DIGITISATION AND INCLUSIVITY: TAKING EVERYONE ALONG

Education and employability in the digital age

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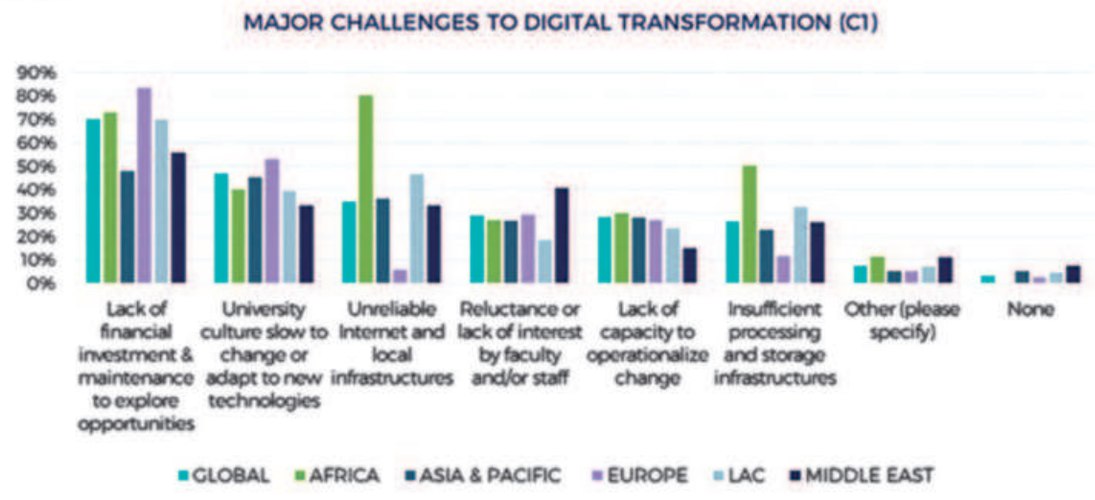
service sector, 30.6 percent in the agriculture sector and 24.1 percent in the industry sector."

While underemployment is of serious concern, what is also of substantial concern is the emerging and disruptive role of technology, artificial intelligence, and automation that has the potential of displacing more people from employment in a technology-driven world.

Again, McKinsey states that "about half the activities people are paid to do globally could theoretically be automated using currently demonstrated technologies and in about 60 percent of occupations, at least one-third of the constituent activities could be automated, implying substantial workplace transformations and changes for all workers."

Fig. 62



Pew Research Center (USA) also indicates how machines are intruding into jobs, including high-skilled work: "The machines can do equal or sometimes even better work than humans who are dermatologists, insurance claims adjusters, lawyers, seismic testers in oil fields…and even replace those who programme software—that is, the creators of algorithms." To many, these views may sound alarming. Thus, "employability" must become a key watchword in national strategy and involve all sectors that contribute to education and skill development, thereby enabling the workforce to perform optimally.

In this matter, according to the Commission on the Future of Undergraduate Education, "Workers of the future can [ ] expect to change occupations and careers several times and may even end up in jobs and industries that do not now exist… emerging technologies will continue to replace routine functions across many job categories at all levels, even as they create new opportunities for workers in hundreds of fields, including medicine and healthcare, manufacturing, and communications."

DIGITAL BANGLADESH

Fortunately, Bangladesh has been proactive and has taken a bold and futuristic stance. The Digital Bangladesh agenda was launched in 2009 by Honourable Prime Minister Sheikh Hasina to transform Bangladesh into a digital economy by 2021 and a knowledge-based economy by 2041. The programme has begun to take deeper root and has four pillars: Human Resource Development, Connecting Citizens, Digital Government, and Promotion of ICT Industry.

According to Mr Zunaid A Palak (MP and State Minister for ICT, Ministry of Posts, Telecommunications & IT, Government of the People's Republic Bangladesh), the Government's training programmes resulted in over 65,000 IT/ITES trained professionals in the past year. Specialised labs are being installed in 130 universities. Related investments are being made in frontier tech Centres of Excellence to address emerging areas such as IoT, Big Data, Artificial Intelligence, etc.

Significant achievements are also seen in Connecting Citizens "with over 93 million internet subscribers, and 160 million mobile subscriptions." For example, such connectivity has transformed lives through greater access to market-related information previously controlled by middlemen. Plans also include early adoption of 5G.

The government has been "proactively pursuing the digital penetration of all government portals by 2023," to enhance services of different government offices via e-Governance. An additional 5,000+ Digital Centres across the country provide various digital services to the citizens, thereby reducing the Digital Divide. The scale and scope of Digital Bangladesh is certain to be transformative.

A vibrant ICT Industry is the fourth pillar with the software and service (IT/ITES) industry generating a billion dollars in income; this is expected to grow to USD 5 billion in the next few years. Hi-Tech Parks are also being built around the country to provide a thriving platform for entrepreneurs to partner with investors.

The positive results of Digital Bangladesh are reflected in "registration for admission to academic institutions, publication of results of examinations, registration for jobs abroad, registration of pilgrimage, collection of official forms, online submission of tax returns, online tendering, etc. Online banking systems…SMS services for lodging complaints to police stations, online bill payments for utility services, instant communication with persons working abroad, and e-passports", are some additional examples. Telemedicine services, videoconferencing for the treatment of diseases and various administrative activities such as remote monitoring are other examples of evolving e-services changing Bangladesh. These developments point to new avenues for modern-day job creation.

ICT IN HIGHER EDUCATION

Given the pace of change and development in the digital arena, driven largely by the Government of Bangladesh, the education sector must come alive and become more vibrant to align itself better with emerging technology to equip future citizens for the new era. It is high time that it shakes off its dour image of being largely responsible for the mismatch between the skills it offers and job requirements in various sectors of the economy.

The Strategic Plan for Higher Education (2018-2030) recognises rapid developments in Information and Communication Technology (ICT) and urges the universities to keep track of the changes to minimise the gap between university teaching/research and industry needs. The Strategic Plan outlines the following to be seriously addressed:

Implement e-learning and distance education.

Build close partnership with industry.

Develop unified curriculum.

Set up a pedagogical/teachers training academy.

Establish fast global connectivity.

Train and develop academic staff.

Establish academic networks.

Establish a clear ICT strategy for each university

Build software labs in the universities.

Build linkages between high tech parks and academia.

ESTABLISHING PRIORITIES

What do the impending changes mean for the entire education sector? How must it gear up? The first step is for educational leaders to begin asking the right questions. For example:

What important skills are needed by the workforce of the future? This also includes up-skilling and re-skilling the current workforce.

How should the curricula be adjusted (across the board) and sequenced?

What is the existing capacity of the education system to transmit these skills?

How quickly can the capacity gap be addressed in the entire supply chain (starting with pre-school and primary education) to harness effective skill-builders at various levels?

What types of partnerships need to be built (perhaps with the private sector and the NGOs) to scale up? How should the partnerships be structured?

What methods (technologies) can be used best for the needed skills be instilled rapidly (online, self-directed, industry engagement, etc.)?

What type of organisation structure (yes, starting from the MoE) is needed to achieve scale of transformation? Should the MoE be restructured as a Human Resource Development Ministry?

What kind of incentive structure must be re-envisaged to retain the best educators and eliminate the poor ones in the system (yes, there's much rot in the system that is downright harmful in equipping the next generation)?

How will a national plan for workforce development by the education system be implemented with many attendant parts to be coordinated?

How will progress be monitored and managed?

How will success be recognised, with what success indicators and mileposts along the way?

ANTICIPATING CHALLENGES

The education system must also anticipate the challenges to successfully align, transform, and deliver an education package for the next generation. A recent International Association of Universities (IAU) report shares a global perspective on the challenges faced as shown in the first figure.

Bangladesh too faces similar challenges. Lack of financial support is a serious barrier at the institutional level to achieve quick technology integration. This problem is particularly acute for private institutions which receive almost zero support from the government. The culture of our education system has also been rather slow to adapt to change (we still use lectures in the main to teach, seat our learners in benches, use chalk boards, and require mandatory mid-term and final examinations to regurgitate information instead of having students demonstrate comprehension, analysis, synthesis, application, etc.—the Bloom's Taxonomy framework)! The

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