in Telangana Schools through T Haazaru Mobile App for teachers and students. The Department of School Education has introduced an "Online Attendance System" to check for attendance of teachers and students in government schools of Telangana.

For this purpose, specially designed a mobile app called T Haazaru. This means that the attendance of teachers and students in their school should be forwarded to the state-level authorities. Attendance must be registered online by 10:30 am. Otherwise, action will be taken on the Head Masters. The policy was introduced by the Secretary of the Ministry of Education, Janardhan Reddy after parents of students complained about the lack of proper teacher attendance at the school.

AADHAR BIOMETRIC ATTENDANCE SYSTEM

The Aadhaar Based Biometric Attendance System is being used in 9,349 Government & Localbody Schools across 13 districts on pilot basis. Later it was implemented in 475 KGBV schools and 33 URS schools of 33 districts. These schools have covered attendance about 48824 Teaching and Non-teaching Staff and Students. In the next academic year, it will be implemented in 33 districts across all over the state to capture the attendance of teachers and students. Students have to give their attendance once before consuming the mid-day meal, while it is twice for teachers, i.e. in the morning and evening.



The machines are designed in a way that biometric fingerprints captured are immediately verified with the biometric details available with the Unique Identification Authority of India (UIDAI) using the internet and it is reflected in the dashboard of the DSE's website.

INBOUND CALL CENTERS IN KGBVS

Installed Inbound Call centers in all Kasturba Gandhi Balika Vidyalaya's (KGBVs) to facilitate the students to call either the Commissioner, School Education Authority, or any helpline like police, fire station, a hospital in case of an emergency situation.

DIGITAL CLASSROOMS

Telangana government has introduced digital classrooms in the first phase in 1,500 schools from November 16, 2019. The digital classrooms are being introduced as part of the government's resolve to improve the quality of education.

The state government would also set up computer labs in schools. SoFTNET: Society for Telangana State Network (SoFTNET) a satellite-based communication network under IT E&C Department of Government of Telangana – which runs two channels by name Mana TV has also been introduced. The channels are being utilised for Distance Education, Human Resource Development and e-Governance among others.

Other than these the Department of School Education of the Government of Telangana is taking several other initiatives in order to revamp the education system of the state.DL

TMREIS: UPLIFTING UNDERPRIVILEGED BACKWARD MINORITIES WITH EDUCATION

TMREI Society is the brainchild of Sri K Chandrasekhar Rao, Chief Minister, as a part of his dream of 'Bangaru Telangana' and 'KG to PG' Mission for all communities. The idea was a golden chance to uplift the underprivileged backward minorities' communities in Telangana, says **B. Shafiullah,** Secretary, TMREIS, in conversation with **Anupama Mehra** of **Elets News Network (ENN).**

TMREIS has an excellent track record of establishing 204 Minority Residential Schools and 2 Residential Junior Colleges in a mere 13 months span in 31 districts of Telangana. Please tell us about it.

TMREI Society is the brainchild of Sri K Chandrasekhar Rao, Chief Minister, as a part of his dream of 'Bangaru Telangana' and 'KG to PG' Mission for all communities. Thus, when the GO was passed in 2016 for the opening of 71 Residential Schools in various districts, the TMREI Society was formed. The idea was a golden chance to uplift the underprivileged backward minorities' communities in Telangana. The concept of residential schools was tough to be accepted by the Muslim minority community, especially in the case of girls.

Hence it was not only a herculean task of establishing the schools, but the greater challenge was getting the students admitted into these schools. Hence, NGOs, Community Leaders, and religious clerics were involved in convincing and assuring the minorities on the safety and security of their children. While this task of convincing the parents was going on, simultaneously suitable buildings were shortlisted, procurement of the furniture, uniforms, books, and other amenities essential for the schools were carried on and similarly, the appointment of the staff was being focused on too.

Finally, 71 schools began functioning along with 12 existing schools and 2 colleges from TREI Society were transferred to TMREI Society making the number to 83 in the first year. As soon as the schools started functioning, the health, safety, and security of the students was focused upon. Finally, the trust of the communities was won, and the success of these schools made the local leaders demand a greater number of schools in their areas. Thus, in the second year, the govt passed the orders for the opening of another 121 new schools. Thus, a record was set in 13 months of establishing 204 schools and 2 Junior colleges in 31 districts due to the dedication of the entire team involved with this project.

B. Shafiullah
Secretary
TMREIS

What steps are you taking for the child's overall development at your school?

We at TMR schools aim at the holistic development of students. We majorly focus on the development of students in 3 major areas such as values, knowledge, and skills. In order to be able, to be good human and able citizens of the world values are very important. At TMR schools we strongly pursue activity-based learning as the quote goes; I hear and I forget, I see and I

remember, I do and I understand-Confucius.

We eagerly believe in developing the 21st-century skills in our students in order to help them keep pace with other students from private and international schools. Sports and arts are also an integral part of our curriculum. We help expose students to international visits such as a visit at NASA Conference, IIT-Hyderabad, and Mount Kilimanjaro, etc. Health, right diet and safety, and security is also focused to ensure the appropriate development of our students. Additional to this, robotics and science labs, library, aided with the latest digital classes from VI – X, etc. are provided to the students.

The teachers not only teach but also play the role of a loco parent for each child enrolled. Additionally, there are educational trips, field trips, etc. organized to ensure the overall development of each child in TMR schools.

TMREIS aims to provide high quality and free education to the children of most economically backward minority communities in the state of Telangana. What is the percentage of enrolment? Has it increased over the period?

The demand for another set of 121 schools right after the first year of establishment of 71 schools coming from the local leaders and residents is a testimonial of the fact that the schools have gained the confidence of the masses. Hence it is very clear that the enrolment in these schools has been good and encouraging for all of us. In the first year the enrolment was 75-80% that has tremendously increased to 85-95% in the second year. In this coming academic year, 2020-21, we are proud to announce the up gradation of 71 first phase TMR Schools to Junior Colleges.

This history-making increase in the number of schools and colleges is testimony of success of the TMR Schools across Telangana. The success of our schools has even attracted delegates from other states and even countries to study the working of our schools with an initiative to start such schools. During the current academic session students enrolled for the entrance test were more than 1:5 in the ratio as per the available seats. This demand is escalating year after year.

What technologies are you implementing in your residential schools? How it is a game-changer in the education sector?

We are working in collaboration with many technology wizards within India and abroad for providing an exposure to our students to the latest developments in the world. We have Duck Learning robotics labs, latest science labs, library, the digital content for all the classes to aid instruction and an MOU with IIT-Hyderabad to give trainings and exposure visits for our students. All this is on par with any school of international standards because of this, our students have improved a lot, although most of them are first generation learners. Today if we assess these students, we don't find them anywhere less than the students of corporate schools. The testimony of this is the fact that the project from TMR schools was selected by NASA, they made it to Mount Kilimanjaro, witnessed the launching of Chandrayan II recently, and the latest one is the inventing of fuel free bike. These events testify that the students in TMR schools are abreast with the latest improvements in the field of education.

Sports, extra-curricular activities in the school are a must for the overall development of the students. How are you ensuring it at your schools?

Focus on physical health and sports is an essential part in all our TMR schools There is enough opportunities provided to all the students to participate in sports and extracurricular activities. There are two sports schools, one for girls and the other for boys, running under the able physical education trainers, with the facility of Eminent sports coaches training the students in the field of their talents. Therefore, TMR students have made their presence felt at many national and international events, winning laurels for the society.

In addition to sports, we also have other events like Spark Fest, a cocurricular event where the students exhibit their skills in 11 events like, debate, elocution, essay writing, drawing, spell bee, dance, vocal music, instrumental music, drama, etc. Thus, all the teachers at schools keep continuously monitoring the students, encouraging their participation and identifying their talents for further training in that field. DL

NICMAR: IMPARTING KNOWLEDGE AND SKILLS

The National Institute of Construction Management and Research (NICMAR), has been constituted as a not-for-profit organisation with the express objective of engaging in activities for the promotion of education, training, research, professionalism and skill formation at all levels of the Construction Management, Real Estate Management, Infrastructure Management, and Project Management (CRIP), and also undertaking special projects, collaboration with other organisations, dissemination of knowledge through seminars/ conferences; publishing literature, undertaking consultancy, etc.

Under the Bombay Public Trust Act, 1950, NICMAR was registered as a Public Trust in 1982. The NICMAR Society was constituted in 1984, registered under the Societies' Registration Act, 1860. With the main campus in Pune, NICMAR now boasts of three other fully functional campuses with state-of-the-art infrastructure at Hyderabad (Shamirpet), Goa (Farmagudi) and Delhi NCR (Bahadurgarh).

Full-Time On-campus Post Graduate Programmes: NICMAR offers two-year full-time Post Graduate Programmes in Advanced Construction Management (PGP ACM), Project Engineering and Management (PGP PEM), Real Estate and Urban Infrastructure Management (PGP REUIM), Infrastructure Finance, Development and Management (PGP IFDM) and Contemporary Smart City Development and Management (PGP CSCDM). It also offers one-year full-time Post Graduate Programmes in Management of Family Owned Construction Business (PGP MFOCB), Quantity Surveying and Contract Management (PGP QSCM), and Health, Safety and Environment Management (PGP HSEM).

Admission Process: NICMAR admits students at an all India level and has a rigorous selection process. The selection of students is made by the selection committee. Admissions are administered centrally from the Pune campus. Those interested in admission to the various programmes may apply online, pay fees and upload documents through the website: **www.nicmar.ac.in** or direct link: **http://admission.nicmar.ac.in** / **http://admission1.nicmar.ac.in** or download the application form from website and send duly filled application form to the Dean-Admissions, NICMAR, 25/1, Balewadi, N.I.A. Post office,Pune - 411045, along with the application fee and required documents as mentioned in the application form within the specified date.

Applications are scrutinised and eligibility is established on the basis of the documents submitted. Eligible candidates will be invited to appear for the selection procedure. Candidates' preference of programme/campus will be considered, but the allotment will be done at the sole discretion of the admission department, NICMAR. Candidates should appear for the selection procedure on the given date at the allocated center. The admission process is conducted at different centers in India, Bangalore, Chennai, Delhi NCR (Bahadurgarh), Hyderabad (Shamirpet), Kolkata, Mumbai, and Pune. They have to make their own travel and living arrangements during the selection process.

Financial Assistance: The Institute offers 'NICMAR Top Ranker's Scholarship' to 5 top ranking students joining NICMAR. The Institute also offers 'NICMAR Means Based Top Ranker's Scholarship' to 5 top ranking students out of 100 highest ranked students in admissions. Besides, the Institute offers the 'Excalibur Award' and a substantial number of merit scholarships.

Placement Assistance: NICMAR holds an enviable record of excellent campus placements for students every year, for over decades with all who's who of CRIP recruiters on board, both in India and overseas. NICMAR is proud of its excellent placement record including steady overseas placements every year with average and maximum compensation offered steadily rising each year.

Along with placements, it boasts pioneer status of all-new, unique PG programmes in CRIP areas; large faculty strength; large alumni strength across the world of CRIP; large student enrollment every year across all its programmes; large collection of state of art software in CRIP areas; large bank of own publications and case materials in CRIP areas; and large number of Executive Development Programmes (EDPs) for the elite of CRIP world.

Infrastructure: NICMAR has endeavored to create

infrastructure in its campuses with well equipped state-of-the-art facilities like library, classrooms, seminar rooms, auditorium, computer labs, language lab, internet access through dedicated lines and Wi-Fi, hostel and canteen facilities for boys and girls, gym, cafeteria, playgrounds, indoor games & recreation facility, clinic, common student activity cell, shop facility, hostel facility with hot water supply, premises is under the surveillance of CCTV and round the clock security, uninterrupted power supply, audiovisual aids, computer software, educational videos, electronic online databases.

The library has a collection of more than 25000 Titles, comprising of over 23,000 Books, Periodicals, Standards, Cases, Technical Notes, Bound Volumes of Periodicals, Theses and Audio-Visual Materials. It also subscribes to electronic resources which include PROQUEST ABI Inform Complete (9,200+ Titles), PROQUEST Ebook Central-Business and Engineering (56,000+ books), ASCE Journals (39 Titles), ASCE Proceedings (711 Titles), SCIENCEDIRECT - Business Management & Accounting (122 Journals), Elsevier Ebooks (52 Titles), Taylor & Francis Journals (80 Titles), SAGE Journals (23 Titles) and the Centre for Monitoring

Indian Economy (CMIE) products including, Prowess IQ, Industry Outlook, Economic Outlook, and the CAPEX. The Anti Plagiarism Software "Turnitin" is also subscribed for the faculty members with 25 instructor licenses.

The access to the e-resources is available at all campuses. The Software includes application packages like Microsoft Project Management, Oracle suite of project management packages including Contract Management, Enterprise Portfolio Project Management, Professional Project Management, Contractor and Risk Analysis. Autodesk suite of Building Information Modeling comprising of 24 software products including, AutoCAD, Revit, Navisworks, etc.

Risk Management Software packages including, @Risk, Evolver, Stat Tools, Top Rank, Neural Tools, Precision Tree. CANDY software for estimation, valuation and project management, Microsoft Dynamics for ERP, Simcity simulation tool for city infrastructure planning and Orell Digital Language software for students to get proficiency in English, TURNITIN for similarity check, PROCHAIN for Critical Chain Project Management, LEAN DO STATION for Lean Construction Management, CalQuan for quantity calculation and cross-section drawing for linear projects, HDM-4 for checking engineering and economic viability of road projects, etc.

Research and Consultancy: NICMAR places a strong emphasis on research and industrial consultancy. NICMAR faculty have published and presented a large number of research papers in national/international journals and conferences. NICMAR faculty members have been invited as a speakers at several conferences and won medals for their paper presentations. NICMAR has undertaken sponsored research studies for various organisations including the Government of Maharashtra, organisations in public and private sectors, professional associations.

The Institute's faculty made significant contributions in research and publications in the year 2019-20 (to date). The faculty members published over 199 research papers in different National/International journals/edited books/proceedings. They presented 103 papers in conferences/seminars/workshops at the National/International level. Besides this faculty published 12 books, and 118 cases & teaching notes which were registered contributing to the teaching and learning process. They also made significant contributions in research projects with 1 project completed and 11 ongoing projects. The Institute has also successfully carried out many consulting studies for such organisations. In order to ensure that the Institute's educational programmes are substantially benefited from research and consulting studies, there is a strong emphasis on case writing by faculty members. As of now, faculty members have registered over 564 cases & teaching notes. Thus education, research, industrial problem solving and training efforts are all directed to make available a professionally competent human resource to carry out many challenging jobs that need to be effectively performed in the institute's chosen areas of concentration.

Faculty: NICMAR has endeavored to build largest faculty strength in the country solely dedicated to construction and allied areas of study comprising a very good blend of experts with industrial experience and academic research background. The total regular full-time faculty strength as of now is 115, of whom 74 hold Ph.D. and the rest are Post Graduates in relevant fields of expertise. Another 36 faculty members are currently pursuing a Ph.D. in various Universities.

Awards for NICMAR: Dr. Mangesh G. Korgaonker, Director General, NICMAR has received **"International Royal Personality Award"** from the Global Achievers Foundation in association with International Business Council at the Indo-Thai Friendship Summit (2020) held at Silom, Bangkok; Also, NICMAR has received many accolades including **"India's Most Trusted Education Award"** in the construction education and training category, from International Brand Consulting (IBC) Corporation, USA (2019); "**Education Leadership Award"** in the ABP News Media Sponsored World Sustainability Foundation Awards (2019); **"Best Educationist Award"** and **"Certificate of Educational Excellence"** from International Institute of Education and Management (2017); **"Award For Educational Excellence"** at the Indo Global Education Summit (2015) and **"Education Leadership Award"** by Lokmat media group at the World Education Congress (2015).

Source :NICMAR. DL

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HOW CG SLATE LEVERAGES AFTER-SCHOOL LEARNING DATA TO IMPROVE CLASSROOM DELIVERY

CG Slate is a **Personalised and Adaptive Learning (PAL)** platform that integrates students' after-school learning data with classroom instructions, and thus helps the school and teachers in making better decisions.

Everything starts with the learner and each learner is unique in many ways. They have different starting points with unique strengths, weaknesses, interests, and aspirations. All of these unique attributes call for unique responses from their school systems. Similarly, every teacher has his/her own style of teaching, but good teachers try to adjust their approach depending on the learning needs of their students. Effective teaching methods engage gifted students, as well as slower learners and those with attention deficit disorders. This is where differentiated instruction and a balanced mix of teaching styles can help reach all students in a given classroom, not just the few who respond well to one particular style of teaching.

With AI and data-driven innovations in education, it has become imperative to create a blended learning environment for the students involving a combination of instructor-led teaching in schools and self-paced learning at home.

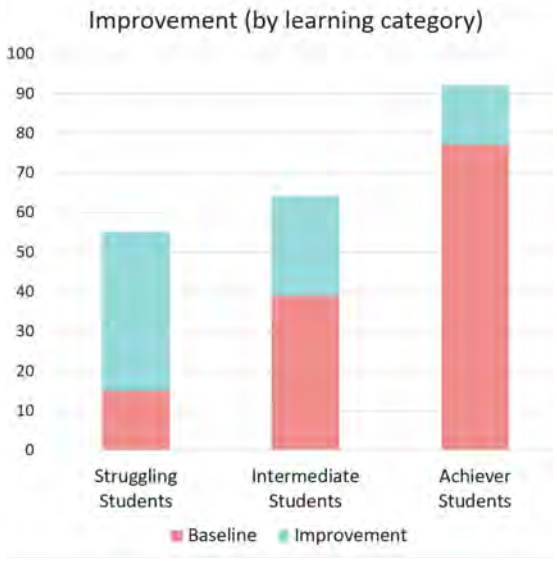
To enable this blended learning environment, CG Slate's adaptive learning platform backtracks on a student's learning progression in the after-school hours, sometimes reaching back to foundational concepts, to find the existing gaps and provide content recommendations accordingly. CG Slate contains learning modules in the form of engaging videos, interactive books, guided practice questions & games. These learning modules, picked on the basis of school curriculum, are sorted using data-driven technologies and are pedagogically aligned to make learning effective.

CG Slate captures real-time learning and performance data of each student in the form of a learning trajectory. It provides school teachers with suggestions to improve classroom delivery by gauging the strengths and weaknesses of individual students and the class as a whole. So, it's like having a teaching assistant telling the teacher what to focus on and why. It also provides the teachers with topic-wise performance data at a classroom level which enables the teacher to categorise common errors and personalise classroom instruction.

CG Slate's powerful dashboards enable the school administration with real-time data that reflects on students' after-school usage and

Topicwise Performance

Grade	Topic	Average Performance	Total Attempts
Grade 6	Integers	41.8	106
Grade 6	Fractions and Decimals -IV	47.5	79
Grade 6	Basic Geometrical Ideas	51.3	99
Grade 6	Playing with Numbers	55.9	86
Grade 6	Measures of Lines and Angles	59.2	108
Grade 6	Data Handling	62.7	75
Grade 6	Fractions and Decimals -III	66.5	92
Grade 6	Fractions and Decimals -II	69.2	95
Grade 6	Whole Numbers	71.7	103
Grade 6	Knowing Our Numbers	75.3	120
Grade 6	Fractions and Decimals -I	80.2	118



improvement in learning outcomes. The dashboards also allow for greater transparency and constructive in-depth discussions with the parents during parent-teacher meetings.

CG Slate is the most widely used personalized and adaptive learning (PAL) platform in India with 5 lac+ students using it on a daily basis. We sincerely believe in reducing the teacher's classroom load significantly and giving them more time to focus on maintaining a healthy environment for learning. DL

RGUKT: HARNESSING THE TALENT OF RURAL YOUTH

RGUKT's primary objective is to spur talented rural youth and inculcate them with world-class educational professional leadership and engineering skills. Year after year we are able to produce students who are very much convergent and equipped with knowledge skills, says **A Ashok,** Vice-Chancellor, Rajiv Gandhi University of Knowledge Technologies, Basar, in an interview with **Sudheer Goutham** of **Elets News Network (ENN).**

A Ashok
Vice-Chancellor
Rajiv Gandhi University of Knowledge Technologies
Basar

You head the Rajiv Gandhi University of Knowledge Technologies, Basar, Telangana. What steps are you taking to harness the talent of rural youth?

Rajiv Gandhi University of Knowledge Technologies (RGUKT) was established in 2008 as a full-fledged University in the then united Andhra Pradesh by a special act of Legislature.

Subsequent to the bifurcation of the State, the new Government of Telangana adopted the lone campus in Telangana state at Basar as a stand-alone University.

The University has a unique six-year integrated program under which the top 1% of the rural students are admitted into the University after their X class.

They complete their PUC and then move into a four-year B Tech program. The University takes 1,000 students every year into the 6-year program. Since the academic year 2018-19, the intake has been hiked to 1,500 students.

RGUKT's primary objective is to spur talented rural youth and inculcate them with world-class educational professional leadership and engineering skills. Year after year we are able to produce students who are very much convergent and equipped with knowledge skills. So, that they can become world-class engineers. In a six-year integrated program, we make sure students are given enough exposure to become master in the game.

Give us an overview of the innovation, incubation, and entrepreneurship-related programs that started at the Rajiv Gandhi University of Knowledge Technologies.

At Rajiv Gandhi University of Knowledge Technologies (RGUKT), our vision is to nurture world-class professional engineers by imparting quality education and transforming rural youth into world-class engineers. To achieve this, students are required to be trained in the skills relevant as per the industry demands. As the job market demands the latest advancements in technology, innovation in education is our most preferred approach for conducting any course.

How significant is the role of incubation centers for preparing global citizens? Please describe various incubation related activities in RGUKT.

Incubation Centres have a major role in higher education. These centers help students in developing diversified thinking that helps in finding a more effective and innovative solution to problems. At Incubation Centres in the State, we follow the process; innovate, incubate, conceptualise the idea, scale up the idea and then mass production.

At RGUKT, Basar, a Japanese company "SafeTracehub" operating in the premises of its incubation center, we will soon be seeing more companies from around the world signing MoUs to set up innovation labs and incubation centers.

Please tell us about the facilities provided at your campus.

At RGUKT, Basar, we want to ensure that students don't feel homesick and give their best to move ahead in the game. To ensure that we are providing the following facilities at the campus:

- ICT enabled classrooms
- Wi-Fi enabled hostel blocks
- Laptops issued to every student
- Advanced labs in IoT, BlockChain, Robotics, Material Characterisation among others
- Biometric tracking and attendance systems
- CCTV camera secured campus
- 30-bedded campus hospital
- ATM, Post Office and Bank
- Student Activity Centre with gymnasium and indoor games
- Vast sports grounds for outdoor sports and games
- Central Laundromat with steam ironing facility
- Summer storage tank spanning 32 acres holding about 90 million liters of water
- RO treatment plants capable of providing 60,000 liters of pure drinking water per hour
- Faculty & staff residential blocks and 6 hostel blocks housing 1,250 students in each
- Solar-powered lighting

- Central Sewerage treatment plant with 2 MLD capacity Recycles 80% – 90% water for reuse

Please tell us about the achievements and accolades of your university.

- RGUKTN-RAVENCLAW bagged the only prize for the entire three-tier event of Rally Car Design Challenge – 2019, which is the best innovation award. It also bagged the second prize for the entire static events in TIER-1 EXTREME category.
- Received a national award in 2018 as the first university to adopt Blockchain Technology for authenticating the academic certificates issued by it
- Regional Centre for NPTEL program – currently rated among the top 50 of 1,300 local chapters. The university also runs NPTEL courses under credit transfer method
- RGUKT, Basar is running NASSCOM's QP and FSIT programs in Data Analytics, Production Design Engineering, and Heavy Construction Machinery
- Active encouragement for students to pursue Industry internships. Two students from RGUKT, Basar bagged the Young Achiever Scholarship at the 5th Internshala Trainings in August 2018. RGUKT, Basar also stood at an All India Rank of 14 (for April – July 2018) from out of 1,574 colleges all over the country where internship opportunities for students are concerned. The South India Zonal rank of the University is 6
- Industry – Institution MoUs with NASSCOM, CITD, NCRI, and NFTDC. More in the offing
- MoU with TITA (Telangana IT Association) to establish TIIC (Telangana Innovation and Incubation Centre) at RGUKT, Basar. The Centre is already hosting a Japanese company 'SafeTraceHub' which was the first one to set up an Industry Incubation Centre here. In the first phase, TIIC is being set up to host up to 15 Industry Incubations and about five student incubations. Expansions are being planned in later phases
- MoU with NCRI (an MHRD Institution) for offering courses in Rural Entrepreneurship and Empowerment and also undertake projects contributing to rural uplift
- Won the SKOCH Award for 2018 along with TITA for Social Contribution in working to convert Basar Village into India's first fully digitally literate village. Working closely with the District administration of the Nirmal District of Telangana to help bring innovation into agriculture and rural entrepreneurship. Already delivered a few solutions like developing e-commerce web platforms for the world-famous Nirmal arts and toys Cooperative Society and Ankapur model village, farm equipment like a unique straw baling machine and seed-sowing machine, etc.
- One of the five universities in the State of Telangana – and the only one in the rural districts – to be hosting the Innovation, Incubation and Entrepreneurial Development Programme. **DL**

SETH ANANDRAM JAIPURIA GROUP: EMPOWERING & ENTHUSING STUDENTS OF INDIA TO EXCEL

"Our endeavor is to promote creativity, environmental sensitivity and academic excellence among students. We help inculcate a spirit of lifelong learning, for them to become effective change agents," says **Shishir Jaipuria,** Chairman, Seth Anandram Jaipuria Group of Educational Institutions in a conversation with **Elets News Network [ENN].**

Shishir Jaipuria
Chairman
Seth Anandram Jaipuria Group of Educational Institutions

The Jaipuria group forayed into education in 1974 and runs some prestigious colleges and schools in Ghaziabad, Kanpur, Lucknow and other cities. How has been the journey in the education spectrum so far?

The journey so far has been progressive and indeed enjoyable. I believe that education is the strongest means of youth empowerment, and opens a path for us to give back to society. We started our journey with Seth Anandram Jaipuria School, Kanpur in 1974 which was followed by schools in Ghaziabad, Lucknow and various other cities in Uttar Pradesh, Uttarakhand, and MP. The experience so far has been extremely fulfilling and enriching. I am making all endeavors to realize the dream of my forefathers to create a suitable environment for the children of our country which is consistent with the ever changing paradigm of education.

With technology making our lives easier and replacing old teaching methods, in what ways has it shaped the teachers at your Institution?

Teachers at our institution are leading the change in using technology in the knowledge delivery process. Seth Anandram Jaipuria School Lucknow has become a **Microsoft Showcase School** and a **Microsoft Aspire School** with 39 teachers as Microsoft Innovative Educator Experts. It is the only school in Lucknow and amongst 200 schools in the country with this unique distinction. The teachers at our institutions are enthusiastic to use technology as a part of everyday lesson delivery. In many of our institutions, the teachers have been using Sway, Kahoot, One Note and Google Sheets to engage students and make learning fun.

How far you have been successful in integrating it in the teaching-learning practices being followed at your institution?

We are a progressive group of institutions. We have virtual classrooms, International knowledge exchange programs through Skype sessions, audio-visual teaching methodology and research based learning that allow students to participate in the learning process and explore out of the box solution to every problem.

Atal Tinkering Lab is operating in two of our schools where students can learn innovative skills and work on creative ideas for groundbreaking developments in different spheres.

We believe that technology can be used as a tool to augment the conventional teaching practices, thereby making the learning process more interesting and engaging for students. Advanced

technology is integrated in our classes through teaching aids such as Robotics and tools of Khan Academy. The online resources of the Academy in different subject areas such as Chemistry, Biology and Physics are being used to complement classroom teaching, which in turn can help students to grasp the concepts better.

What are the challenges on board that still need to be addressed?

One area of concern is reaching out to children at home and shortlisting ways to teach them in case school is shut down due to emergencies.

We also want to zero in practices that can be used to direct children on where to draw the line when it comes to respecting their values while having unhindered access to the internet. The idea is that the young ones do not behave erratically in platforms with access to internet.

What are the factors to look after while choosing the right partners when it comes to franchisees and getting the right faculty?

We believe in connecting with like-minded individuals having a vision towards nation building through education. Moreover, they need to have the infrastructural capabilities to open a school in specific cities.

The teachers at our schools are chosen based on their positive attitude towards education. Our faculty members also need to be technology friendly and experts in their specific subject areas.

People are moving towards private schools as government run schools are not able to provide quality education. How is Seth Anandram Jaipuria making a mark in this regard?

We are focusing all our efforts in providing high quality education to young learners to empower them so that they can contribute positively to the world in different fields. This is reflected in our alumni who are placed all around the world in high-profile jobs.

We ensure that the teachers serving at our schools are the best in their fields in terms of experience as well as expertise. These mentors can make the teaching/learning process interactive and fun. We also provide the necessary independence to students from early on so that they are able to develop their personalities and know their inner strengths. In addition, we keep abreast of latest technological innovations and include the same in our teaching/learning format.

> *Looking at the way the world is progressing, it is expected that the jobs of the future will require high levels of emotional intelligence and technical skills. Use of technology along with appropriate human intervention will prepare our children to face any challenge that may come tomorrow with ease -- Shishir Jaipuria.*

What is your take on Draft National Education Policy? In your opinion, what reforms are necessary to transform the school education system in the country?

I believe that the Draft National Education Policy has quite a few salient features to its credit. The focus on online learning as a substitute to regular classroom interaction between learners and teachers can reduce costs as well as make education more accessible. I welcome the initiatives in the Draft National Education Policy for better engagement in the private sector. The proposed national research fund which aims to ensure provisioning for government funding for R&D work is another great initiative. DL

KINDER GARDEN - THE PLAY SCHOOL: ENCOURAGING EXPLORATION & CURIOSITY

Prabha D Mukhiya
Principal
Kinder Garden - The Play School
Karimnagar, Telangana

"We educate our pupils in a holistic manner by using various teaching aids, like puppets, blocks, puzzles and games. This methodology encourages explorations, curiosity, imagination, and enables children to start thinking by themselves, which leads to the child's holistic development", says **Prabha D Mukhiya, Principal,** Kinder Garden - The Play School, Karimnagar, Telangana, in a conversation with **Shivani Babbar** of **Elets News Network (ENN).**

What is the vision and mission of The Play School?

The vision of The Play School is to create responsible citizens for our nation. As the foundation of a student's life is his/her kindergarten education, our mission is to lay the right foundation imbibed with human values.

What are the activities and play-based learning that encourage the holistic development of the child?

We educate our pupils in a holistic manner by using various teaching aids like puppets, blocks, beads, seeds, puzzles, games, enacting stories and rhymes and celebrating festivals of all religions.

We take them to field trips, conduct weekend programmes and cultural programmes. This methodology encourages explorations, curiosity, imagination and enables children to start thinking by themselves, which leads to the Child's holistic development.

What are the initiatives taken at the playschool that make it one of the best preschool?

We live up to our slogan - "Motherly care in a homely atmosphere " and apply it not only by our teachers but also by our supporting staff. Our entire team provides the utmost care and a homely atmosphere to every child that comes to us.

We always enable, encourage and guide our pupils to do things by themselves which creates confidence within them.

We also welcome our parents not only on "Parent – Teacher Meeting " but any time to discuss the child's performance and other issues.

Finally, our ambiance, which includes our open area with big neem trees and flower gardens makes us one of the best Preschool in Telangana.

How is technology integrated in your classrooms and how different is it from other preschools?

We have digital classrooms in The Play School which are included in our daily teaching. Pupils will be given small assignments to do on computers. But we never over do it, because we believe that over use of technology may curb a child's natural learning.

Any message you would like to give the viewers and readers of digital learning magazine?

Choose your profession, respect it and enjoy your work. The outcome of it will be the best and this will be your right contribution to your nation. **DL**

INTERNATIONAL CURRICULUM NURTURES HIGHER-ORDER THINKING IN CHILDREN WITH TECHNOLOGY: DR MONA LISA BAL

Slowly but assuredly, International education is gaining ground in the Indian education scenario. Undoubtedly, the International curriculum has much to commend it. The focus on critical thinking, perspective building, inter-disciplinary learning and technology bundled with International education offers a considerable level of merit in education. In an interview with **Debjyoti Mohanty** of **Elets News Network (ENN), Dr Mona Lisa Bal**, Chairperson, KiiT International School, Bhubaneswar points out that the International curriculum succeeds in preparing children for higher-order thinking through use of technology besides offering the best placements and career options in higher education, both in India and abroad.

Dr Mona Lisa Bal
Chairperson
KiiT International School
Bhubaneswar

What is the vision and mission of KiiT International School?

KiiT International School's vision revolves around leading and excelling by engaging minds, transforming lives, and serving others with compassion and empathy as a premier international school.

As far as our mission is concerned, we endeavor to enrich childhood with knowledge, insight, innovation, and transformation. KiiT International School's (KiiTIS's) vision and mission clearly underlines the school's philosophy to foster the development of international-mindedness to lead students to inclusivity and imbibe mutual respect for differences, both in a global and local milieu. It seeks to inculcate learning beyond the pages of text-books.

Could you give us a brief overview of the curricula and courses offered by KiiT International School?

The **Central Board of Secondary Education (CBSE)** is offered from Nursery to Grade XII. This foundation curriculum is integrated with a theme-based, inter-disciplinary approach which includes experimental and hands-on learning making it appropriate to accommodate students from different educational systems.

The International General Certificate of Secondary Education (IGCSE) programme is offered from Grades VII to X. IGCSE develops the learner's understanding, motivation, and skills. The completion of our IGCSE programme provides an ideal foundation for the IB Diploma Programme.

The International Baccalaureate Diploma Programme (IBDP) is a rigorous two-year course of study in DP-1 and DP-2, designed to prepare students for the challenges of university studies and life beyond. The balance of a demanding academic program and the all-round development of personality is the hallmark of IBDP.

How does the International Curricula offered by KiiT International School fare with the National Curriculum, and what are the considerations

involved in choosing one over the other?

Each of the curricula addresses a certain body of students as well as parental expectations regarding the child's university education and career choices. They have their own strengths. The concept of offering three curricula as choices for students was a conscious one, with the intention of incorporating the best practices of each to provide a meaningful and systemic experiential-learning experience to the child. A feel of international learning practices also creates a platform for students to make informed choices about the curriculum that they wish to pursue.

Specifically, to help students transition from CBSE to IGCSE and IBDP, constant counseling, and interfaces about IGCSE and IBDP, with students and parents is the starting point. Educating the parents about the opportunities that an international curriculum offers, keeping in mind the aspirations, aptitude, and keenness of the child to ensure that he/she joins the programmes on offer for the right reasons is vital because the transition is never easy and informed decision-making must augment this transition. Also, our society is extremely assessment-driven. Results and high scores are norms by which expectations are formed. The international curriculum is very demanding and the criteria-based assessment is something that parents and students are not used to. Also, the focus on critical thinking, perspective building and inter-disciplinary learning, concurrently on the different subject areas, is new for the child and requires constant guidance and support from the teachers.

Besides, the stress on academic skills, like thinking, research, self and time management, as well as social skills with an emphasis on a clear framework of academic honesty to guide them. Students also learn to balance between technology as an aid for learning and the distraction that it can be. In my opinion, a critical aspect that the international curriculum succeeds in preparing children is for higher-order thinking through the use of technology. Also, the international curriculum offers the best placements and career options in higher education abroad and in India.

As a standalone at IGCSE and IBDP school in my home state Odisha, we have an added responsibility towards our students and parents. The team is dedicated and extremely proud of being able to augment a truly global learning experience to the students.

Extra-curricular activities are important for maintaining the physical and mental well-being of young students. How does KiiT International School handle this crucial part of school education?

Every activity in school life plays a significant role in the development of students. Co-curricular activities are an essential part of school life and help in enhancing the learning process of students at school. At KiiT International School, co-curricular activities are compulsory, which are important for every student to participate in. Co-curricular are designed and balanced with the academic curriculum so that every student gets to learn beyond subjects.

Co-curricular activities are meant to bring social skills, intellectual skills, moral values, personality progress and character appeal in students. It includes athletics, cultural events, library activities, science lab activities, classroom activities, creative arts, and meditation, etc.

Generally, campus life is something that we cherish forever. How does the KiiT International School campus fare with residential students?

Being a residential school in a city is our biggest strength. We provide a safe, accessible and yet serene living experience to the students on campus. The house parents take care of their students to provide a home away from home flavor. Special academic support by teachers for them after school hours helps. Also, campus activities, special meals, celebrations and supervised outings exclusively for the boarders give them a feeling of being in touch with the outside world and in sync with their day-boarder peers. The school is next door to KIMS, a super specialty hospital and medical school. This takes care of the medical needs of the students and is a tremendous source of comfort for parents too. **DL**

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GLOBUS INFOCOM: BOLSTERING ED-TECH INNOVATION & SOLUTIONS

'Innovation' defines Globus Infocom where research and development act as the base to drive growth in the industry, says **Kiran Dham,** CEO & Whole Time Director, Globus Infocom Limited in conversation with **Debjyoti Mohanty** of Elets News Network (ENN).

Kiran Dham
CEO & Whole Time Director
Globus Infocom Limited

Tell us something about Globus Infocom Limited.

'Innovation' defines Globus Infocom where research and development act as the base to drive growth in the industry. We are a channel friendly organisation with a large customer base of 25000+ satisfied customers in segments of school & higher education, training institutes, hospitals, government organisations, defence & paramilitary establishments and corporate firms.

With a strong nationwide sales and service network, we work towards creating need-based solutions to affirm that client requirements are met to the core. Having a wide solution basket in three different verticals - Education Technology, Digital Signage & Display and Security & Surveillance, we work to cater to the needs of the 21st century. Being a Make in India brand, we have our own manufacturing units offering a wide variety of products and solutions that are devised to put forth the best-in-class and innovative products. Being one of the leading companies in the industry, we work with an aim to innovate continuously to bring in solutions to allow clients ease off with their current mechanisms. Keeping in mind the same, we became the only company to provide all components of a solution - including hardware, software and infrastructure - together at one place for a hassle-free customer experience. In the end, it's all about creating

a technology-driven ecosystem of opportunities, growth and trust for our customers, partners and team members.

What is the mission & vision of Globus Infocom and how has your journey been so far?

The mission of Globus Infocom revolves around creating a technology-driven ecosystem of opportunities, growth and trust. Our vision is to become a leading and trusted Make in India brand for innovative solutions and provide a world of unlimited possibilities for our customers, partners and team members.

The journey till date has been extremely enriching and rewarding with each day as an experience leading us towards being a trusted and established name in the industry. Since the inception of Globus Infocom in 2001, we have come a long way. Starting our journey with the primary vertical of education technology, we have expanded into three different verticals including Digital Signage & Display, Security & Surveillance and Software Solutions till date.

We have enormously widened our range of products & solution basket in all three segments to cater to the soaring market demands of not only metros, but of Tier 2 and Tier 3 segments too. Along with huge and varied product offerings, we have also strengthened our Research & Development department bringing in meaningful solutions which work efficiently in Indian standard environmental conditions. It's only because of the quality of products & services that we offer we can proudly claim an outstanding repeat business order ratio of more than 50%.

Globus offers a wide variety of Ed-Tech solutions, both hardware and software. If you were to choose one, what would be your flagship product and how has it been received in the market?

Though we offer range of innovative technological solutions which are futuristically designed, but if I were to choose one, I would certainly name our latest offering "Digital Board Solution" as our flagship product this year.

The Digital Board Solution has been designed to enhance not only the productivity of the classroom, but also takes care of the product safety aspect in the traditional classrooms. It equips the teacher completely so that the traditional classroom can be converted into a blended teaching and learning environment, where teacher can teach by using the basics of traditional classrooms and also impart the digital features and resources through Interactive flat panel display. We also provide complete subject and language (Hindi, English and Sanskrit) content based on the educational institute's requirement. Since the time of its introduction last year, we have successfully installed more than 1,000 units across India with 100% customer satisfaction.

Virtual and Augmented reality technologies are at the frontier of development right now, with their market size expected to reach USD 142 billion by 2023. How are you implementing it?

Being at the forefront of technology, we strive towards constant innovation and always work towards imbibing best of the technologies in our products and solutions. We have plans to introduce solutions equipped with augmented and virtual reality by the month of July this year. We expect a positive response and a successful implementation.

How was the year 2019 for the company? What new innovations are you planning to implement this year?

2019 was the year of innovations and growth. We would be closing on the revenue of Rs. 150 cr. in this financial year along with an impressive growth in the team size. We introduced several new technological innovations in different fields last year which were welcomed and appreciated by our prestigious customers. A number of major projects for esteemed government and private organizations were successfully executed last year. To name a few, we feel extremely proud to have successfully accomplished projects in leading establishments of the country like UP Police, University of Goa (Dept. of Higher Education), Schools under Department of education, Government of Haryana (Aarohi Schools), Colleges under knowledge consortium of Gujarat (25 colleges), Kashi Vidyapeeth University, Schools in Gujrat (CSR initiative by Welspun) and many more.

This year, we have plans to introduce more need-based innovative offerings like App-(Android) based content, tablet-based ICT lab solution etc. Also, in 2020, our focus will be on enhancing the process of reporting and analytics for teachers, students and parents for a smooth and transparent academic system.

Technologies like AI, ML, IOT, and others are changing the way of working in all the sectors. How is it impacting your sector? And are you implementing any such technologies in your company?

Advanced technologies are impacting every sector; education and security are no exception. We already have launched AI-enabled surveillance solutions in 2019. This year, we have plans to introduce AI & VR-enabled solutions in education sector in the month of July. DL

GREENWOOD KINDERGARTEN:
PIONEERING IN IMPARTING QUALITY EDUCATION

Early-childhood education is very important in the overall development of every child. Greenwood kindergarten has been pioneering in imparting quality education with love and care by providing peaceful surroundings for the past 50 years and above, says **Jhansi Premanand,** Owner & Director, Greenwood Kindergarten, Hyderabad in conversation with **Anupama Mehra** of **Elets News Network (ENN).**

Jhansi Premanand
Owner & Director
Greenwood Kindergarten
Hyderabad

Greenwood kindergarten has been pioneering early-childhood education in Hyderabad for more than 50 years. How has been the journey so far?

Early-childhood education is very important in the overall development of every child. Greenwood kindergarten has been pioneering in imparting quality education with love and care by providing peaceful surroundings for the past 50 years and above. With innovative, creative, nature-friendly activities, we are working on bringing out the best abilities in each and every child along with the help of excellent teaching-learning materials. The year 2019 was the most memorable year for Greenwood kindergarten as we celebrated our Golden Jubilee, where the students, teachers, staff, parents, friends, well-wishers of five decades had participated and celebrated the golden years.

How important do you feel is early-childhood education when it comes to developing an individual's future?

Early-childhood education plays an important role in the overall development of a child. It helps the child to develop his/her cognitive, social, fine and gross motor skills, vocabulary building with phonemic awareness sensory development along with exploring the surroundings. It's the first step in learning for the future and a strong foundation is required to prepare them to join the mainstream of the school years. Apart from academics the children at Greenwood also learn kindness, love towards pets and how they should give respect to others around them. The early-childhood foundation helps the child to explore, imagine and adapt to real-life situations, later, which makes the child a good and responsible citizen or individual to face the future journey in learning.

How are you implementing technologies like AI, ML, IoT in your school? How is it helping in better efficiency and outcome?

Greenwood kindergarten has always been open for new ideas and upgrading new methodologies in learning and embracing the new system of Artificial Intelligence (AI), Machine Learning (ML), IoT (Internet of Things) in the school curriculum. The children are acquainted with the usage of computers and experiencing digital learning. It has a tremendous effect on improving the quest for learning because of the colors, sound, and movement. We don't encourage tabs, I-pads for children to use individually in the classroom.

Children enjoy learning in Computer labs. Early years have to be exposed more to nature, water play, group learning, group play and individual play using the learning opportunities like imaginary plays, story picture reading, enjoying different sounds and rhythms using the musical instruments in any form and indoor, outdoor play around them in Kindergarten.

Do you think the emergence and adoption of technologies are bridging the gap between parents and their kids?

Well, the emergence and adoption of technologies have both advantages and disadvantages. As it helps the child to develop and acquire the latest information happening around the world. The disadvantages are that there is a substantial decrease in the concentration level especially for early-childhood education learners where it is affecting their behavior pattern.

How was the year 2019 for you? What new innovations and projects are there in the pipeline?

The year 2019 was the most memorable year as we celebrated our Golden Jubilee, and introduced many new innovative and creative concepts like our learning world (the lessons we put to life), we also revived the old traditional games which have faded the world of the concrete jungle. We created outdoor learning games (new concept), chalk drawing, floor puzzles, imaginary plays, carnival parade, bio-diversity, curriculum expo adventure day, Hiroshima and Nagasaki day, planting seeds and plants, erecting peace pole on peace days. Teaching peace is the main objective in Greenwood along with other academic, National, festival and cultural activities. The teachers have upgraded their skills by attending the symposiums, workshops, etc. We will continue the teaching journey with more creative thoughts on fitness & role-play opportunities, with introducing nature-loving activities, encouraging positive thoughts, stressing on more peace education and also innovative teaching process, helping and training teachers on digital teaching available with our caring and teaching philosophy. DL

GREENWOOD KINDERGARTEN
Banjara Hills Hyderabad

Help young minds grow and learn in a harmonious environment resulting in the all-round development of the child.

A Dynamic Eductional Community for young minds!

Resource Material

- With learning material collections spanning 50 years, we've got an extensive programme for developing ages.
- Montessori materials like geometric forms, knob puzzle maps, coloring beads, movable alphabets, sound cylinders, task materials for pouring, scooping, ironing.
- Hours dedicated to arts and music helps students to explore themselves.

- The Greenwood programme helps every student to become individualistic as well as connected to others.
- The kindergarten is upgrading every year their resources for new ideas and innovative teaching methods.
- These materials are used for both inclusive as well normal stream of learning.

Infrastructure

- Situated in Banjara Hills, with Excellent Infrastructure and Greenary around.
- A spacious 6000 sq foot premise, comprising of huge halls & airy, well lit rooms well ventilated.
- Safety measures in and outside the school and classrooms, like CCTV cameras, child safe switchboards, safety windows, montiored entrance gates.
- Centre has the free play area with safe play equipment with many outdoor and indoor play areas and activity work spaces.

Greenwood Kindergarten, 6-3-249/1/1, Road No.1, Banjara Hills, Hyderabad - 500034
No : +91 402 331 6828 / +91 934 704 1746

BUILDING AN ENTREPRENEUR: IS AN MBA WORTH IT?

Do you have an innovative idea that you think can transform into a business? However, the questions looming over your mind are innumerable. Believe it or not, every single entrepreneur faces this fear.

In India, over 90 percent of organisations wind up closing down within a year of their start, and the reasons behind them are plenty. There is a secret recipe for a fruitful business. Being passionate about a strong idea is no longer enough. One has to deal with workers, customers, funds and much more, all of which don't hit hard until one starts an organisation. Which is where an MBA comes in.

MBA covers different dimensions of a business. Though you have a specialisation or niche, you still tend to learn different aspects from every domain. Entrepreneurs need not be masters of something. They need to know a little bit of everything. But more importantly, here's why an MBA can greatly help entrepreneurship.

DEVELOPING STRATEGIC THINKING

Hypotheses can be restricting. There are many extraordinary books that give you simple and modest access to business knowledge. The genuine value of a business college comes out through the projects and connections that one undertakes through a business school programme. More to the point, when you go to a business school, you're kept for a couple of years in a business bubble.

Being encompassed by incredible abilities, working with them on the numerous aspects of business, speaking and discussing contextual investigations, and meeting world-class specialists – every one of these things, unquestionably assists you with priceless knowledge that helps you think strategically.

Without a business degree, it would take a long time to arrive at a similar degree of understanding. Going through numerous business cases, meeting like-minded friends and teachers, and meeting with speakers helps one attain success in entrepreneurship a lot quicker.

AVAILING SUPPORT

There's an extremely positive impact when you encircle yourself with similarly invested individuals. Having like-minded people around you encourages you to achieve your objectives quicker as opposed to diverting you from them. On a functional level, the information you gain during your MBA studies will assist you with creating a progressively field-tested strategy and powerful pitch, along with the additional scholarly qualifications on your resume.

BROADEN YOUR THINKING

It is a fact that anybody can start a business. But on the other hand, it is also a fact that numerous start-ups are failing. If one is enthusiastic about a thought or an idea, it takes perseverance and every bit of help to turn it into a successful, effective endeavour. Taking up an MBA can give incalculable advantages. Despite the fact that everybody comes

with a similar objective, going to business school opens your mind as not many different encounters will.

Numerous business visionaries don't think internationally. However, receiving a worldwide outlook matters now like never before. In any case, when you've had the chance to befriend individuals who come from different nations, it is a lot simpler to find out about these nations and their markets. Heading off to the correct business school and can open the mind to an increasingly global mindset.

EXPANDING YOUR NETWORK

It is astounding how much a good, expansive network of people can offer in comparison to any other resources. You can make more companions in two months by getting intrigued by others than in two years by attempting to get others inspired by you.

Networking isn't only the capacity to approach individuals for some help. But networking is the capacity to remain associated with similarly invested individuals you can help and who may support you as well.

CONCLUSION

Obviously, there is "business" in "business college." But not all things are about business. B-school is additionally a spot where you have a great deal of fun, meet long-lasting companions, and become familiar with yourself. It's a school of life as well. You meet individuals who are in a transitional snapshot of their lives. Everybody is thinking about what they ought to do straight away and how to move toward that following stage, and that is sometimes where you find the right partners for your entrepreneurial dream.

(Views expressed above are those of Dr. Shailesh G, MBA, Ph.D., Principal, T. John Institute of Management & Science (TIMS), Bangalore). DL

IAR: AN INNOVATIVE UNIVERSITY FOR THE 21ST CENTURY

The grand challenges that society faces today can only be met with education and innovation. Whether it is the impact of climate change, resource depletion or life-long health and well being, these can only be confronted by the advancement of knowledge and its application.

The Institute of Advanced Research (IAR) is research and innovation-intensive university, which offers undergraduate, postgraduate and research degree programs. IAR was established in 2006 with the support of the then President of India Dr. A P J Abdul Kalam, who inaugurated the Institute, and Prime Minister Narendra Modi, who was then the Chief Minister of Gujarat. The University is financially supported by the Puri Foundation for Education in India, established by Professor Nathu Ram Puri, who is a leading industrialist in the UK with manufacturing and other business operations worldwide. The University is a not-for-profit institution and its sole purpose is to promote world-leading research and innovation led education for young people in Gujarat and nationally.

The Institute of Advanced Research, Gandhinagar, Gujarat is committed to developing and delivering world-leading higher education programs that are underpinned by relevant research. Education disconnected from the real world context does not necessarily lead to graduates who will be the driving force for step-change in the economy and, social and environmental well-being that we seek. Therefore, students at IAR actively interact with society, business, and industry through extra-curricular and co-curricular programs. Our students and faculty benefit from a structured interaction with business and industry leaders through open lectures, business competitions, industry visits and voluntary work in society.

IAR was awarded the university status under the Gujarat Private Universities Amendment Act, 2011. The University commenced offering educational programs in 2014 and currently has around 550 students in several undergraduate, masters and research degree programs.

The Institute is well respected for its high quality of research nationally and internationally with the research being published in top international journals.

We are a young and growing research and innovation led university, allowing us for setting the agenda for innovative university education, research, and enterprise to contribute to the social and economic advancement of our state and the nation.

Increasingly complex problems demand ever innovative solutions, which can only be realised through multi-disciplinary education, research, and application, which are intertwined.

The acquisition of knowledge is one but important aspect of university education. Our focus is also on developing our students as confident and enterprising individuals alongside strong academic focus as we believe that confident and enterprising graduates will be the future leaders and change-makers.

Prof. Rao Bhamidimarri
President
Institute of Advanced Research
The University for Innovation
Gandhinagar
Gujarat

The university aspires to be the leading research university in the private higher education sector nationally with a strong international presence.

Our academic and research programs currently focus on the following areas

- Biological Sciences and Biotechnology
- Physical Sciences
- Engineering and Technology, and
- Business and Management

Each area has highly accomplished faculty members, most with experience at world-leading institutions abroad, up-to-date research facilities, and research culture to allow for all-round development of future scientists, engineers, managers, and entrepreneurs. Our students, therefore, experience world-class research-led teaching and a learning environment that is student-friendly and fosters confidence and enterprise through co-curricular and extra-curricular experience.

(Views expressed above are the personal opinion of Prof. Rao Bhamidimarri, President, Institute of Advanced Research, The University for Innovation). DL

5 TRENDING CHANGES THAT WILL SHAPE INNOVATION AND ENTREPRENEURSHIP EDUCATION ECOSYSTEM

Dr. Ramakrishnan Raman
Director- Symbiosis Institute of Business Management (SIBM)
Pune

Both 'Innovation' and 'Entrepreneurship' have been the buzz words for the past five years or more. Universities across the globe are creating courses that are oriented towards learning 'Innovation' and also equipping 'Entrepreneurs' with specific skill sets that can be of immense value to them. The Indian education system must encourage the proliferation of innovation and change. The system must ensure that the information is treated as raw material for knowledge management. There must be a shift in the culture of education, a culture that embodies innovation and economic development. The system must consider that all minds are essentially equal when it comes to using knowledge. It must believe that all can be innovators and must provide opportunities for the same. Motivation will be intrinsic in an education system based on managing knowledge. With several angel investors looking at investment in start-ups to still be a lucrative option listed below are the five trending changes that will shape up the innovation and entrepreneurship education ecosystem.

SEED FUNDING WILL BE THE NEW NORMAL

Those B Schools, Engineering institutions and universities that are imparting education in the 'Innovation' and 'Entrepreneurship' space must ensure that every participant who enrolls into the program is given an opportunity to present his/ her idea to the group of angel investors or venture capital firms or high net worth individuals who, are willing to invest in their start-ups. Alternatively, the educational institution must provide seed funding to the tune of at least 10 lakhs which can help the young entrepreneur to pursue his or her dream without hiccups. This can be done by having a series of competition for all the participants who enroll and the prize money can be distributed by paying into their firm's account. Seed funding is going to be the new normal and sooner this is realised, the chance to attract the students who will be willing to enroll to learn more about innovation and entrepreneurship will be higher.

MENTORING – A DEFAULT PROVISION

One important aspect that has to be integrated into the curriculum is - Mentoring support to the start-ups. Many start-ups expect support to be given to them by those who understand their domain. A mentor is considered as a person who can guide an entrepreneur by building trust and modeling positive behaviors. An effective mentor understands that his or her role is to be dependable, engaged, authentic, and tuned into the needs of the mentee. Mentoring has to be continuous, which should be done the way a coach helps professionals. Mentoring will become a default facility to be provided by the educational ecosystem, for those who are pursuing innovation and entrepreneurship education.

FAB LABS – A MANDATORY PROVISION

According to research literature, a FAB lab (fabrication laboratory) is a small-scale workshop offering personal digital fabrication. A FAB lab is generally equipped with an array of flexible computer-controlled tools that cover several different length scales and various materials, with the aim to make "almost anything". This includes technology-enabled products generally perceived as limited to mass production. While fab labs can't help in creating mass production and its associated economies of scale in fabricating, they have the potential to empower individuals to create smart devices for themselves. These devices can be tailored to personal needs in ways that are not practical or economical using mass production. Universities and B- Schools offering education in the innovation and entrepreneurship space must necessarily provide a FAB lab which can be of great use to entrepreneurs, who can try to create their prototype.

PROVIDING STATE OF THE ART FACILITIES AND INFRASTRUCTURE

Providing state of the art facilities cannot be considered special and unique. Provision of high-speed Wi-Fi, Power outlets, Power backup, Meeting Rooms, Digital Infrastructure, Internet of Things(IoT) Lab, Company registration/document support, support to understand the governmental support for start-ups, and other facilities will be considered normal in the innovation and entrepreneurship ecosystem.

GLOBAL EXPOSURE

Exposure to global cultures and the start-up ecosystem that exists across the globe of immense value. It will be a herculean task for the entrepreneurs to get such exposure. The education ecosystem must provide this to all those pursuing formal education in innovation and entrepreneurship education. In general, having global exposure makes a person more open-minded and accepting of new ideas and beliefs. This quality can be a great asset for an entrepreneur since many a time they will need to operate outside their comfort zone to accomplish their dream.

Keeping the business local or even national can limit the potential for profit. When an entrepreneur gets 'Transaction exposure,' he or she is trained in dealing with foreign money. This can be beneficial when he to take his or her firm global. The global economic exposure immensely helps in innovating as well. The global exposure – specifically - tax exposure incurred due to earnings a foreign currency- will also be invaluable.

(Views expressed above are the personal opinions of Dr. Ramakrishnan Raman, Director- Symbiosis Institute of Business Management (SIBM), Pune). DL

ARE BUSINESS SCHOOLS GIVING ADEQUATE IMPORTANCE TO THEIR PROGRAM RESEARCH?

Ritesh Goyal
Managing Director and CEO, GIBS Business School, Bangalore

Business programs remain one of the most looked after majors, both at the undergrad and graduate levels. But, the setting in which business schools operate has experienced a huge change, which makes it imperative for B-Schools to embrace different models and assessment methodologies to stay relevant. Worried about the difference between what is instructed to MBA students and what organizations require from them after they graduate and are hired, educators and business pioneers have for some time, been asking schools not to discount the significance of preparing their understudies for this reality.

Students are also being practical about the need to get themselves ready for the troublesome job market. Holding a generalist MBA degree may not be sufficient for them. The pattern towards more niche Master of Science degrees appears to be clear. M.Sc. specialisms could incorporate banking, marketing, finance, human resource administration, business analytics, and various others. The only way MBA programs retain their relevance is by incorporating more human-centered initiatives. Here are three such initiatives that B-Schools across the world are taking up:

ACTION-ORIENTED LEARNING:

T\As a part of the core curriculum, students take part in action learning that puts them in situations where they have to deal with international management and business cases. And in the present day, the impetus is also laid out on problems around corporate social responsibility. Through action-oriented learning, students also work on consulting projects with students from law, engineering and other streams bringing together different perspectives to deal with a common problem.

BUSINESS MODEL CONTESTS

Students of B-Schools must participate in various case competitions, that is spearheaded by a student-led committee. These competitions from around the world are coordinated and participated in with the objective of accentuating one's industrial knowledge, analytical skills, presentation skills, and corporate exposure. Through these competitions, students also pave their way into jobs across organizations that are sponsoring these events

ACTIVE ALUMNI CONNECTIONS

In today's world, numerous B-Schools across the world have large alumni bases. This helps them in facilitating a number of events to connect the present students with successful and experienced ones through on-campus meet-ups, company treks and dinners across various cities.

Whilst these pointers bring about pertinent changes in the approach, it is of paradigm importance for B-Schools to look at more concerning facets. Bureaucratic aspects that have persisted and plagued the field for years.

Does a business school truly need a selective pool of workforce that works with them for perpetuity? And should this workforce be full-time based at only one institution? Is it important for the workforce to be committed to just one school? Could the staff be shared among a few scholarly establishments? They are a costly asset, so why not share the expenses? This obviously reinstates, that every professor must be willing to embrace research in their line of study.

The idea of a steady system of part-time workforce may improve scholastic execution, both in study and in research. Professors are expected to explore and deep-dive into their field further, to stay relevant. It might also be an ideal opportunity to promote a collaborative faculty. This could be through a part-time workforce that strings together various modules of a course to render the requisite information.

As of now, a lot of teaching happens in the classroom, where a teacher converses with the understudies and there is constrained or restricted exchange of thoughts. The classroom ought to be more of a meeting place filled with dynamism and energy. There have been changes towards this sort of setting, particularly across B-Schools, yet it does not suffice. In a viable 'meeting place' where there is a feeling of transparency, new ideas could be uninhibitedly exchanged, possibly profiting one's research. Thoughts could be 'tried' against existing suggestions, and against valid experiences and challenges.

Numerous academic institutions restrict their workforce from having a considerable amount of contribution: there is a bottom-up' command culture. To counter-balance, there must be a 'top-down' approach, to bring the best out of the faculty and the students. Pioneers and thought leaders may find it difficult to lead in a bottom-up style of approach, where both the students and the institution's management may not be receptive to an opinion or suggestion.

To close, it is absolutely worth thinking about why these adjustments in educational settings aren't happening any quicker. **DL**

The **BIGGEST** Platform to Showcase **INNOVATION** in **EDUCATION**

Since 2011, World Education Summits have witnessed the confluence of decision makers, influential experts and practitioners linked to the education sector from across the world. The summit aims to explore groundbreaking innovations and encourage to significant improvements in the global education sector.

In order to explore various facets of the education sector in India and abroad, Elets Technomedia along with digitalLEARNING magazine conducted the 15th edition of World Education Summit in Mumbai on November 21-22, 2019. The World Education Summit is the premier international platform dedicated to innovations and creative actions in the education sector. Here, top decision-makers share their insights with on-the-ground practitioners and collaborate to rethink and find out various emerging opportunities in the education landscape at present and in future.

Held in the commercial capital of India, the 15th edition of World Education Summit was inaugurated in the presence of Dr Satish

Chandra Dwivedi, Minister of State, Basic Education, Government of Uttar Pradesh; Shuchi Sharma, Secretary, Higher & Technical Education, Government of Rajasthan; Philippe Guillien, Western Zone Attaché for Cooperation, France Embassy to India; Dr A Ashok, Vice Chancellor, Rajiv Gandhi University of Knowledge Technologies, Basar, Telangana; Dr Chithung Mary Thomas, Secretary, Board of School Education, Manipur and Syed Omar Jaleel, IAS, CEO & Secretary, Telangana State Intermediate; Dr M S Shyamasundar, Advisor, NAAC; Jawahar Surisetti, Advisory to Government, Smart City Expert and Rakesh Kumar Verma, Special Secretary and Joint Executive Director Udyog Bandhu.

The Summit was alos graced by Actor, Entreprenur and socialist- Vivek Anand Oberoi.

The 15th World Education Summit, Mumbai was one of the biggest congregations of Game Changers from the education fraternity. Spread over two days, the summit witnessed the coming together of names like Kanak Gupta, Director, Seth M R Jaipuria Schools; Raghav Podar, Chairman, Podar Education; Roshan Gandhi, Director of Strategy, City; SK Rathor, MD & Chairman, Sanfort Group of Schools Montessori School; Reekrit Serai, Managing Director, Satluj Group of Schools; Pratima Sinha, CEO, DSR Educational Society, Hyderabad and many more from the School Education sector.

From the Higher Education spectrum, the summit witnessed the confluence of Pankaj Gupta, President, IIHMR, Jaipur; Kunwar Shekhar Vijendra, Chancellor, Shobhit University, Meerut; Dr Sandeep Pachpande, Chairman, ASM Group of Institutes, Pune; Sudhakar Rao, Director Branding, ICFAI Group, Hyderabad; Dr Sivaguru S Sritharan, Vice Chancellor, M S Ramaiah University of Applied Sciences, Bangalore among others.

Besides this the summit was also attended by the key government dignitaries, policymaker's, government regulatory bodies and eminent edu-leaders from higher and school education sector, who leveraged the platform to analyse, understand, and share their vision and modern-day practices to bring improvement in the education landscape.

There were discussions and deliberations on topics ranging from: Role of Education in Building Entrepreneurial Competencies; Developing Next Generation of Innovators and Creative Thinkers towards #Vision2024; Professional Development of Early Childhood Practitioners to Artificial Intelligence & Machine Learning in Indian Classrooms; School's Infrastructure: A Key Element of Students Learning Experience and others, in the school education hall.

In the Higher Education track, the panel discussions revolved around topics like: New Age Learning: Interactive, Blended & Self; International Study Destinations; Data, Artificial Intelligence and the Future of Student Enrollment; Role of Counselling in School & Higher Education; Examination Reforms in Indian education system; Flipped Learning Collaborative and Problem-based Learning among others.

The 15th World Education Summit was supported by Embassy of France as Country Partner. Whereas, Government of Manipur, Government of Uttarakhand, Government of Nagaland, Government of Telangana and Board of Secondary Education, Manipur participated as the government supporting partners.

Besides, the summit also had Billimoria High School, Birla Open Minds, HVB Global Academy, Seth M.R. Jaipur Schools as School partners and British Orchard Nursery as Preschool partner respectively. The summit witnessed a number of Ed-tech corporate schools and higher education institutes exhibiting the latest technologies, innovations and practices.

Top companies like Coursera, Elsa, Adobe, RGUKT, iRobolabs, CollPoll, Entab, Financepeer, KidZania, Lit Skills, Matific, Skoozo, Tata ClassEdge, Adventure Education Tours (Mumbai), Butterfly Edutech, Cerebry, CII Institute of Logistics, extraaedge, Grayquest, InCred, Leadsquared, Nexool, OpenDoor, School Handy, Purohit Academy, Sportz Village School, ViewSonic, WESA, YaruKey, YearbookCanvas, Infinity, Early Childhood Association (ECA) and Members of International Schools' Association (MISA) among many others showcased the innovative products and services which have a tremendous potential to transform the education sector.

Besides, the industry presentations during the summit highlighted the scope of technology and its effects in the education sector and also underlined the need of extensive participation of corporate for betterment of education ecosystem.

The summit also witnessed the felicitation of edu-leaders from School and Higher Education spectrum, acknowledging their exemplary contribution in transforming the education sector for a better tomorrow. The award ceremony was graced by Vivek Anand Oberoi, Dr A Ashok, Dr Chithung Mary Thomas, Shuchi Sharma and Rakesh Kumar Verma.

POLICYMAKER'S PERSPECTIVE

DR SATISH CHANDRADWIVEDI
Minister of State
Basic Education
Government of Uttar Pradesh

There has been a paradigm shift in our education system, if we compare it to the gurukul system of the past. The present system of education focuses more on virtual classrooms. For example, a scheme called 'Kayakalp Yojna' has been launched in the state of Uttar Pradesh which is encouraging parents from financially sound backgrounds to send their children to government schools. This scheme has been instrumental in transforming the face of schools in terms of infrastructure, better facilities and providing quality education.

SHUCHI SHARMA
Secretary
Higher & Technical Education
Government of Rajasthan

We have a very rich educational legacy which is evident from our historical literature that includes the Vedas, Upanishads, Ramayana and Mahabharata. But when we look at our present education system, there is a lot of dissatisfaction among the students, parents and the society as a whole. We all want our children to receive good education but somehow we are not able to achieve those goals. Although we are making sincere efforts to reform the system, the need of the hour is to completely transform the system by making a dent on its fundamentals. Education is meant for liberation and it should be pursued with the same purpose.

POLICYMAKER'S PERSPECTIVE

PHILIPPE GUILLIEN
Western Zone Attaché for Cooperation
France Embassy to India

The struggle for education is the best answer to face all the challenges of this world. Along with education, culture and intelligence are the sustainable answers to the global demographic challenge. And this is how we will fight against social inequalities, especially between women and men. The President of France, Emmanuel Macron has made education in our country a top priority. We have built an ambitious education strategy from kindergarten to university, which we believe gives a special credibility to our country in this regard.

DR CHITHUNG MARY THOMAS
Secretary
Board of School Education
Manipur

The education system in Manipur is picking up pace but it still needs to catch up with other states of the country. The government has undertaken several initiatives to develop and improve the state's government schools because they are in a deplorable condition. With the measures initiated by the education minister, Thokchom Radheshyam, the challenge of improving school education along with many best practices have been put in along with marked changes.

POLICYMAKER'S PERSPECTIVE

DR M S SHYAMASUNDAR
Advisor
NAAC

India have a student population of about 328 million which is equivalent to the overall population of America. As per higher education statistics, 1,000 universities and 47,000 colleges are currently functioning in India. Education is a lifelong process because even after receiving a certain degree of education, people need to have skills. The ultimate aim of 'Education for All' is sustainable development, which is not only relevant in education but in health, agriculture, industry etc. Education is an important weapon to eradicate poverty in any country

SYED OMAR JALEEL
IAS, CEO & Secretary
Telangana State Intermediate Education
Government of Telangana

Telangana, the youngest state in the country, has undertaken some unique initiatives in intermediate education where Information Technology has been introduced in such a way that the students receive their passing certificates online. We are taking initiatives to make students psychologically more mature so that they can face their exams with confidence.

INDUSTRY PRESENTATIONS

KARTIK NARAYAN
CEO & Founder
LIT SKILLS

The number of engineering colleges in India in 1990 was 337, in 2000 it reached 776 and by 2017 it increased to 6,472. Out of this, 80% of engineers are not fit to be hired. Is it the methodology of engineering which is wrong or is it the way of teaching? In 2019, a company like Tesla is talking about sending people to MARS and at the same time we are launching Chandrayan 2. This shows that we have people who support engineering, but how is engineering performing as a career option today? At present, 94% of the graduates from engineering colleges in India either need re-hiring or need to go for further studies to be employable.

RANDY STEVENSON
Academy Head
Corvus American Academy

Our organization is building the first American curriculum boarding school in Maharashtra in September 2020. Technology surrounds us and it is up to us how we utilize it. In one of our classrooms, we will be having literary activities through Instagram where students will write an Instagram post that will tell their parents about their daily activities and learnings. We will also be providing the students with application-based education.

INDUSTRY PRESENTATIONS

AVINASH SHARMA
Senior Manager
Entab Infotech

Entab Infotech Pvt. Ltd. is a 20-year-old organization and we hold expertise in school automation. We are primarily known for school Enterprise Resource Planner (ERP). In other words, we are India's most preferred ERP. Along with catering our services to 1300+ prominent schools in the country, we are providing services to schools with respect to all their domains like fees, accounts, payroll transfers, and many more. We have close to 98% client retention which is highest in the industry

HEMANT SAHAL
Chief Executive Officer
CollPoll

In the last ten years, the number of students enrolling in higher education has doubled along with the universities and colleges, resulting in the increase in complexity, compliance and competition in higher education. In India, traditional institutions have ERPs to manage records and transactions like student records, accounting, attendance, and many more. But what it doesn't take care of is how students and teachers interact outside the classrooms, peer learning, digitising smaller but more frequent workflow inside your campus, etc. Here is where CollPoll comes into picture; it's is a cloud-based mobile application helps educational institutions to experiment with technology at a low cost.

INDUSTRY PRESENTATIONS

RAGHAV GUPTA
Managing Director - India & APAC
Coursera

Globally, 300 million people are set to join the workforce in the next ten years. But with rapidly evolving technology, the risk that automation presents to certain kinds of jobs is also increasing. With India having one of the lowest Gross Enrolment Ratios (GER) in higher education, 52% of jobs are expected to be affected by this automation. Taking this into consideration, companies like Coursera are focusing on skills required for the future along with skills needed today.

BHAVESH GADHETHARIYA
Founder
Infinity Infoway Pvt. Ltd

Educational institutes plays a major role in building an individual. They help students to grow and get future-ready for the industry as well as for the country. Our technologies and solutions allow institutions to manage multiple degrees, multiple profiles in a centralized form i.e from their admission to the time they leave the institute. We also help institutes to analyse their student's performance, in-turn helping them to know the areas where a particular student is not performing well and where they need to focus on.

INDUSTRY PRESENTATIONS

ROHIT GAJBHIYE
Founder & Chief Executive Officer
Financepeer

Everybody wants to provide a better quality of education to their kids. Furthermore, the parents are looking for flexible modes of fee payment. This is because in the schools of India, parents need to pay the entire annual fees right at the beginning of the year. Financepeer helps in bridging the gap between the parents and the educational institutes by providing zero cost monthly installment options at absolute zero interest, zero processing fees, and no hidden charges.

VIBHA MAHAJAN
Vice President- India
Matific

We provide online gamification mode of education to students from Nursery to Grade VI. On our platform, we provide multiple math-based games to the students so that they can learn while playing. In our country, less than 20% students in grade 3 are able to solve basic arithmetic questions and when they grow, maths becomes a phobia as their concepts are not clear. At Matific, we are trying to remove this phobia by making maths an easy and fun subject.

INDUSTRY PRESENTATIONS

ANIL MAMMEN
Chief- Learning Design & Social Impact
Tata Class Edge

Childhood is a time of wonder, discovery, learning and imagination, and the role of education is to support these qualities. We need to limit the usage of technology by children, to that which we can trigger curiosity and creative imagination in them. Bringing a formal structure to learning may kill imagination. However, if technology is used appropriately in Early Childhood Education (ECE), it can become a tool for learning. On the other hand, if it is misused or overused, it can have dire consequences for the kids belonging to the early age group.

ASHANK DESAI
Founder and Former Chairman
Mastek
Mumbai

India provides IT services across the globe but we are failing to utilize it in a proper way; it should be the other way round. To become a developed country, the bright students passing out from our schools, colleges and universities will need to invent tomorrow. These people will not be problem solvers; instead they will be problem finders.

INDUSTRY PRESENTATIONS

WIAANA MAHAJAN
Operating Officer
LIT Skills Learning

At LIT Skills Learning, we provide literacy focused resources for K to 12 students. This includes resources for instruction and practice through blended learning. We offer an array of online resources to support school students at all levels of learning. We have come up with a unique methodology of teaching english and science through an 'edutainment' model, i.e. education through entertainment, covering all aspects of Listening, Speaking, Reading and Writing (LSRW).

SUDHIR KUKREJA
Co-founder
Credence International Group of Schools
Mumbai

Shopping for kids' school products like uniform or books which are not available at one place, has always been a challenge. As per a survey, there are two ways parents buy school products – one is shuffling from one shop to another or by standing in a long queue at the school tuck shop. To make their life easier, we have come up with a platform called SKOOZO which is a 360 degree integrated platform that allows parents to order school essentials online and get it delivered at their doorsteps.

INDUSTRY PRESENTATIONS

SHILPA POTNIS
President
Birla Open Minds

Birla Open Minds focuses on providing world-class education that nurtures India's tomorrow. We are a 12-year-old company, with a primary focus on creating content and curriculum. Today, we have 100+ schools pan-India where pre-schooling is offered as well. Our logo also underlines the philosophy of transformation at all levels. At Birla Open Minds, ideas transform into action, creativity takes flight and students are encouraged to constantly attain greater heights.

SUPREET NAGARAJU
Head – Education
Digital Media
Adobe India & South Asia

We are living in an ever-changing world which changes through experience. We are trying to change it through digital experiences by focusing on high-quality content creation, personalization, digital marketing, e-learning and much more. There is a growing chorus across various board members and CEOs around the world about digital transformation. But the question is, does it really cater to the lowest denominator in the society and that's what we are here to deliver.

INDUSTRY PRESENTATIONS

DR A ASHOK
Vice Chancellor
Rajiv Gandhi University of Knowledge

When it comes to educational reforms, the state of Telangana has made its mark across the country. This is because education has been given top priority in the state along with health and welfare. Our gross enrollment ratio is known to be best in the country. We have introduced new techniques to enhance learning and retention among the students. Use of technology, including digital classrooms, to achieve outcome-based learning is encouraged.

15th World Education Summit

MUMBAI, 21-22 NOVEMBER 2019

School Education Track: Day 1

Panel Discussion: Pre Inaugural Session on 'The Crucial Role of Education in Building Entrepreneurial Competencies through the 21st Century Framework'

Panelists (L-R): Vikash Kumar Bhakat, Principal, Evergreen English School, Jamshedpur; Jyothsana Gururaj, Principal, R B Karia School, Mumbai; Vijayalaxmi Manerikar, Director, Global Vision English School, Nashik; Niti Jonathan, Principal, Podar International School, Pune Huzaifa Zoebbhai Maimoon, Principal, New Taiyebiyah Senior Secondary School, Ratlam; Gurdeep Kaur, Principal, Shri Harshad C Valia International School, Mumbai (Moderator); Ritu Dubey, Vice Principal, C P Goenka International School, Mumbai; Hemalatha S Murthy, Director - Principal, White Petals School, Bengaluru; Sandeepan Reddy, Founder-Chairman, Synergy National School.

Panel Discussion: New National Education Policy: Implementation and Assessment on the ground

Panelists (L-R): Reekrit Serai, Managing Director, Satluj Group of Schools; Roshan Gandhi, Director of Strategy, City Montessori Schools; Syed Omar Jaleel, IAS, CEO & Secretary, Telangana State Intermediate Education, Government of Telangana; Kanak Gupta, Director, Seth M R Jaipuria Schools (Moderator); Raghav Podar, Chairman, Podar Education; SK Rathor, MD & Chairman, Sanfort Group of Schools; Pratima Sinha, CEO, DSR Educational Society, Hyderabad;

Panel Discussion: Making Classrooms Smart & Student Smarter

Panelists (L-R): Dr Raina Jain, Director, Witty International Group of Schools, Mumbai; Dr Kavita Bajpai, Director, The International School of Thrissur; Sangeeta Puri, Head Mistress, Children's Academy Group of Schools, Mumbai; Farzana Dohadwala, Senior Academic Advisor, Fazlani L'Academie Globale and Former International Baccalaureate Represenative, South Asia; Moderator: Garima Babbar, Head Programs - Education and Skill Development, , South Asia, Adobe India; Revathi Srinivasan, Director - Education and Principal, Smt.Sulochanadevi Singhania School, Mumbai; Kusum Kanwar, Director & Principal, Kangaroo Kids, Kandivali and CEO, AddupSkills; Suchita Malakar, Principal, Podar International School Powai CAIE, Mumbai; Anjum Babukhan, Director Education, Glendale Group of Schools, Hyderabad; Dr Preetha Menon, Head, Symbiosis centre for Behavioural Studies; Dr Ajay Sharma, Chairman, St Joseph 's Group of Schools, Kota; Sudhir Kukreja, Co-founder, Credence International Group of Schools, Mumbai

Preschool Education: Professional Development of Early Childhood Practitioners

Panelists (L-R): Tanvi Drolia, Founder & Director, Cubby Tales, Bengaluru; Purvesh Sharma, COO, Footprints Education; Dr Reeta Sonavat, Former Dean SNDT University, Mumbai (Bombay), Director, ECA; Harshita Sharma, Territory Head, ECA Pune, Pune; Dr Vandana Gandhi, CEO & Founder, British Orchard Nursery - Official, UAE & UK; Rachel Colaso, Head of Education, Brisbane Marketing; Jawahar Surisetti, Advisory of Government, Smart city expert (Moderator)

Panel Discussion: Artificial Intelligence & Machine Learning in Indian Classrooms: A Need of the Hour!

Panelists (L-R): Dr Latha Venkateshwaran, Principal, K.G Seksaria Sarvodaya School, Mumbai; Debika Chatterji, Director Principal, JBCN International School, Borivali, Mumbai; Dr Amrita Vohra, Principal, Elpro International School, Pune; Dr Sangeeta Srivastava, Principal, Sardar Vallabhbhai Patel Vividhlaxi Vidyalaya, Mumbai; Aditya Bisaria, Managing Director, Ganges School, Kanpur; Abhinandan Bhattacharya, CAIE and IBDP English Facilitator, JBCN International School, Mumbai; Dr Sagareeka Roy Bhatia, Principal, RBK International School, Mumbai; Dr Seema Negi, Principal, Sanjeevani World School, Mumbai (Moderator) ; Manit Parikh, Country Head- India, ELSA, Corp; Kavita Sanghvi, Principal, CNM School and N D Parekh Pre Primary School, Mumbai; Dr Anima Saxena, Principal, GEMS Public School, Bhopal; Kavita Singh, Principal, Ram Ratna Vidya Mandir, Thane; Rosemary Dolphy, Principal, Bai Kabibai English High School and Junior College, Mumbai; Dr Jyothy Ramachandran, Head Principal, Mahapragya Public School, Mumbai

Panel Discussion: Role of IoT as Catalyst in Education

Panelists (L-R): Swami Supradiptananda, Principal, Ramkrishna Vidya Mandir, Gwalior; Prodipta Hore, Program Director, Aditya Burl Education Academy, Mumbai; Dr Rupali Dhamdhere, Principal, Trinity Junior College, Pune; Dr Priti Shrimal, Principal, Billabong High International School, Vadodara; Kalyani Chaudhuri, Principal, Billabong High International School, Thane; Seema Saini, CEO & Principal, N L Dalmia High School, Thane (Moderator)

School Education Track: Day 2

Pre Opening Session: Succeeding in change management managing technological change for schools of the millennium

Panelists (L-R): Er Sundaram Kumar, Principal, Delhi Model Public School, Kulharia, Ara; Dr Sabina Keshwani, Educationist (Ex Principal), Billabong High International School, Mumbai; Mohammed Azhar, Founder Principal, Knowledge Academy School, Chennai; Dr S Reshma, Principal & School Director, Gulf Model School, Dubai (Moderator); Chandrashekhar Nagda, Director, Adharshila Academy School, Neemuch Dr Ruchi Singh, Head Mistress, Sheth M.A. High School, Mumbai; Sushma Sharma, Principal, R.N. Shah International School, Mumbai Kalpana Adhiya, Principal, M P Shah English High School, Mumbai; Anita Sharma, Principal, C P Goenka International School, Mumbai Atul Goyal, Founder Director, Adharashila Academy, Neemuch

Panel Discussion: Happy Students: Preparing them for Smooth Life after School

Panelists (L-R): Dr Sandeep Khanna, Principal, MIT Pune's Vishwashanti Gurukul School, Pune; B Anantha Krishnan, Head Operations, Kalorex Group; Deepa Bhushan, Director, C P Goenka Group of Schools, Mumbai; Sarika Babar, Principal and Director of Academics, Clara Global School, Pune; Dr Saibal Kumar Sanyal, Principal, BK Birla Centre for Education, Pune; Kavita Agarwal, Principal D.G. Khetan and Chairperson, MISA (Moderator); Rakhi Mukherjee, Principal, Utpal Sanghvi Global School & PPS International Junior College, Mumbai; Pratibha Mishra, Principal, Panbai International School, Mumbai; Aditi Goradia, Managing Director, Billimoria High School, Panchgani;

Panel Discussion: Role of Preschools in Building a strong foundation for life

Panelists (L-R): Vinesh Menon, Chief Executive Officer - Education, Consulting & Skilling Services, Vibgyor Group of Schools (Moderator) Payal Patnaik, General Manager - Academic Services, Tata ClassEdge; Dr Kamini Rege, Assistant Prof, Dept of Human Development, College of Home Science, Nirmala Niketan, Treasurer, ECA; Sneha Rathor, CEO, Sanfort Group of Schools; Pritam Agarwal, Founder, Hello Kids Education Group; Smriti Agrawal, Senior Headmistress, Podar Jumbo Kids, Centre Head, Podar Institute of Education, Hiranandani, Powai; Pooja Dugar, Leap Years Preschool, Kolkata; Dr Anuradha Iyer, Principal, Dhole Patil School for Excellence, Pune; Pratibha V, Prinicipal, Chinmaya Vidyalaya Vaduthala, Kochi

Panel Discussion: School's Infrastructure: A Key element of students learning experience

Panelists (L-R): Dr Lekha Visaria, Principal, Swami Vivekanand Vidyalaya, Mumbai; Dimple Sahi, Director, Small Wonders Early Learning Centre, Pune (Moderator); Dr Sujatha Umesh Bolake, Director, The Legacy Academy Cocomelon Preschool, Pune; Prema Mishra, Chief Operating Officer, Rainbow International School, Thane; Gunjan Srivastava, School Head, The Orbis School, Pune; Revathi Marabathuni, Vice Principal, Cornerstone International School, Hyderabad; Abhishek Bagchi, Principal, RMPS International School, Ankleshwar

Panel Discussion: Joint Decision Making with Powerful School-Parent Relationship: Research, Objectives, Programming and Evaluation.

Panelists (L-R): Sapna Sukul, Education Consultant, Teacher Trainer, British Council Ambassador (Moderator); Seema Sabhlok, Principal, S. M. Shetty High School, Powai, Mumbai; Mohammad Anisur Rahaman, CEO & Head of School, Averroes International School, Dhaka Komala Krishna Kunapareddy, Academic Director, Cornerstone Group of Schools, Hyderabad; Sanjay Nandi, Principal, Podar International School - CIE,Kalyan, Mumbai; Rekhaa Shah, Principal, Podar World School, Vadodara; Zenobia Khodiaji, Trustee, Besant Montessori School, Juhu; Rachel Shroff, CEO, Global Education Solutions

Higher Education Track: Day 1

Panel Discussion: New National Education Policy: Implementation and Assessment on the ground

Panelists (L-R): Dr Vikas Misra, Campus Director, Geetanjali Institute of Technical Studies, Udaipur; Atul Khosla, Co-Founder, Shoolini University, Solan; Dr K Karunakaran, Principal & Secretary(Trustee), Sri Ramakrishna College of Arts & Science, Coimbatore; Dr Sivaguru S Sritharan, Vice Chancellor, M S Ramaiah University of Applied Sciences, Bangalore(Moderator); Kunwar Shekhar Vijendra, Chancellor, Shobhit University, Meerut; Prof Dr M R Patkar, Chairman & Advisor, Indian Institute of Aeronautical Engineering & Information Technology, Pune

Panel Discussion: New Age Learning: Interactive, Blended & Self

Panelists (L-R): Prof Prabha Shankar, Director Corporate Relations, ASM Group of Institutes, Pune & Mumbai; Dr Suresh Ukarande, Dean, Mumbai University, Mumbai; Dr Lakshmi Mohan, Director, ITM Business School, Navi Mumbai (Moderator); Dr Raja R Choudhary, Director, Universal Business School, Mumbai; Raghav Gupta, Managing Director - India & APAC, Coursera

Panel Discussion: Importance of Physical, Mental & Social Well Being of teachers & Students

Panelists (L-R): Dr Mohit Dubey, CEO, AIC,MIT ADT University, Pune; Dr Amol Gawande, Director, Dr D Y Patil B-School, Pimpri- Chinchwad; Dr Sunil Rai, Vice Chancellor, MIT ADT University, Pune; Dr A Ashok, Vice Chancellor, Rajiv Gandhi University of Knowledge Technologies, Basar (Moderator); Prof (Dr) Ajay Kumar, Director, GL BIMR, Greater Noida; Dr Nilofer Sultan Sheikh, Senior Lecturer, M.A. Rangoonwala Dental College, Pune; Dr Anamika Singh, Director, Singhad Institute of Management and Application, Pune

Panel Discussion: International Study Destinations

Panelists (L-R): Prof Christopher Abraham, CEO, S P Jain School of Global Management, Dubai; Dr Ryan Pereira (Cornell University & Ohio State University, USA), Regional Officer, US-India Fulbright Commission; Deborah Rosario (University of Oxford, UK), EducationUSA Adviser, Education, USA; Pinky Desai, Manager, Agent and School Engagement, Student Recruitment and Admissions, Monash University, Melbourne, Australia; Asslam Shaikh, Student Mentor, Study Abroad Consultant, University Promoter, Global Education Expert, Mumbai; Smriti Singh, Study Abroad Coordinator and Career Counselor, CMS, Lucknow (Moderator); Orishtha Ray, Recruitment Adviser – India (West and South); International Student Recruitment, External Relations, University of Nottingham, UK; Namita Thitta, IE University, Spain; Firdoz Shaikh, Swiss Education; Amrita Sadarangani, University of Edinburgh, UK; Dr Shrihari Prakash Honwad, Provost, MIT World Peace University, Pune; D D Shinde, Director (Admissions),Sandip University, Nashik

Higher Education Panel Discussion: Data, Artificial Intelligence and the Future of Student Enrollment

Panelists (L-R): Prof J N Pitambre, Dean Training & Placements - Engineering, Sinhgad College of Engineering, Pune; Dr K S Zaikuddin, Dean Academics, Priyadarshini College of Engineering, Nagpur; Dr Sanjay S Pawar, Principal, Usha Mittal Institute Of Technology SNDT Women's University, Mumbai; Dr Vikas Singh, Executive Director, Institute of Technology and Science, Greater Noida (Moderator); Dr Geetika Saluja, Director, Programs and Development Director, Programs and Development Gandhi Nagar; Dr Chandrani Singh, Director-MCA, Sinhgad Institute of Management, Pune

Examination Reforms in Indian education system

Panelists (L-R): Dr C M Sedani, Principal, Padmabhushan Vasantdada Patil Institute of Technology, Pune; Dr Avinash G Kharat, Director(Academic), Jayawant Shikshan Prasarak Mandal, Pune; Akhil Shahani, Managing Director, Thadomal Shahani Centre For Management, Mumbai; Dr Riddhiman Mukhopadhyaya , Dean Marketing, Pune Institute of Business Management, Pune; Dr Sirajuddin Chougle, Principal, Maharashtra College of Arts, Science & Commerce, Mumbai

Higher Education Track: Day 2

Future Skills for Employability & Entrepreneurship of Technical & Management Education Graduates

Panelists (L-R): Dr Ashwini Sharma, Vice Chancellor, Vijay Bhoomi University, Karjat; Dr Kailas V Chandratre, Principal, Loknete Gopinathji Munde Institute of Engineering & Research, Nashik; Prof (Dr) Keshav N Nandurkar, Principal, K K Wagh Institute of Engineering Education and Research, Nashik; Dr Pankaj Natu, Director, Thakur Institute Of Management Studies And Research, Mumbai;Dr Rajasshrie Pillai, Dean HR and Research, Pune Institute of Business Management, Pune; Supreeth Nagaraju, Head – Education, Digital Media, Adobe India & South Asia; Dr Ravi Prakash, Training and Placement Officer, K C College of Engineering & Management Studies and Research, Thane

Role of Traditional Public Institutions & Modern Private Universities in Building New India

Panelists (L-R): Hemant Sahal, CEO, CollPoll; Dr Sandeep Pachpande, Chairman, ASM Group of Institutes, Pune; Dr Nagendra V Chowdary, Dean, School of Management, Bennett University, Greater Noida; Sudhakar Rao, Director Branding, ICFAI Group, Hyderabad (Moderator); Dr. Rakesh Verma, Special Secretary, Infrastructure and Development department and Joint Executive Director, Udyog Bandhu, Government of Uttar Pradesh; Santosh Nair, Sr Director, Parul University, Vadodara; Racquel Shroff, CEO,Global Education Solutions; Jawahar Surisetti, Advisory to Government, Smart City Expert

AWARD CEREMONY
SCHOOL EDUCATION

ACN International School, Aligarh Innovative Practices for Academic Excellence

Aditi Goradia, MD, Billimoria High School, Panchgani, Top Women Entrepreneurship Award in School Education

Apeejay School, Kharghar, Innovative Practices for Academic Excellence

Apeejay School, Nerul, Innovation in Pedagogical Practices

Birla Open Minds, Innovative Practices for Academic Excellence

Empyrean School, Mumbai Innovation in Pedagogical Practices

Credence International Schools, Leading K12 School Franchise in India

Dhole Patil School For Excellence, Pune, Innovative Practices for Academic Excellence

Euro School, Airoli, Teaching Excellence in Sports

Fravashi International Academy, Nashik, Excellent School in Sports Infrastructure

Fravashi International Academy, Nashik, Innovative Practices for Academic Excellence

HVB Global Academy, Mumbai, Innovation in STEAM Education

Sanskar School, Jaipur, Innovation in Pedagogical Practices

The Orbis School, Pune, Innovation in Pedagogical Practices'

Prakritik School, Patna,Excellence in Teaching

AWARD CEREMONY
SCHOOL EDUCATION

*Sagar International School, Bhopal Innovative Practices for Academic Excellence_*

J S Public School, Chandauli, Innovative Practices for Academic Excellence

Ram Krishna Vidya Mandir, Gwalior Innovative Practices for Academic Excellence

Thakur International School Cambridge, Mumbai, Innovative Practices for Academic Excellence

Unique School of Modern Education, Pachore , Innovation in Global Collaborative Learning

Seth Anandram Jaipuria School, Kanpur, Innovation in STEAM Education

AWARD CEREMONY
PRESCHOOL

British Orchard Nurseries, UAE & UK, Innovative Preschool Enterprise

Euro Kids International, Leading Preschool Chain (National)

Euro Kids International, Innovation in Curriculum in Early Childhood Development

Strawberry Kidz, Hajipur, Emerging Standlone Preschool

Kidzonia International Pre-School, Leading Pre-School Franchise in India

Little Red Bus Global Preschool, Emerging Preschool Chain

Williez Pre-School, Mumbai, Innovation in Curriculum in Early Childhood Development

AWARD CEREMONY
HIGHER EDUCATION

G L Bajaj Institute of Management and Research

Priyadarshini College of Engineering

Emerging University in India
Sage University

Dr Seema Singh, M.R Patel Educational Campus, Thaltej Ahmedabad, Gujarat

Sri Ramakrishna College of Arts and Science

Outstanding Computer Training Institute in Surat, Gujarat Dreams Design Institute

University Providing Global Exposure
Agenkya DY Patil Group

Ramaraju Halvi Ediger, Associate professor, Vijaynagar Institute of Medical Sciences, Bellary

Dipika Vishal Patel, Directorate, IICE Computer Education, Vadodara

Prashant Singhal, Physics lecturer, Nityam Educational Council, Mumbai

Minal Barasara Mahajani, Educator and Mentor, Heed India, Mumbai

Prof. (Dr) Shailendra Saxena, Vice Dean and Head CFAR, King Georges Medical University, Lucknow

Dr. Nilofer Sultan Sheikh, senior lecturer, M.A. Rangoonwala Dental College, Pune

Dr Abdul Jabbar Ahamed, directorate, Government of Polytechnic College, Tirurangadi

A Ashok, Vice-Chancellor, Rajiv Gandhi University of Knowledge Technologies, Basar

AWARD CEREMONY

TEACHER'S GLORY AWARD

Tuhin Subhra Mandal, Principal Educator, Balurghat Green School(a class without walls), Balurghat

Shekhar Khomne, Teacher, Z P High School, Pimpalgaon Raja, khamgaon

Seemanchal Tripathy, Head Master, Govt. Middle School Runiyadih, Surajpur

Vandana Mehta, Principal, SICA Indore

Nandkumar Singh, Assistant Teacher, Govt. M.S Dawana, Surajpur

Lukeshwar Singh, Teacher, Govt. M.S Kanya Aashram Shivpur, Surajpur

Pavitra Mohan Behara, Upper Division Teacher, Govt. M.S Pangasuwan, Jashpur

Goverdhan Singh, Lecturer, Govt. Girls Higher Secondary School Aghina, Salka, Surajpur

Dharmanand Goje, Assistant Teacher, Govt. P.S Sundarganj, Surajpur

Rita Giri, Lecturer, Govt. Girls Higher Secondary School Aghina, Salka, Surajpur

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Chandan Anand : +91-8860635836 | wes@eletsonline.com

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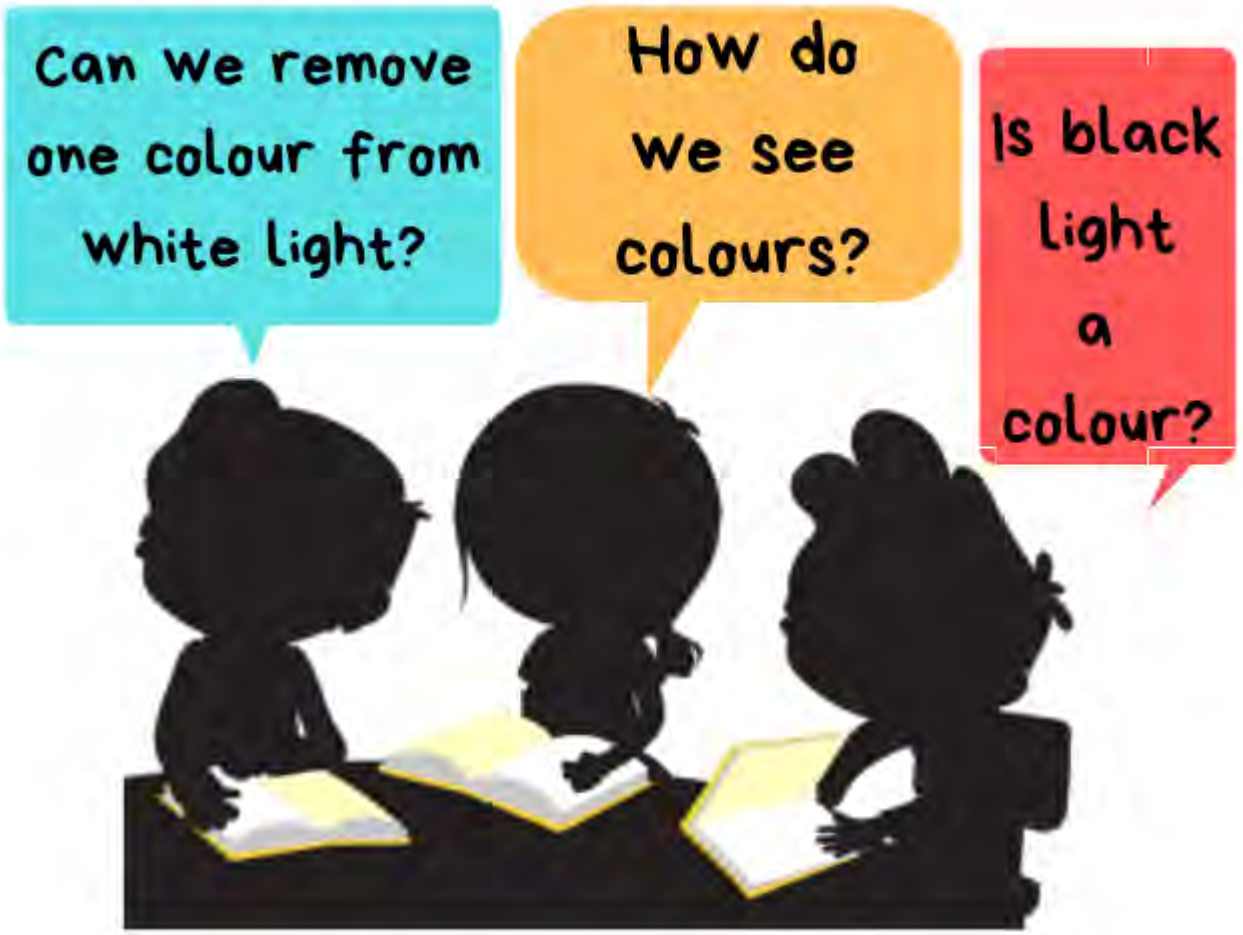

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ICFAI FOUNDATION FOR HIGHER EDUCATION: CREATING VALUE THROUGH INNOVATION

The ICFAI Foundation for Higher Education (IFHE) is a deemed to-be university established under section 3 of the UGC act 1956. The University is accredited by NAAC with A+ Grade with a score of 3.43 out of 4. It has evolved a comprehensive student-centric learning approach designed to add significant value to the learner's understanding in an integrated manner, covering relevant knowledge, practical skills, and positive attitudes.

IFHE has four constituents – ICFAI Business School, ICFAI Tech School, ICFAI Law School and ICFAI School of Architecture offering UG, PG and Doctoral programs in Management, Science & Technology, Law and architecture.

ICFAI Business School, Hyderabad is the first Business School in India to receive AACSB Accreditation for all its programmes namely UG/PG/Doctoral – MBA / BBA / PhD programmes.

INFRASTRUCTURE

The eco-friendly campus is spread across 92 acres and is fully residential with separate hostels for boys and girls. The university gives due importance to extracurricular activities and is equipped with a wide range of indoor and outdoor sports and games facilities. Lecture Theatres and classrooms are designed to facilitate an excellent learning experience for the students. They are wifi enabled and with state of the art audiovisual tools. The

modern library is equipped with software packages, CDs, Videos, journals and research reports relating to Management, Science & Technology and Law etc.

INTERNSHIP PROGRAMS

Internships are unique to the Programs offered by IFHE and they help students gain real work experience critical to their success and prepare them to face the challenges of today's global competition. The Internship Programs ensure that linkages are developed and sustained with industrial and other organizations outside the world of academia.

They serve as a formal method within the curriculum, to bring the realities of the world of work into the educational process. The university has strategic tie-ups with foreign universities promoting academic, research collaboration. Further it has signed various MOUs with leading institutions.

Benefits to the Students through internships

- Opportunity to work on real-life problems in actual working conditions
- Development of useful work-related skills
- Enhanced placement opportunities.

FACULTY RESOURCES

The campus has a large and well-qualified pool of faculty members coming from diverse fields with a unique blend of academic, research and industry experience. Faculty Members are also involved in research and consultancy activities besides teaching.

STUDENT LIFE AT CAMPUS

The student community is truly diverse at the campus with students belonging to different states, social and cultural backgrounds. They become a part of the community, and get an unparalleled exposure to different cultures, languages and ways of living. **DL**

VEL TECH: ENHANCING SKILLS & TALENT IN ENGINEERING STUDENTS

Vel Tech campus is a multi-linguistic community, fostering skills and talents of young student engineers. The management takes every effort to ensure that all students at the Institution have an experience of holistic growth in an active fun-filled and resourceful ambience to explore and learn, says **Mrs. Rangarajan Mahalakshmi Kishore,** Chairperson, Managing Trustee, Vel Tech Rangarajan Dr. Sagunthala R& D Institute of Science and Technology, in conversation with **Elets News Network (ENN).**

Rangarajan Mahalakshmi Kishore
Chairperson
Managing Trustee, Vel Tech Rangarajan
Dr. Sagunthala R& D Institute of Science and Technology

What are the major milestones achieved by the college or students in the field of Engineering or research?

Vel Tech has been ranked fifth among the privately funded institutions in India by the "Atal Ranking of Institutions on Innovation Achievements (ARIIA) 2019", an initiative of the Ministry of Human Resource Development (MHRD), Government of India for 'Innovation and Entrepreneurship Development'. Furthermore, Vel Tech holds a position in the top 100 Engineering Institutions of India in NIRF India Rankings under the Engineering category for the past three years.

Times Engineering 2019 Rankings ranked Vel Tech fourth in India (overall) and second among private Engineering institutes in India.

Times Engineering Institute Ranking Survey 2019 listed the Institution second among the top 20 engineering colleges offering full-time courses in Tamil Nadu and Excellence in Cyber Security.

What is different about Vel Tech from the 100s of other Engineering colleges in Tamil Nadu?

Acknowledged as an Institution Deemed to be University with a difference, we take pride that our Institution is the First Member from India in Conceive-Design-Implement-Operate (CDIO) worldwide initiative with an aim to produce the next generation engineers by adopting CDIO Syllabus/Outcome Based Education/Flexible Choice Based Credit System. The CDIO based academic process undoubtedly generates knowledgeable and up-skilled graduates with a professional attitude, who are future-ready and capable of implementing and operating complex industrial machinery from the very first day of their joining. More than 100 startups are provided with financial, legal, infrastructural and technical support inside the campus to incubate and innovate. Vel Tech has active collaboration with 2000+ industries and 100+ Top-ranked Universities abroad for faculty and student exchange and research.

Any notable International accreditations to the college?

National Assessment and Accreditation Council (NAAC) accredited the Institution Deemed to be University with 'A' Grade (CGPA 3.17).

Six B.Tech programmes namely Aeronautical Engineering, Automobile Engineering, Civil Engineering, Computer Science

& Engineering, Electronics & Communication Engineering, and Mechanical Engineering were accredited by National Board of Accreditation (NBA) under the tier-I category.

Stands 43rd position as per the Times Higher Education (THE) Asia University Ranking 2017.

Stands 1st in India and 74th in the world, according to THE Young University Ranking 2017.

Our Institution has been ranked Band 101-200 in the World by Times Higher Education (THE) Impact Rankings under the Sustainable Development Goal (SDG)Industry, Innovation, and Infrastructure. Only five Institutions from India were ranked under SDG 9, out of which, Vel Tech stood first in India.

QS I·GAUGE awarded the Institution with a Diamond University Rating through rigorous and independent data collection and analysis against performance metrics as set out in the QS I·GAUGE methodology.

Please tell us about the unique factors/features regarding the campus and infrastructure of Vel Tech.

National Facilities, Centre of Excellence and Special Labs in association with Research Organizations/ Industries for carrying out R&D and Industry relevant projects by the students and faculty.

NIDHI – Centre of Excellence for Manufacturing by Govt. of India to include innovations and Entrepreneurial development

TBI - More than 100 incubators, including our Students and Alumni, registered their startups and converting their innovative ideas into Minimum Viable Products

Vel Tech Campus is a multi-linguistic community, fostering skills and talents of young student engineers. The management takes every effort to ensure that all students at the Institution have an experience of holistic growth in an active fun-filled and resourceful ambience to explore and learn. Choice Based Credit System (CBCS) gives the highest academic flexibility to students to learn at their own pace. The institution practices Active Learning Methods (Project/ Problem Based Learning, Blended Learning, Collaborative Learning, Flipped Classroom) to make students' learning more effective and also aids modern methods of learning for students by enabling easy access to online management and e-learning resources. Vel Tech also offers the opportunity to work and transfer credits from more than 400 reputed institutions across the globe.

Please give us an overview of the placement/ internship opportunities at Vel Tech.

Placement

- Integrated curriculum encompasses Aptitude training and skills for employment.
- In Intensive Pre-employment training for Product and System based companies.
- Experts from Industries conduct career path sessions to have a clear idea on what do industries expect.
- Alumni Mentoring Program allows young professionals to gain and transfer the knowledge regarding the career.

Internship

- More than 3000 Industrial partners – Opportunity for faculty members and students to interact with the Industry through training, internships and project consultancies. **DL**

SHOBHIT DEEMED UNIVERSITY MEERUT: A RESERVOIR OF KNOWLEDGE

Shobhit Institute of Engineering and Technology, Meerut (popularly known as Shobhit Deemed University) is a NAAC accredited deemed to-be university established under section 3 of UGC Act, 1956 in Delhi NCR.Ranked among the top institution of India, the University aspire to make academic issues and commitments as the key concerns of the young generation and thereby, make a significant contribution to the academic developments wherever they are in the world.

We believe that the essence of the University is to create, integrate and disseminate better understandings of the world around us through knowledge. Recognising that students and faculty shift between and share all three roles, we challenge the notion that knowledge is static and insular. Instead, we welcome and enable a diverse and dynamic learning community of scholars, teachers, and learners.

The University is unmistakably modern in both appearance and outlook. As a completely purpose-built development, the campus is more compact than most, with all major facilities easily accessible from a central parade. The University's academic centres and programs focus on education and research in specific disciplines and areas of study, and share the knowledge gained with the state, the nation, and the world. The faculty works with students to develop their academic skills, both in general and in the context of specific courses or assignments.

In the University, we are working to achieving excellence in research, and to ensuring that our research contributes to the well-being of society. We are a research-intensive university that shares the values of high-quality teaching within an environment of internationally competitive research. We seek to provide a creative and supportive environment in which ideas are generated and can flourish.The University is open to diversity in perspectives, experiences, and traditions as essential components of a quality education in a global context. The University lays stress on social responsibility in fulfilling its mission to create, communicate and apply knowledge to a world shared by all people and held in trust for future generations - the moral dimension of every significant human choice taking seriously how and who, one chooses to be in the world.

Lots of researches and studies are carried out in various subjects around the world. These updates on various fields cannot be included in the student curriculum. To provide latest information about the things which are happening in science and technology, the University strategically plans and organises workshops, seminars, conferences, and brain storming sessions at national and international level with the help of experts from academia, industry, and research organizations.

The University Training & Development Centre understands that active engagement of the industry with the academia is vital for developing the required skills in the future professionals. Lack of Industry engagement in Indian higher education sector has been sighted as one of the key reasons for outdated curriculum, irrelevant research initiatives, inappropriate training and mentoring of students and faculty etc. These issues have been debated endlessly on various Industry-Academia forums, however, without any viable solution.

To facilitate the industry in the current scenario of the skill gap on one hand and to enrich students with the industry exposure on the other hand; a one semester internship program has been incorporated in the course curriculum of maximum of the academic programs. Internship is an effective way to connect the acquired basic and core skills, academic knowledge earned by students in the University and with the professional work arena of the industry.

Today, the University is a preferred destination for recruitment among young universities in India. More than 250 renowned Corporate, Research Organisations and Institutions are patronising our students by providing excellent job offers. The University has evolved into a Campus of Excellence. Our excellent talents are placed in the best of the corporate houses in India and abroad.

The University has developed the following Schools and Centres:

School of Engineering & Technology

- Department of IT & Computer Engineering
- Department of Electronics Engineering
- Department of Mechatronics & Mechanical Engineering

School of Biological Engineering & Life Sciences

- Department of Agriculture &Agri-Informatics
- Department of Bio-Informatics
- Department of Biomedical Engineering
- Department of Biotechnology

School of Business Studies

School of Law & Constitutional Studies

School of Education

School of Basic & Applied Sciences

Industry-focused Research Centers

- MSME - ASPIRE Technology Business Incubator
- Centre for Agri Informatics and e-Governance Research Studies
- Centre for Informatics Development Studies and Applications
- Centre for Industry 4.0 Technology Studies and Applications
- Centre for Agribusiness & Disaster Management Studies
- Centre of Psychology and Human Behaviour
- Centre for Law and Good Governance
- Centre for Yoga and Research
- International Skill Development Center
- BMW Skill-Next Centre

To know more about the academic, research, and out-reach activities of the university, please visit **www.shobhituniversity.ac.in**. DL

"Shobhit University must act as a power house, gushing forth innovative ideas creative thinking and tangible effects of social and cultural vitality, by connecting the youth with a wide source of new knowledge."

Kunwar Shekhar Vijendra
Chancellor

HOW TO BE IN THE TOP 100 NIRF RANKED UNIVERSITIES

Launched in 2015 by the Ministry of Human Resource Development (MHRD), the National Institutional Ranking Framework (NIRF) has become one of the most sought after ranking in India. The rankings have resulted in a positive competition and as a result, every Indian institution is striving hard to be ranked in top 100.

The first NIRF ranking was released in 2016, after which changes in a few sub-parameters were made. The changes were implemented in 2017 and every large institution was given a common overall rank as well as a discipline specific rank as applicable. Since 2017, there has been no change in the ranking methodology.

As per the **spatial distribution** (Figure-1) of pertinent data, most of the universities ranked in top 100 are in the southern states (including Maharashtra) or in and around the National Capital Region (NCR). Except nine private universities, all universities in the top 100 list are public universities, spread over the entire Northern, Western and Eastern states, including the North Eastern (NE) states of India.

Interestingly, central states like Madhya Pradesh, Chhattisgarh and Bihar do not have any top ranked universities, either public or private. If two private universities of Rajasthan and Orissa, one public university of Gujarat and one private university of Jharkhand are excluded, entire heartland of India does not have any institutions in the top 100. This may be because universities of the central region, whether public or private, do not conform to the standards set by the ranking framework because they do not attract enough students or faculty. This may also mean that universities which are strategically located near cities having greater opportunities attract both faculty as well as students.

> *"There are 35 private and 65 public universities in the top 100 list. The major factors which affect the ranking have been found to be – number of PhD students graduating, number of publications, publication quality and patents."*

It has been observed that there is a 50 percent decrease (from rank 1 to 100) in **Student Strength (SS)** in the top 100 universities, including PhD students. A comparison of private and public universities shows almost the same trend but the drop is steep in the case of private universities. It was further observed that almost all the top 100 universities, both public and private, have maintained a Faculty Strength Ratio (FSR) of 1:15.

SS takes a dip with the ranking whereas FSR and faculty

qualifications have been maintained at the required level. The university exam metric, which measures the average number of students completing their programme in the stipulated time, is almost flat for all the universities, meaning all of them are adhering to the regulations and most of the students are completing the programme well within time. Parameters like faculty qualification and budget utilisation also remain almost the same for all universities in top 100.

The major factors which affect the ranking have been found to be – number of PhD students graduating, number of publications, publication quality and patents.

The trend shows number of **PhD students graduating** decreases by 75 percent (from rank 1 to 100) and this seems to be one of the factors affecting the ranks may be because with more PhD students, more quality papers are published. The trend is same for public as well as private universities.

Overall the number of PhD students graduating decreases with the rank, but the situation in private universities is very grim. Private universities score about 50 percent less than public universities in this metric. This might be due to the fact that students don't prefer private universities as their choice for enrolling into PhD, may be due to lack of research funding and research facilities.

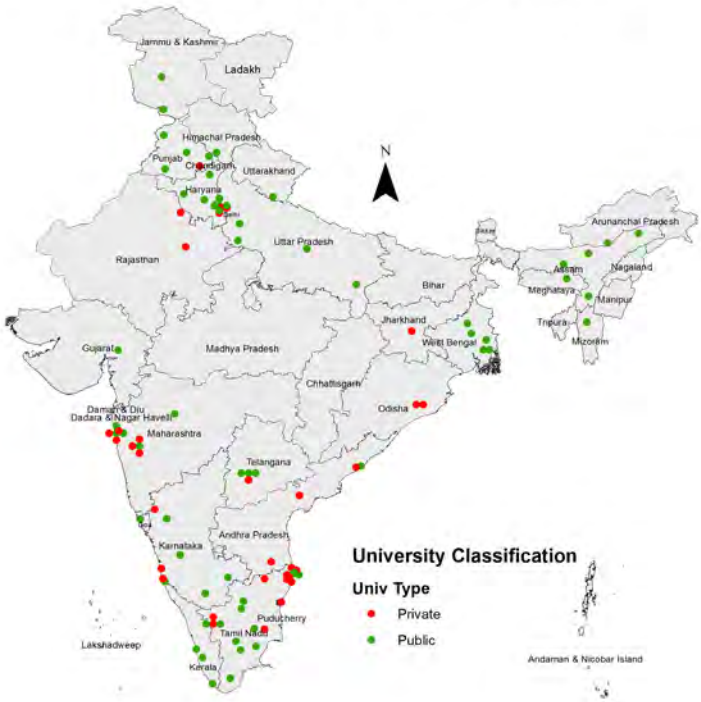

Figure-1: Spatial distribution of top 100 universities

Most of the public universities have provisions for research funding through internal sources (seed funding), which ultimately gets converted into external research grants. These grants have the provision of hiring research scholars with stipend, ultimately leading to their PhD degree. Such facility is mostly missing in the private universities, leading to less enrolment and graduation of the PhD students. This has a cascading effect.

Smaller number of PhD scholars and meagre research grants mean less research leading to lesser publications. It has been observed that the **publication metric** decreases with rank for both for public as well as private universities. There is a reduction of 40 percent in the publication metric for top 10 private universities, when compared with top 10 public universities. Moreover, the overall publication metric for private universities was found to be 22 percent less than public universities.

Intellectual Property Rights (IPR) metric measures the patents filed, published, awarded & licensed. In this regard, private universities in top 100 are performing slightly better than public universities. Only 22 percent private universities score zero in this metric, as compared to 32 percent public universities.

Regarding quality of publications, an overall decrease of 26 percent has been observed between public and private universities. This was expected as the students do not prefer private institutions as their favourite destination for pursing PhD.

The Footprint of Projects, Professional Practice and Executive Development Programs (FPPP) metric measures the amount of research funding received by the university in the last 3 years and the amount generated through consultancies and by the virtue of conducting one-year full time Faculty Development Programme (FDP). If a comparison is made between the private universities and public universities, except IISc, the private universities are performing slightly better in this regard. This is in contrast to the general belief that the research funding is not being provided to the private universities and they are not able to generate consultancies. Conversely, the number of PhD students graduating out, is less for private universities. Although, the relationship between number and value of research projects vis-à-vis number of PhD students graduating out is not clear yet, this peculiar observation may be attributed to the fact that the project and consultancy data is available only for the last three years, and on an average, a PhD student takes three to four years to complete their degree. Keeping this in mind, the trend might change after few years.

The **Perception metric** for universities was calculated based upon the perceptions of employers and research investors, academic peers, public perception and competitiveness. In India, most of the private universities are looked down upon, by both employers and research funding agencies. This perception has very well been captured in the perception data. Private universities were found to have an average perception index 33 percent lower

than public universities. IISc Bangalore was found to have the highest perception of 100 in the country.

Peer perception data was calculated through a survey conducted over a large category of employers, professionals from reputed organisations and a large category of academics to ascertain their preference for graduates of different institutions.

Data was also captured for **student diversity,** which measures the enrolment of students from other states/ countries, number of female students, and socially and physically challenged students. The analyses showed that there in not much variation in the data under this category, and there is quite a diverse mix of students, including female and physically challenged students in almost all the universities.

Furthermore, almost all the universities have facilities for physically challenged students. However, IISc Bangalore and University of Hyderabad, which are otherwise ranked as 1 and 4 respectively in overall university ranking, have scored poorly, and need to improve their facilities for physically challenged students.

In terms of **percentage of female students**, almost all the universities have scored well. Surprisingly, IISc scores well below the national average in this regard. It may be due to the fact that less female students take-up Engineering/Science as a career choice.

Upon analysing the Different parameters for top 100 NIRF ranked universities in 2019, it can be concluded that the Government of India and state governments in the Central and Eastern part of India need to focus on improving the infrastructure. None of the Central states such as Madhya Pradesh, Chhattisgarh, Rajasthan, Bihar, Jharkhand, Gujarat, Orissa, and most of the North Eastern (NE) states have any/or only a few top 100 ranked universities, be it public or private.

The **spatial distribution** of these top 100 universities shows that the Central India and NE India lack good infrastructure and facilities and good students are not opting for universities in these regions, which is ultimately affecting their rankings.

In this backdrop, the government may need to intervene and start quite a few universities with good facilities which may attract students. There have been some efforts of opening at least one central university in every state, but the results might take some time, as only one central university has figured in the top 100 universities, only two in the 101-150 band of ranks and four in the 151-200 band of ranks.

Patents and consultancies are areas of concern, as the scores are dismally low for all the top 100 Indian universities. The government needs to intervene, and students need to inculcate the eco-system of innovations and entrepreneurship from school/ college level so that this score improves. There needs to be a major mind-set change of the students so as more and more innovations are done at the school/college level.

The views expressed above are the personal opinion of Prof Satya Prakash, Professor, Department of Civil Engineering, Sharda University, Greater Noida, Uttar Pradesh. Contact: satya.prakash@sharda.ac.in. *Link to the online article: https://digitallearning.eletsonline.com/2019/12/how-to-be-in-the-top-100-nirf-ranked-universities/.* DL

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UNIVERSITY OF PRETORIA: FOSTERING RESEARCH ECOSYSTEM AROUND THE WORLD

We are proud of our many recent research breakthroughs and achievements. In the research domain, the use of 3D-printed bones to restore hearing in a patient – a first in the world – and our participation in the imaging of a black hole, to mention a few, are great breakthroughs says **Professor Tawana Kupe**, Vice-Chancellor and Principal, University of Pretoria (UP), South Africa in conversation with **Debjayoti Mohanty** of **Elets News Network (ENN).**

The University of Pretoria (UP) is one of the largest research universities in South Africa and has made significant contributions to the global scientific database. How has your journey been so far?

Since I joined the UP, we have continued to position the University as a leading research-intensive university in Africa that is recognised internationally for its quality, relevance, and impact.

UP is ranked in the top 100 in the world in eight subject fields, namely Agricultural Sciences, Clinical Medicine, Engineering, Environment/Ecology, Immunology, Microbiology, Plant and Animal Science, and Social Sciences. These achievements have placed UP as one of the preferred research partners for global collaborators in South Africa.

We are proud of our many recent research breakthroughs and achievements. In the research domain, the use of 3D-printed bones to restore hearing in a patient – a first in the world – and our participation in the imaging of a black hole, to mention a few. On the infrastructure side, the launch of the Future Africa Institute and Campus and the Javett - UP Art Centre, as well as the upcoming launch this year of Phase 1 of the Engineering 4.0 complex, the purpose-built trans-disciplinary innovative platform focused on research, teaching, training, and testing for transport and mobility in all its forms using Digital technologies and smart intelligent systems at the centre of the Fourth Industrial Revolution.

Professor Tawana Kupe
Vice-Chancellor and Principal
University of Pretoria (UP), South Africa

Internationalisation of higher education has become a recognised global trend. How is the University of Pretoria working towards this goal?

One of the University's long-term strategic goals, UP 2025, is to strengthen the University's research and international profile. Visibility of the University's research and academic programmes is very critical in efforts to make UP one of the leading research-intensive universities in Africa and beyond.

As a top global university, we have a number of agreements with universities and institutions around the world, which form a broad framework for a range of activities like staff and student exchanges, research collaboration, expanding on teaching and learning expertise and increasing cultural understanding and cooperation. We currently have more than 200 active research agreements across 70 countries and six continents. Over the last two decades, we have partnered with over 330 institutions around the world.

Recently, the University was admitted as the tenth member and only South African partner of the Michigan State University-led Alliance for African Partnership (MSU-AAP). UP is also a member

of the African Research Universities Alliance (ARUA), a network of universities from different countries and different historical backgrounds pursuing its goal of enhancing research and graduate training in member universities.

Student exchange activities contribute to the internationalisation of academic programmes, collaborative research projects and the diversification of cultures at the University. UP has over 4,000 full-time international students from about 100 countries and about 400 international students on short-term exchanges annually. UP further supports staff exchange programmes and visiting scholars to UP. About 44% of the research conducted at UP is done with international collaborators.

UP is also the only representative from Africa in the new University Social Responsibility Network (USRN), an international group of 15 top universities. .

University campus life is something that we all cherish forever. How does the University of Pretoria ensure a quality campus life for its international students?

The University of Pretoria enhances its international standing through multifaceted internationalisation programmes. The programmes are facilitated and coordinated by the International Cooperation Division (ICD), which is part of the Department of Research and Innovation.

UP offers support for international students before arrival on campus, while on campus and even post-graduation through a dedicated office in the International Cooperation Division. International students are provided information on all aspects including immigration, admission, accommodation, banking, security, etc.

UP also hosts a number of events, aimed at orientating and integrating international students into the broader university community and the surrounding environment, such as special orientation for international students, UP International Students' day, excursions and cultural events. Once settled, students get to embrace and enjoy the vibrant student life on offer at UP. The UP Student Representative Council (SRC) also has a portfolio responsible for International Students.

UP places great value on the presence of international students on campus. They add to our diversity and bring different experiences, views, opinions, and ways of doing things. The University believes that cohesion is important and that the presence of international students offers an opportunity for both staff and local students to learn, for example, more about each other's cultures because arts and culture form a huge part of life at the University.

A university must demonstrate the fact that knowledge and knowledge seekers know no borders and boundaries.

Does the University of Pretoria offer any visa-related assistance to prospective international students? If yes, how should an interested international candidate approach the University for admission?

The University of Pretoria has a dedicated office – the International Cooperation Division – which looks after the interests of international students and provides all the assistance with immigration requirements. UP also maintains close relationships with the Department of Home Affairs, foreign embassies, and missions in and outside the country.

All prospective students should visit https://www.up.ac.za/international-cooperation-division for more information.

The South African public higher education system went for reforms in 2004, merging and incorporating small public universities into larger institutions. How have the reforms benefited the South African education system?

The restructuring of the higher education sector in the early 2000 was aimed at breaking down apartheid's racial divides and transforming tertiary education in the country. The process assisted in dismantling racial and ethnic segregation, fragmentation and poor coordination. The mergers represented an attempt to create a single coordinated system of higher education without racial inequalities. In addition, the merger was geared at creating a more clearly differentiated university system and enhancing efficiencies. The incorporation of institutions such as the Mamelodi Vista Campus and Normal College of Pretoria, Teacher Training College at the Groenkloof campus allowed, for example, for enhanced capacity for our teacher education programme, foundation provisioning, etc.

How do you approach the skilling of students to make them industry-ready and does the University Pretoria offer any vocational diplomas and degrees to its prospective students?

Enterprises UP, in conjunction with the University of Pretoria's (UP) Career Services, has recently launched a ready-for-work initiative specifically designed for students and graduates from UP to acquire the requisite skills and attributes to help them integrate into the world of work more easily.

The Ready for Work Programme consists of four-course packages that include either free or paid options focussing on career planning, job preparation and workplace skills. The packages are made up of free, self-paced online modules as well as specialised skills options that consist of online courses and face-to-face workshops during the July recess.

The skills and knowledge that students and graduates gain from the programme not only enhance their professional and personal profiles, but also assist in making a meaningful contribution to the workforce, their communities, and the economy while also aiding their success in their chosen careers.

UP's support system for encouraging an entrepreneurial mindset is based on a multi-pronged eco-system approach. We offer students a custom-designed course and support system developed especially for our students. All they need to do is sign up for a free Professional Online Development (POD) course where they can learn these skills in their own time. The course teaches vital business skills to any registered student. DL

'EDUCATION SHOULD BE FREE? BECAUSE KNOWLEDGE IS NOBODY'S PROPERTY'

The modern idea of science has been built on the belief, that scientific information belongs to humankind, and it has to be shared with everybody. Learning is a basic right of every citizen on this planet, says **Mika Tirronen,** Counsellor of Education and Science, Embassy of Finland, New Delhi in conversation with **Elets News Network (ENN).**

Mika Tirronen
Counsellor of Education and Science
Embassy of Finland
New Delhi

Finland's education system is considered to be one of the best in the world and has been a top performer since the very first programme for the International Student Assessment (PISA) triennial international survey back in 2000. What makes the Finnish education system so successful?

Finnish society is supportive of the core values of education, which in turn reflect the values in the society. Hence, free and universal education, equality, low competition, teamwork, teacher autonomy, student-oriented approach, early independence, peer interaction, self-evaluation (rather than testing), trust, low hierarchies, mentoring and counselling (rather than dictating), fun learning, learning by doing, plenty of free time, modest amount of homework, no extra-curriculum classes, own hobbies, etc.

The brain is a very sensitive system, which needs a lot of rest and varying stimulation (non-monotonic). There is no use of pouring data into kids' brains as if they are machines. This won't help.

Finland did not create this understanding, but it is one of the few countries, that took this lesson seriously. Finally, a high level of professionalism of teachers is a cornerstone of the Finnish system.

The brain is a very sensitive system, which needs a lot of rest and varying stimulation (non-monotonic). There is no use of pouring data into kids' brains as if they are machines. This won't help.

The phenomenon-based learning (PBL) is an intriguing part of the Finnish education system. Could you please tell us how it has benefited the students in Finland?

PBL is one part of the Finnish curriculum, few courses, but its amount has been exaggerated in global media. But the tendency is clear, though. First of all, the motivation of having PBL in the curriculum is to keep education in line with the overall development of the ever more complex society as well as the developing Research and Innovation (R&I) scheme.

Multi- and cross-disciplinary science projects are the ones that earn the highest citation indexes nowadays. Combining digital tech with biotech, for instance, is the means to take the Artificial Intelligence (AI) robotics to the next level. Similarly, using DNA in computing, or creating quantum computers, both require a cluster of established technologies integrated into new technology.

Let's take climate change for instance. We can now see how the melting of polar ice affects ocean streams, which affect monsoon rains, agriculture, economy, the policies and societal transformations in India at various levels.

We still need experts on ice research, but we also need to educate citizens, who understand these feed-

back loops and are civilized enough to take well-educated actions and responsibility on climate change. This is what PBL is all about. We need to learn more about climate change as a phenomenon.

The Finnish 'Elements of AI' course has gained global popularity in a very short span. Could you please tell us about its benefits and the effects it has had on the Finnish and European education and employment ecosystem?

To me, it tells two stories. Firstly, it tells about the power of free education. Why education should be free? Well, because knowledge is nobody's property. The modern idea of science has been built on the belief, that scientific information belongs to humankind, and it has to be shared with everybody. Learning is a basic right of every citizen on this planet.

The beauty of the Elements of AI is that anyone can take the course on the internet. I bet that this is the future of education, there will be more actors and believers, who will follow this path and revolutionise the practices of learning. Secondly, it helps people to catch up with technological development, which is to take place globally during the following few decades.

It helps to adjust and re-educate, and to share the benefits of the transformation to a wider population. Elements of AI is just the beginning. I hope there will be the next study levels for the more advanced learners.

Finnish Open Universities provide the opportunity to pursue a degree regardless of age or educational background. How has this unique initiative helped the Finnish society?

Societies are constantly under flux. Paper mills are shut down, social media companies are established. To keep the society coherent, there needs to be ways to adapt to this change, at the individual and industrial level. Skills need to be updated. Learning never ends, it is a life-long pathway.

We should keep this option open for everyone, laymen or professionals, who need to re-educate themselves or upscale their skills. Many do take their degrees through open university studies while they are working. Those who did not pass the entrance examination, can also opt for open university and use these credits later for their degrees.

This is a wonderful system. It again tells, how education should be kept open and free (or affordable), it helps societies to do better.

The Finnish National Agency for Education has been promoting Internationalisation amongst its populace. How has it benefited the students and the society in Finland?

Finland is an ageing population, and we need more talents from abroad. To accept foreign experts, we need global perspective and understanding. A Finnish who never studied or worked abroad, or who never worked with a foreigner, has a higher threshold to hire a foreigner to his company or institute than the one, who has this experience.

We need these people, who are ready to interact and internationalise. We can still improve this; to my mind, our country is just slowly becoming as international as it needs to be, to make it. We are working on this.

Now, my ambition is to make the interaction and mobility between Finland and India much more active and stronger. We have annually around 1,000 Indian students studying in Finland and taking degrees including Ph.D. I think we should multiply this. I'm sure, that we will make it. **DL**

VIGNANA JYOTHI: IMPARTING KNOWLEDGE; BUILDING CAREERS

Vignana Jyothi is a non–profit organization founded by a group of Industrialists, Academicians, Businessmen, NRIs and Professionals of Telangana, who are known for achieving commendable results in their respective fields. Vignana Jyothi was registered during the year 1991 under the Andhra Pradesh and Telangana Areas Public Societies Registration Act. The aims and objectives are to promote Social, Cultural, Educational, Scientific and Research activities among men and women, particularly the youth.

It is also aimed at establishing, managing, aiding and maintaining Educational and Other Institutions, impart Education and Training at all stages for the promotion of Engineering, Medicine, Pharmacy, Agricultural, Commerce, Literature, Arts and Science, Management and other subjects and allied activities for diffusion of useful knowledge and training especially to instill self-confidence, creative thinking, and entrepreneurship in students and trainees and to issue Degrees / Diplomas / Certificates to the successful candidates.

VIGNANA JYOTHI PUBLIC SCHOOL

The first Institution of Vignana Jyothi and is affiliated to the Central Board of Secondary Education(CBSE). The school has digital classrooms, higher-end computing facilities, libraries, and laboratories. The School has made a mark and received high appreciation from the neighborhood community, especially for its modest and affordable fee within the reach of lower-middle-income groups. It has been achieving 100% results in Class-X CBSE examinations continuously for the past 10 years.

VIGNANA JYOTHI INSTITUTE OF MANAGEMENT

An autonomous Institution approved by the All India Council for Technical Education (AICTE) for the award of Two Year Post Graduate Diploma in Management (PGDM) with an annual intake of 240 students. VJIM was set up to mould its students as professional managers. The PGDM programs aim at creating holistic managers, synthesizing conventional and modern management thinking with a global outlook. The Institution is consistently ranked among the top 50 B-Schools by various ranking agencies.

VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

VNR Vignana Jyothi Institute of Engineering & Technology (VNR VJIET) is a unique institution that since its inception has charted distinct pathways to academic excellence. It has become, and remains one of the most distinguished and premier institutions of higher education in the State of Telangana. Its complexity, diversity, and comprehensiveness are a fountainhead of creativity and innovation.

DR. D. RAMA NAIDU VIGNANA JYOTHI INSTITUTE OF RURAL DEVELOPMENT & AGRICULTURE POLYTECHNIC

It is established with the aim of imparting practical training on modern methods of Agriculture to rural youth. The Institute is running Agriculture Polytechnic with affiliation to Professor Jayashanker Telangana State Agriculture University, Rajendranagar is offering:

Two-year diploma courses in

- Agriculture Polytechnic
- Seed Technology

Three year Agriculture Engineering program

Around 270 Diploma Holders of this Institute got selected and joined as AEOs (Grade II Officers) in the Department of Agriculture, Government of Telangana.

In collaboration with Bayer CropScience Ltd, the Institute offers a free six months vocational training to rural youth right from the selection of seeds to harvesting.

VIGNANA JYOTHI INSTITUTE OF ARTS & SCIENCES

This Degree College commenced from the Academic Year 2011-12 with a view to being an effective learning Centre of Academic Excellence in the fields of Arts, Sciences, Commerce and Management. The Institute is affiliated to Osmania University and offers graduate programs of a three-year duration in B.Com (Computers), B.Com. General, B.Sc. (Maths, Statistics), & B.B.A. **(SOURCE: Vignana Jyothi).** DL

ANNAPURNA STUDIOS:
TAKING A LEAP TOWARDS BUILDING CREATIVE CAREERS

In today's world of Artificial intelligence (AI) and automation, machines are outperforming human beings. Conventional careers are slowly going out of demand, but the good news is that creative careers are on a rise. In this digital world, where personal screen-time exceeds face2face time with friends and/or family; creativity and innovation will only thrive.

Below are listed few creative career options available in the media and entertainment industry. These opportunities are on a rise giving you the opportunity to make your choices, in order to pursue your passion, and make a career of it.

Animation: A huge growth is projected in the Animation and VFX industry due to the increased demand for CG content in commercials, animated films and TV shows, video games, web sites, and visual effects for movies and television. All formats of content ranging from web series to a feature film incorporate visual effects as a very important part of the narrative. If you are good at visualising scenes or sketching characters, Animation as a career holds a bright chance for you.

Film direction: Film making, like other creative careers is in huge demand. Filmmaking is largely a multi-disciplinary project involving coordination and teamwork across various creative departments. Director, the boss on the set, is in charge of all creative decisions made in the production of a movie, from the beginning stages to the final edits. A degree in film direction can set you up for a thriving career in films.

Film Production: The producer's main job is to make sure that everybody else is doing theirs. He/she chooses the story, manages resources, appoints the cast and crew including the director, chooses locations, manages the legalities, arranges finances, etc.

Amala Akkineni
Director
Annapurna College of Film and Media
Hyderabad

Cinematography: The cinematographer compiles scenes for visual impact; he/she decides the lighting, camera angles, a job with high technical expertise requirements. Turning day into night, or shifting moods, he/she is responsible for what you see in each frame.

Film Editing: Editor's job may look as simple as cut-copy-paste, but without crisp editing, the content can become dull and boring. This requires immense talent and technique alongside patience and a keen eye for detail. The role of a Film Editor is to put together the scenes of a Film in a manner that is entertaining and engaging and tell the story as it was intended to be told.

Sound design: Sound is important because it informs us and moves us in ways the visuals can't. Certain combinations of sound and visuals can evoke emotions that neither can do alone. Good sound design encourages the audience to connect better with what they are watching. It helps to understand the film scene/moment in the game and creates the atmosphere.

Ad filmmakers: The most intelligent filmmakers are the ones who create stories for commercials, where a complete story is depicted with marketing messages in a few seconds. Advertising graduates can work in various agencies before venturing out on their own. The digital marketing trends have created huge demand for video Ad

makers.

Acting: An actor communicates a character or situations to an audience through speech, body language and movement. This usually involves interpreting the work of the scriptwriter while improvising the reactions of a character to a situation. Projects/genres may vary enormously, from live stage performances to community theatre, television advertising and film.

Scriptwriting: A 'Script' is the whole anatomy of a film. A scriptwriter practices the art and craft of writing screenplays on which films, television shows, video games, documentaries etc. are made. In a film school, the students pursuing scriptwriting, learn how to write and "pitch", so when they graduate they can go out and pitch their stories to various production houses.

Photography: As with most professions, a degree can open the door to opportunity. In the field of photography, degree holders are often considered for jobs as commercial photographers, photojournalists, digital photo editors, fashion photographers, product photographers, wildlife photographers, industrial photographers, etc. The internship will help you discover your interest

If you want to choose a career whose demand is moving in an upward trajectory, choose a creative career as the options are umpteen in the media and entertainment industry. **(Source: Annapurna Studios)**. DL

MNR EDUCATIONAL TRUST

MNR Educational Trust established its first institution a primary school with just 36 students on its rolls in the year 1974 at Hyderabad. Over the past 4 ½ decades the Trust grew into a leading educational group. As on date the MNR group governs 78 institutions with about 50,000 students and 2300 faculty members offering courses from primary education to post graduation and research. The Trust governs institutions of higher learning that offer courses in the fields of **Medicine, Dentistry, Homoeopathy, Pharmacy, Physiotherapy, Nursing, Education, Science, Engineering and Technology.** The Trust and its sister organizations run various institutions in Hyderabad, Mumbai and Dubai.

The Trust made an indelible mark in the field of education and health with **Sri M N Raju,** Founder Chairman and Managing Trustee at the helm of affairs supported by a team of highly qualified Deans, Principals, Faculty Members and Staff. **Sri M N Raju** was born in a poor agricultural family and could not even attend primary school in his childhood. He pursued double post graduate degrees in Arts and Education through non-formal education. With an aim to provide quality and value-based education he established a small school 45 years ago and nurtured into a massive education and Health-Care empire. ***"Enriching lives through Education and Health"*** is the main objective of the Trust.

MNR Higher Education & Research Academy (MNR-HERA) Campus is located at Sangareddy, Gr. Hyderabad, in a lush green 100 acre campus with more than 12,00,000 S.Ft. of built-up area with all modern amenities. It is the largest private educational campus in the state of Telangana and the only campus that houses eight (8) professional colleges in a single campus. It has well designed roads connecting various facilities in the campus. All the institutions have state-of-the-art facilities like lecture galleries with audio visual aids, fully equipped labs, libraries, examination halls, wi-fi internet access, sate-of-the-art virtual classrooms (for E-learning). The campus amenities include fully secured staff quarters, student hostels (separate for boys / girls), sports arena (for indoor / outdoor sports) including gym, a 1400 seating Auditorium, ATM, super market, canteen, mess and provide round the clock medical facilities for inmates.

MNR Medical College and Hospital at MNR-HERA Campus is a 675 bedded teaching hospital with latest medical equipments and state-of-art facilities. A team of nearly 180 doctors work round the clock and provide much needed quality health-care to the rural masses at a very nominal cost. The institution offers under graduate and post graduate degree courses and is actively involved in research activities. The institution was accredited by **NAAC with "A" grade**.

MNR Dental College & Hospital at MNR-HERA Campus is the largest dental institution in the district with 200 dental units, latest equipments and state-of-art facilities. A team of nearly 80 doctors provide dental health-care services to the rural patients at a very nominal cost. The institution provides under graduate and post graduate degree courses and is actively involved in research activities. The institution was accredited by **NAAC with "B++" grade.**

The following institutions are housed at MNR-HERA campus providing educational and health-care services:

- **MNR Medical College & Hospital (with attached 675 bedded hospital)**
- **MNR Dental College & Hospital (with 200 dental units)**
- **MNR Homoeopathic Medical College & Hospital (with attached 25 bedded hospital)**
- **MNR College of Pharmacy**
- **MNR's Sanjeevani College of Physiotherapy & Hospital**
- **MNR College of Nursing**
- **MNR School of Nursing**
- **MNR College of Engineering & Technology**
- **MNR College of Education**
- **MNR Foundation for Research & Innovation**
- **MNR School of Excellence**
- **MNR CART (Centre Aiming Rural Transformation)**

The international affairs department and MNR Foundation for Research and Innovation are instrumental in collaborations with the following premier institutions across the globe: -

- **Tufts University, USA**
- **American Observership Inc., USA**
- **Pusan National University, Korea.**
- **AIMST University, Kedah, Malaysia.**
- **Center for Cellular & Molecular Biology (CCMB), Hyderabad**
- **Indian Institute of Technology (IIT), Hyderabad**
- **Indian Knowledge Park (IKP), Hyderabad**
- **Birla Institute of Technology (BITS) Palani, Hyderabad**

Proposed **MNR UNIVERSITY**

the journey continues ……

BIHAR SCHOOL EXAMINATION BOARD: PAVING WAY FOR BETTER EDUCATION

Many steps have been undertaken by the Board to publish the results on time. This included making available pre-printed answer booklets and Optical Mark Recognition (OMR) sheets with barcodes and lithocodes to each student for each subject with their names, subject code, roll no, roll code, date of exam and other details pre-printed on it, says **Anand Kishor,** Chairman, Bihar School Examination Board (BSEB), in conversation with **Elets News Network (ENN)**.

Technology has played a pivotal role in the complete overhaul of the BSEB Examination System. The examination process is now computerised right from filling up of the forms to the publication of results.

Bihar School Examination Board (BSEB) had set a record in the year 2019 for publishing both Class 10th and 12th results in record time. How did you execute this within such a short span, surpassing other Boards?

BSEB has introduced many technological changes in the entire examination process to make it foolproof and student-friendly. BSEB, which had earlier been blamed for the late publication of results, released the results of Intermediate and Matric Annual Exams 2019 way ahead of all other Boards in the country. The BSEB also completed the examination cycle (i.e. conducting annual and compartmental examinations and releasing the results) in the month of May itself, ahead of all the other Boards in the country.

For this, many steps have been undertaken by the Board to publish the results on time. This included making available pre-printed answer booklets and Optical Mark Recognition (OMR) sheets with barcodes and lithocodes for each student for each subject with their names, subject code, roll no, roll code, date of exam and other details pre-printed on it. Besides, many multiple computerised formats (introduced for the first time) were scanned to prepare data for the results, resulting in speedy result processing. More than 2,100 computers were used at Inter and Matric evaluation centers across the state to enter marks directly from the evaluation center. Softwares readied by the BSEB IT team helped during the entire process. Simultaneously, the officers and staff did a commendable job to properly monitor the entire process. All such initiatives helped BSEB declare Inter and Matric results ahead of other Boards in the country.

Apart from conducting Board

Anand Kishor
Chairman
Bihar School Examination Board (BSEB)

Examinations, what are the other key responsibilities of BSEB?

The primary responsibility of BSEB is to conduct Matric and Intermediate Examinations every year. Combining the two exams, approximately 30 Lakh students appeared in Inter and Matric Exams last year. BSEB also conducts examinations for Diploma in Elementary Education (DI. Ed.) of institutions recognised by the National Council of Teachers Education (NCTE) and affiliated by the BSEB. The Board has also mandated to conduct other examinations like Teachers' Eligibility Tests, Simulatala Entrance Test, etc. as per the direction of the State Education Department. The Board also granted affiliation to Secondary and Senior Secondary Schools as well as to the institutions conducting Diploma in Elementary Education (DI. Ed.).

In the last one year, the use of technology has transformed the way BSEB functions. What were the major challenges in implementing technology and how you overcome it?

Technology has played a pivotal role in the complete overhaul of the BSEB Examination System. The examination process is now computerised right from filling up of the forms to the publication of results. Now all the Exam related works are being done through Pre-Exam Software and Post-Exam Software. The use of modern technology in the entire process has also led to the end of manual intervention in every process -- from filling up of the forms to the publication of results. Computerization on such a vast level required training of the present workforce regarding the use of computers. The adaptability to this new computerised system was also required from stakeholders like school principals and staff. I am very happy to note that the system has adapted to it successfully and fast.

What are your future plans for BSEB?

> *More than 2,100 computers were used at Inter and Matric evaluation centers across the state to enter maks directly from the evaluation center.*

We are planning to introduce complete computerisation in BSEB, thereby, making the state Board paperless through ERP (Enterprise Resource Planning). Further, plans are afoot to digitally connect nine regional offices of BSEB in nine divisional headquarters of Bihar for more convenience of the students and better monitoring of the regional offices from the headquarter. Besides, online monitoring of examination halls at nine divisional headquarter from BSEB headquarter is also in the offing. We are also planning to start the online process of affiliation of colleges along with online verification of students' marksheets in the near future.

Describe your experience in the Examination reform of BSEB??

I feel great to be a part of this reform as I myself have been a student of BSEB. I am thankful to the State Government for giving this opportunity to make the system better and improve the quality of education through reforms initiated at different levels in the Bihar School Examination Board. DL

A NEW HORIZON FOR INDIA-AFGHANISTAN RELATIONS: SEDIQULLAH SAHAR

The outcome of 'New Development Partnership' has been one of the gold standards by which the success of bilateral ties between Afghanistan and India can be gauged. It has penetrated deep into the hearts and the minds of Afghan people, says **Sediqullah Sahar,** Education Attache, Embassy of Afghanistan in India, in a conversation with **Debajyoti Mohanty and Shivani Babbar** of **Elets News Network (ENN).**

Cultural relations between India and Afghanistan have spanned centuries and this cordial relationship continues even today. What more can be done to enhance people to people ties between the two countries?

India-Afghanistan relations encompass the spectrum of eclectic aspects, be it epistemological, etymological, or cultural. To reinforce the entrenchment of the profundity of our bilateral ties, more people to people contact must be encouraged and coaxed, like increasing more opportunities of quality education for Afghanistan youths, organising cultural events that throw a light on our coterminous customs by diligently collecting and collating our common social and cultural practices that possess their genesis in our bilateral history.

Indian Council for Cultural Relations (ICCR) and the Indian Council of Agricultural Research (ICAR) are providing numerous scholarships to talented Afghan students. How popular is this initiative in Afghanistan and how is it benefiting the Afghan society?

Knowledge transfer is one of the main pillars of Afghanistan relations with India, its all weather friend. India is considered as the first choice education destination among Afghanistan youths. Today, more than 15,000 students are presently studying in different universities across India, quarter of them are under scholarships funded by Government of India. Since the fall of Taliban regime, more than 60,000 Afghan students have graduated under various different schemes offered/sponsored either by Government of India, or Government of Afghanistan or international donors. This justifies the lionisation of such scholarships among Afghan society. Further, the rich pool of knowledgeable and educated demography is morphing the face of the country by significantly improving the Afghan polity, social fabric, cultural awareness, and its constantly vigilant civil society.

Sediqullah Sahar
Education Attache
Embassy of Afganistan in India

Have any initiatives been taken by the Embassy of Afghanistan in India to promote collaborations between leading Indian and Afghan universities and schools? If yes, could you please elaborate?

India is the biggest regional donor to Afghanistan, which hosts over 15,000 Afghan students, with approximately 4,500 under Government of India scholarships (including ICCR, ICAR, ITEC, SII – Study in India programme). In the last decade, the number of Afghan students studying in Indian universities witnessed a two-fold increase from 7,000 to over 15,000 due to initiatives taken by this Embassy. The Government of Afghanistan has diverted many of its funded scholarship schemes as well as International organisations/donors funded scholarships to India, since it will help in strengthening and expanding people to people contacts.

In March 2019, a Memorandum of Understanding (MoU) was signed between Ministry of Human Resource Development (MHRD), Government of India, and Ministry of Higher Education (MoHE), Government of Afghanistan, on cooperation in the field of human resource development, which facilitates students and faculty of Educational Institutions in Afghanistan to register and use the SWAYAM portal and its Courses, provide access and share the technology of other major ICT Initiatives in Education such as National Digital Library of India (NDLI), Virtual Labs, Spoken Tutorials.

It facilitates commencement of Joint Master Degree Programs between six top premier Indian Institutions (five IITs & JMI) and six Afghanistan Public Universities. Government of India would also assist the Ministry of Higher Education, Afghanistan in areas of Curriculum Development and Capacity Development of Teaching Staff. Because of the Embassy's proactive engagement, many of above mentioned projects came to realisation, thereby consolidating further academic collaborations between the two countries.

A large number of Afghan students are studying in Indian universities. What has been their feedback? And what needs to be done to improve their experience and learning?

Many Afghan students consider India as their second home country. There are various reasons behind this: inter alia, easy to obtain visa, low cost of living, cultural similarities, historical commonalities', good relations between governments, the use of English in colleges and universities, huge scholarships provision by India, and also diversion of many other Scholarships and education programs funded by International donors (such as WB, EU, ABD) to India. Most of these alumni and alumnae are heading top institutions in Afghanistan in diverse sectors, be it economy, commerce, polity, and NGOs, among others.

The Government of Afghanistan has persistently engaged the Indian officials to increase the scholarship slots, facilitate more education opportunities for Afghan students in various Indian universities, and to improve their learning environment by implementing various hand holding mechanisms. Much progress has been achieved in this direction.

Under the Indo-Afghan New Development Partnership, many community development programs have taken shape in Afghanistan. How has the initiative been received by the people of Afghanistan and what areas has it touched upon?

The outcome of 'New Development Partnership' has been one of the gold standards by which the success of bilateral ties between Afghanistan and India can be gauged. It has penetrated deep into the hearts and the minds of Afghan people. Launched in September 2017, new projects are steadfastly incorporated under this scheme. For instance, Shahtoot Dam drinking water project was taken up for Kabul city; low cost housing was taken up in Nangarhar province. Further, 116 high impact Community Development Projects and a host of other infrastructure development projects were also incorporated under this. Additionally, over 3,500 Afghan nationals are trained and receive education in India every year under this partnership.

Bilateral trade between India and Afghanistan has increased since the operationalisation of Chabahar Port in Iran last year. Has any other initiative been taken to further improve trade between the two countries?

The operationalisation of Chabahar Port in Iran was aimed to be the gateway to an overland trade corridor through Iran to Afghanistan. While it is constantly making affirmative strides bolstering trade between Afghanistan and India, a spectrum of new avenues has also opened thereafter. Here, the air freight corridor scheme between Afghanistan and India deserves a special mention. Establishing direct air freight corridor in June 2017 connecting Kabul to Delhi and also Kabul to Mumbai, it was further expanded to connect Kandahar to New Delhi. This scheme is running successfully and has elevated exports up to 44 percent so far. Now the Kabul-Amritsar air cargo, which has been in the pipeline, will commence soon.

Afghanistan is a place of geostrategic importance as it forms a link between Central Asia and the Indian subcontinent. What steps has the Government of Afghanistan taken to improve regional cooperation with the countries around it, and what place does India hold in Afghanistan's grand scheme of things?

Contemplating the trade potential that a safer South Asian region can realize, Afghanistan has constantly been beefing up its security infrastructure. Commensurately, Afghanistan has been reforming its civil society, economic, and governance related institutions with slew of measures to attract foreign investments and to give impetus to regional connectivity that would ultimately prove to be a win-win situation for the entire Indian subcontinent. And as already mentioned, Afghanistan considers India its most trusted ally and expects it to play a major role in propping up Afghanistan to improve regional cooperation. India has been correspondingly reciprocat-ing by investing heavily and perpetually in Afghanistan in various key sectors. **DL**

RYERSON UNIVERSITY: FOCUSSING ON EQUITY, DIVERSITY, AND INCLUSION

It is a part of our mission to diversify the perspectives of students in our classrooms and the curriculum that our professors teach. Given our strategic location at the heart of Toronto, we pride ourselves on being representative of one of the most diverse cities in the world, says **Professor Anver Saloojee,** Assistant Vice President (International), Ryerson University, Toronto, Canada with **Anupama Mehra** of **Elets News Network (ENN).**

Professor Anver Saloojee
Assistant Vice President (International)
Ryerson University
Toronto
Canada

How is Ryerson International working across the university community to support and strengthen international linkages, projects, exchange opportunities, and others?

Ryerson International (RI) consulted widely across the university to develop Ryerson University's first internationalization strategy that addresses the multifaceted work our university undertakes. Consulting, being proactive, being outward facing as well as being service-oriented and embedding international in all facets of the work of a university, is critical to success.

Ryerson University takes a students-first approach to every aspect of strategic planning, curricular and co-curricular program development, community engagement, student support and partnerships. Ryerson International takes a lead role at the University to strengthen international linkages. RI supports each of our Faculties to develop innovative programming that creates access for students in international and global activities, across disciplines and among equity-seeking groups. My unit is continuously improving communication channels across Faculty and the university and maintains good relationships with the government at all levels.

Many law schools are taking an innovative approach towards legal education with experiential learning, a focus on entrepreneurial skills and new technology. What is unique about Ryerson's approach?

Ryerson University is widely recognized as Canada's most innovative university and one that is deeply committed to diversity. As we were doing our research, we noted the calls for change to legal service delivery and to legal pedagogy. Combining all of this we alighted on the 4 pillars that differentiate the Ryerson approach: a focus on legal technology; a focus on diversity, access to justice and a focus on sound academics. We were able to develop a curriculum that has a co-teaching model and a one-semester placement program. Lastly, because of our focus on practice readiness, the Law Society of Ontario agreed that the integrated practice program was such that graduates from Ryerson would not need to do articles if they did not want to.

Diversity in educational institutes and courses is a must. Please comment.

A focus on equity, diversity, and inclusion is built into Ryerson University's DNA. It is a part of our mission to diversify the perspectives of students in our classrooms and the curriculum that our professors teach. Given our strategic location in the heart of Toronto, we pride ourselves on being representative of one of the most diverse cities in the world.

As a university, we are also deeply committed to addressing the Truth and Reconciliation Commission's recommendations around the importance of indigenizing universities and being responsive to the historic injustices faced by Indigenous nations in Canada.

Do you think India needs more Law schools and a better approach in education?

India does not need more law schools. It needs law schools that will teach future lawyers differently. India needs more cutting edge, innovative law schools, with a focus on legal technology and integration of legal tech into the curriculum and classrooms. Law schools need to be representative and socially responsible and they need to ensure that there is diversity among faculty and students. Gender diversity and regional representation are crucial for law schools to improve their success.

Do you think technologies like AI, ML, IoT is bringing a major shift in the education sector?

Absolutely yes. There is clearly a global demand for an interdisciplinary approach to AI, ML and IoT and universities have to respond to these demands. Many universities have already responded by bringing in innovative curriculum, and developing and advancing niche micro credentials, but more can and should be done. There should be international collaboration among universities across the globe.

Universities like ours need to remain nimble and responsive to the massive transformative technological changes. We should learn from each other to advance the global good.

However, it is critical that universities ensure that they are not just taking a strictly technical approach to higher education, but that they integrate and include diverse perspectives from other disciplines. At the same time, there is global growth in the significance of cybersecurity.

Public and private sector institutions, cities, states, and nation-states are all vulnerable and we need to do everything we can to protect and advance the information and the rights of citizens whose information is often the target of cyberattacks. Universities can and must play a central role in this arena. **DL**

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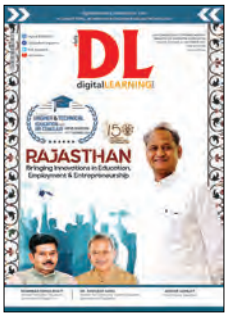

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FOR QUERIES CONTACT : Chandan Anand +91-8860635836 | E-MAIL : kumarchandan@elets.in

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