

EDITORIAL

Technical Skills Education: The Path to Empowering Pakistan's Youth

Pakistan has been in a constant state of crossroads (and crossfire) since its birth—a situation made worse by poor leadership and decision-making. Three interconnected areas in which we have particularly suffered are: explosive population growth, declining level of education and high rate of unemployment. In this edition of The Outlier, we have focused on the potential of technical skills education in Pakistan and how it can be a panacea for the substantial challenges facing us in this sector.

Pakistan's total population currently stands at approximately 220 million, 68% (150 million) of these are under the age of 30 and generally classified as youth. If we take the widely accepted definition of youth (15 to 29 years), around 27% (or 41 million) of Pakistan's population falls in this category. The rate of unemployment in this group is estimated at 8.5%, or currently about 13 million unemployed youth in the country falling victims to the social, economic and political repercussions of this reality. This is a serious, volatile situation given the energy and aspirations young minds have at this stage of their lives.



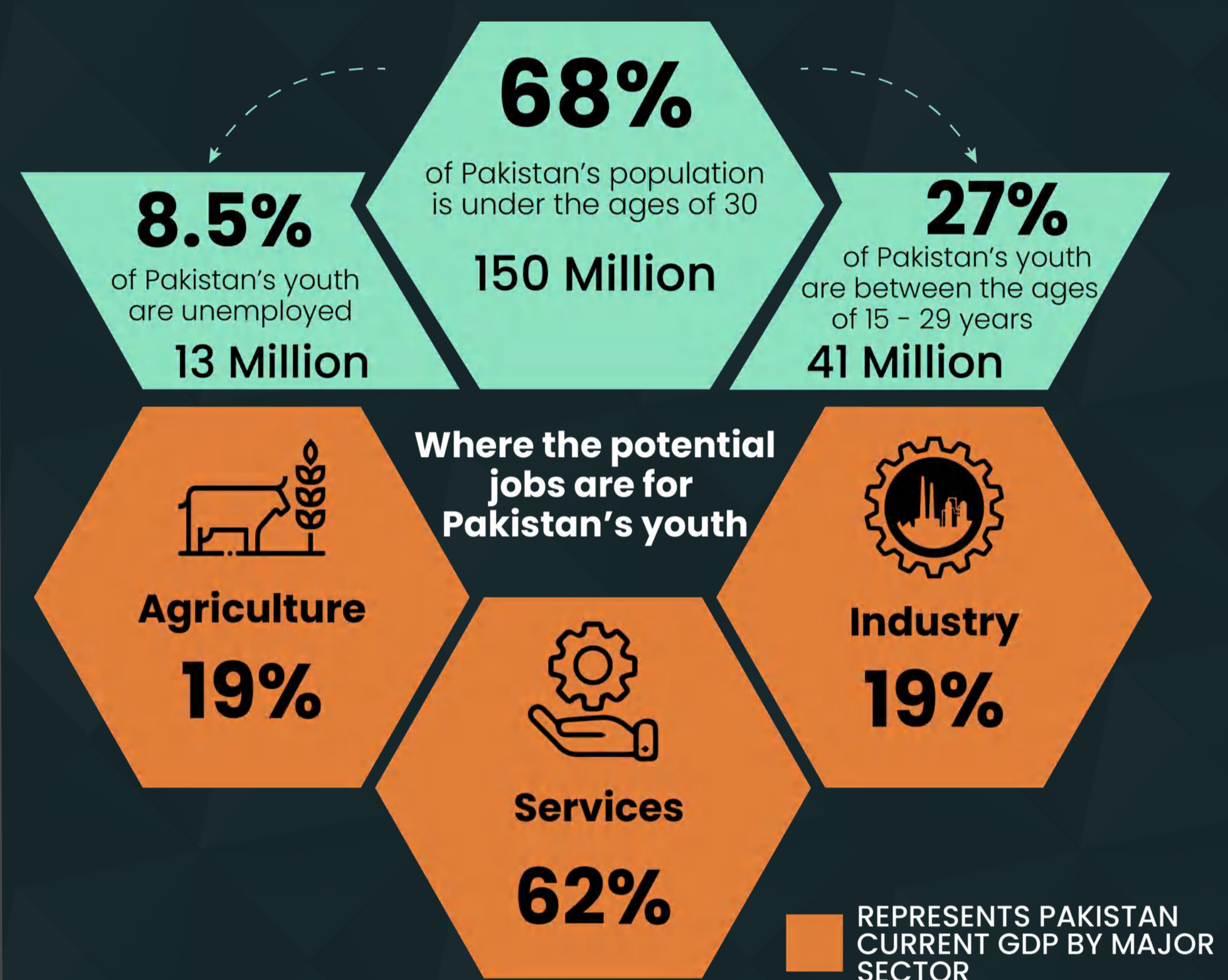
It is obvious that the state of Pakistan has to arrest this extremely worrisome problem in the shortest possible time. Introducing and promoting technical skills education (certification and diploma courses of 6 months to 2 years duration) will be a timely initiative. The current government has already embarked on many projects in this aspect. It is time that the government introduces relevant and industry-demanded courses, which meet the requirements of Pakistan's domestic industrial base, i.e., offering programs which address the demands of the major sectors of Pakistan's GDP such as Services (61% of Pakistan's GDP), Industrial/Manufacturing (19%) and Agriculture/Livestock (19%). We already have the examples of countries like Turkey, Malaysia, Germany and India. With relatively large youthful populations, they have provided good economic paths to many who have qualified as technicians. These technicians make a respectable living and look forward to prosperous career opportunities.

At the policy level, the decision-makers must stand firm behind this direction, lock in the support and funding for this sector on a sustainable basis and prevent a reversal of this strategy if Pakistan is to deliver on the promise of hope and prosperity for its youth.



NUMBERS TELL A STORY

The Youth Disenchantment in Pakistan



The stark stats above depict one of Pakistan's biggest challenges in how to manage the expectations of the growing youth population in Pakistan. Our take is that imparting technical skills education may be a powerful path to channeling the energies and talent of our young into a productive force.

Source: AASA Consulting research, derived from World Bank, UNDP, and Population Division reports

WIT'S END

Zain Ashir



"Where is everyone?? Don't you know? Its Friday.... Work from mosque."

TAKE 5

Dr. Muhammad Mukhtar on Skills Education

This interview has been edited for length and clarity



Professor Dr. Muhammad Mukhtar is the Founding Vice Chancellor of National Skills University, Islamabad. He is a Virologist by training, having completed a PhD at Drexel University in Philadelphia, USA, and further completed a Graduate Certificate in Research Management from Thomas Jefferson University of Philadelphia, USA. Before serving in NSU, he was also the Vice Chancellor of three other universities in Pakistan.

1. What is the connection between virology and a technical skills education?

The current COVID-19 situation has made people greatly aware of the significance and dangers of viruses. I had the unique honour to study molecular virology, that is, to study viruses at the micro-level. My doctoral dissertation is in biotechnology, which gives you skills to perform experiments on living things—which are specialized skills. Highly skilled professionals are in great demand. As an example, I once hired a gentleman who, after serving at our university for 3 months, was offered double the salary we were giving him by another university, because his skill set was unique and much in demand. I feel the challenges facing Pakistan today, technical skills education can play a critical role in providing economic prosperity to our youth. Hence, due to my background as a biotechnologist, I was found suitable to lead this institution. At National Skills University, I am fulfilling one of my ambitions, which is to provide a pathway to the youth of Pakistan in the growing demand of technology-based education.

2. Given your background, why did you choose to take the job of Vice Chancellor of NSU?

What a lovely question. Being a biotechnologist, and a person who has done academic tourism, I taught in USA, Brazil, Portugal, Malaysia, UAE. Beside this, I am so blessed that when I came to serve in my own homeland in 2010, I was given the task to serve as Vice Chancellor of Islamia University in Bahawalpur. That was an intriguing and learning experience for me. That was the place where I learned a great deal about academic management. When I was serving as Vice Chancellor of that university, I was given the charge of establishing another university. And that's where I came to know that I am a leader. There was another university in the region, Ghazi University which was in some trouble. The government asked me to intervene and I became its first Vice Chancellor. I applied for the position of Vice Chancellor for NSU and, during the interview, I was asked, "What is your favourite job"? I told them to be a teacher is my ideal profession. Now I am fulfilling two ambitions, teaching young minds in technical education and imparting my leadership skills as a Vice Chancellor at NSU.

3. What is unique about NSU and why is the government so keen to promote it?

NSU is Pakistan's first skills university and that is its most unique position. We have taken a holistic approach where we plan to teach both soft and hard skills courses and programs. We will develop the personalities of our students, and empower them so that they can do a task. This university has a unique model. Most of the other universities are driven by policies that come from the Higher Education Commission of Pakistan or certain regulatory bodies. At NSU we have created a special body called the Advisory Council which consists of eminent industrialists, businessmen and members of the NSU Senate. Our Advisory Council acts as a bridge between academia and the industry, thus enabling us to deliver talent which is in demand in the marketplace. This integration of industry and academia makes NSU a unique institution. Our university is the only university recognized by the UNESCO-UNEVOC. This is one of the components of UNESCO that looks into vocational education. Not only this, there are six universities in the world that have been selected to define future skills education and I am happy to share that NSU is privileged to be one of them. Our laboratories are not just laboratories, but full-fledged workshops, which is rare to find in Pakistan in the quantity and variety that we have.

4. How do you view the dual challenges of a large population and high unemployment rate of the youth in Pakistan?

This is a global challenge. Our vision is to establish a world class university at NSU. We have mainly a young population, with over 60% of people under the age of 30, which makes us a very young nation in terms of population. For young people to contribute to the national economy, you need to train them. If we could train our youth in smart technology skills, such as IT etc. it could lead to economic gain for many currently unemployed people. Our graduates should have the capability to work anywhere in the world. So, if we do that across the country, if this is done in an efficient and faithful way, we will be able to curtail unemployment. Giving the youth soft skills along with sound management and organizational behaviour curricula, we hope to produce world class skills enriched talent for Pakistan. When people work jointly, they can do wonders. My mother, used to say, "My son, always work with the people." She would say, "If you add 1 plus 1, it becomes 11 and if you add another 1 that becomes 111!" So that is the philosophy we bring to skills education. Just keep adding '1', and these numbers I'm sure will be able to curtail unemployment. Another challenge was that 70% of university area was occupied by encroachments. We had to get it back with great difficulty, through legal and administrative means which we have successfully done and now 100% of the university is back in our possession. Hiring faculty has been challenging, we are looking for many qualified faculty members but there is a global shortage of academicians with a background in technical skills education. Those in Pakistan with this kind of background will find us a ready employer, but generally these individuals earn good salaries in private employment and thus it is a challenge for us to recruit them.

5. If I was a young 16-18 year-old person, why would I enroll at NSU?

There was a time when only two career choices were available to us in Pakistan: doctor or engineer. Now that trend is gone. Many more options and career choices are available to us. If you want to be doctor or engineer, that is fine. But NSU provides specialized skills programs. We currently have five programs, with many others planned for launch shortly. We are a residential university, we provide a good living experience as well. We want to be a place that will become the centre of all technical skills education in Pakistan. If you are young and want to make a prosperous living and continue to grow than skills-based education offered by NSU is a major area of interest and opportunity for you. Our monogram says, "Al Kasibu Habibullah" meaning a person who has skills is closer to God. Skills education is very much an Islamic education. We produce manpower that is earning. We are really supporting Islamic and also Pakistani culture that way.

OBSERVATIONS FROM THE FIELD

The Trials of Measuring Child Nutrition in Pakistan

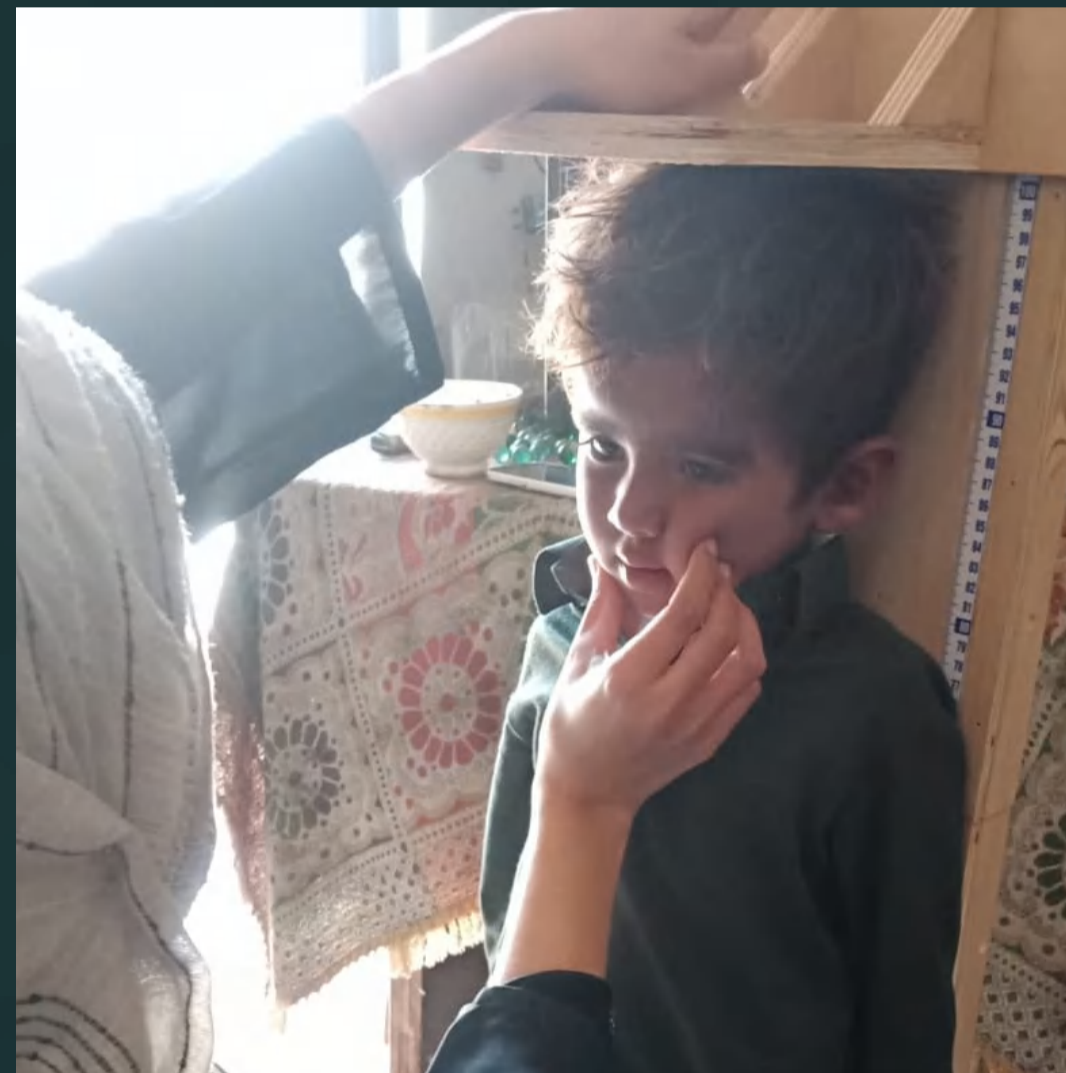
Ayesha Tarek

Did you know that the digital scale used to measure a child's weight is so sensitive that it accounts for the movement of water or any vibrations that may occur?

Last week, our team conducted a training for a survey on Nutritional Assessment in Hyderabad. Specialized equipment was used to denote if a child or their mother is malnourished. This included anthropometric measurements, such as Mid-Upper Arm Circumference (MUAC), Edema, height, and length and weight of babies, children (under 5 years) and their mothers.

MUAC measurement is as intricate as the name suggests. Before taking the reading, the measurer has to find the point between the tip of the shoulder and the elbow (AC joint) to measure the mid-point. If the measurer finds the wrong mid-point, then the MAUC reading will be inaccurate, and the measurer will have to start again.

Weighing is conducted with a digital scale and the indirect method (also known as 'double weighing') to accurately measure the baby's weight. This can be difficult, since most babies are restless and crying. You have to protect the scale from heat and humidity which may impede the reading.



Bilateral Edema is an excess of cellular fluid due to acute nutritional deficiencies, measured by a thumb pressure test. If positive, a pitting remains for a few seconds, where the fluid has been pressed out of the tissue. Edema is very rare and needs to be double checked by other team members to confirm its occurrence.

Height/Length measurement has its own specifications, including the placement of the measurer in order to accurately take the reading.

Furthermore, it is important to note that you are measuring a child. Children usually don't stand straight, may keep moving and often start crying. The measurer has to be swift and still be precise. Ensuring such intricacies while taking the reading of children in rural Sindh is a challenge for even the most experienced of fieldworkers. This is an expertise that not many have, putting it in high demand.

At a time of great scarcity and uncertainty, Pakistan needs to have more surveys with such trainings across the provinces, to ensure that the future of our nation's children is bright, and not marred by preventable stunting and wasting.

READERS TALK BACK

Importance of Short-duration, Skill-based Education in Pakistan

Faiza Zameer

Education simply means to acquire knowledge and to enlighten one's mind, but it does not mean academic education of long duration. One does not need bookish knowledge, what is needed is some type of skill.

These are of various types and kinds e.g. technical and vocational training and these can be further categorized more. Three types of technical and vocational education and training (TVET) are used around the world: school-based TVET, dual apprenticeship (or workplace-based approach), and informal TVET.

Pakistan is one of the worst performers in terms of TVET. Specialized and sophisticated skills are needed for most jobs these days. The industries want to employ workers who are semi-skilled for certain technical works. Youth who receive training in any vocation like refrigeration and electric appliances, mechanical, paramedics, etc. can obtain a job, which makes them a financially independent individual and an asset to the family and country.

There are only 3,798 TVET institutes in Pakistan, which are not enough to cater to all the unemployed as well as high school dropouts, which are increasing in number each passing year. Vocational and technical education can be regarded as a solution to the economic problem of Pakistan.

At least one technical education university should be established in each province which can have degree as well as diploma programs. More funds should be available to help both the students as well as the institutes. There is a dire need in Pakistan to increase vocational training institutions as compared to higher education institutions and to include women in different fields to help overcome domestic financial problems.

To put an end to this discussion we must understand that we have to transform our education system to meet the needs of one industry and to provide our youth with a decent livelihood to overcome the problem of poverty and frustration.

QUOTE OF THE MONTH

The more that you read, the more things you will know, the more that you learn, the more places you'll go." – **Dr. Seuss**



Theodor Seuss Geisel was an American children's author, political cartoonist, illustrator, poet, animator, and filmmaker. He is known for his work writing and illustrating more than 60 books under the pen name Dr. Seuss

FEATURE STORY

IBA SUKKUR: CHANGING THE HIGHER EDUCATIONAL LANDSCAPE

Syed Maroof Ali

One of the benefits of working in the development sector is getting exposure to various places via field visits. And it so happened that one of the units from the Head Office Team had a chance to visit the city of Sukkur. Within the third most populous city of Sindh, we got to experience an academic institution that is touted as a *miracle* across the province. A miracle that was academic in nature, grand in magnitude, and started with a humble beginning from a two-room accommodation to a state-of-the-art university: Sukkur IBA University (SIBAU).

As we reached the university to meet Mr. Noor Hussain - Director, Directorate of IBACCs SIBAU - I particularly noticed a strange familiarity to the place. A spacious area with multiple gardens where students were busy studying, chatting, or both. Once we started to roam around the place, it became clear that there was a certain atmosphere to this area: calming, enthusiastic, and optimistic. Coupled with the abundant display of nature between the red-brick buildings, we were dazed. After a productive meeting with Mr. Noor, where he talked about the progressive and collective vision of the university, we were invited to explore the library, science lab, and engineering lab. Once inside the library, it was heartening to see the thoughtful execution of this learning space.



Another space that left us in awe was Pakistan's first ever Fabrication Lab (Fab-Lab) made with collaboration of MIT - Massachusetts Institute of Technology, USA, where I got to see a 3D printer for the first time! We were informed that this technology allows the user to print any design with just the raw materials and a blueprint. Lastly, we were taken to a subsection of the Lab where prototypes, such as customized chairs made with wood were showcased. As we bid farewell to Sukkur IBA University and thanked the SIBAU Team for their time and hospitality, I understood the reason why this institute of academic excellence was not just a miracle in the bustling city of Sukkur, but also an academic blessing for the people of Sindh.

"Transformation of Sukkur IBA University from a two-room accommodation to a university is no less than a miracle."
 Amir Ali Khan Ghauri

READERS TALK BACK

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