

# HIGHER EDUCATION IN THE FOURTH INDUSTRIAL REVOLUTION



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## Professor Milan Pagon Vice Chancellor (Acting), Independent University, Bangladesh (IUB)



The Fourth Industrial Revolution will cause many of the traditional jobs that we know now to disappear. The preparation for the revolution should start from education. The major problem is that universities are preparing students for jobs in the existing job market, or even jobs from the past. There are two important components that universities are not focusing on enough. The first is the gig economy: a job market characterised by short-term/part-time jobs and freelancing. School and college students of today will get short gigs here and there in the future instead of joining traditional jobs. They will not have their own business but will work for other businesses, for short terms. The gig economy is based on "just in time" employment, which means, if I need somebody for three months, I will employ them only for that time period, and they will have no job security.

The second component is entrepreneurship.

Students have to create jobs since they may not be offered jobs in a traditional company and they might not opt for the gig economy approach. Traditional universities do not equip students with the skillsets necessary for starting their own business.

How do you prepare for jobs that do not exist yet? You must identify some universal skills which will prepare you for any kind of challenge. For example, many students question why they have to study math since they will never have to use that in their lives. But research shows that when you study math, it gives you certain cognitive skills which are transferable later in life. Skills like problem solving, critical thinking, lateral thinking are all universally applicable. For example, there is one method called Kepner Tregoe, which teaches you how to analyse the situation, the problem, the decision and the potential problems. Once you master this thinking tool, you can apply it to any problem.

Traditional universities and degrees might lose importance within the revolution. People will still come to university, but it will be more likely for the specific knowledge, skills, certification and specific courses. They might not declare a major but will want to take courses from different programmes. The focus will shift from formal degrees to acquiring knowledge and skills on a need basis. Universities need to start offering relevant modules, courses, and certifications.

If we expect our universities to adapt to the revolution, then we need to remove the administrative barriers that currently exist in Bangladesh. If we are allowed to introduce only one new programme per year, it will take us 20 years to adapt. The government should look into the infrastructure, faculty members, and staff of universities when deciding how many programmes can be introduced by a particular university.

## Professor Dr Abdur Rab

Vice Chancellor, IUBAT-  
International University of Business  
Agriculture and Technology

Traditionally, the purpose of general higher education was to acquire, create and disseminate knowledge. An exception to this was professional courses such as medicine, engineering, architecture, law, accounting, business administration, etc. Courses and curricula were designed by the institutions to meet these traditional needs. The fact that education is also meant for meeting skills requirements by the employers is a more recent realisation. Even now, employers hire graduates and train them up in the skills they require. With the advancement of technology and competitive business environment, employers are expecting the universities to prepare graduates with skills so that they can use them readily.

Basic and common skills are required in the



positions where graduates are employed. These include communication skills (comprehension, speaking, writing and presentation, more often in English), good technical knowledge and skills, social and interpersonal skills, critical thinking and problem-solving abilities, ability to understand the work environment and cope with its challenges and ability to pick up 'cues' from local, national and international environment. In our university, we try our best to provide these skills. However, universities vary in their capacity to equip their students with these skills and so, there is a gap between the needs of the employers and skills provided by universities.

Universities should prepare and provide appropriate human resources for organisations. The universities need to regularly revise courses and curricula keeping in view the changes taking place in the organisational needs.

IUBAT offers a compulsory course on entrepreneurship. Many of our students have set up businesses and many others have plans to get into business once they gain job experience and acquire the capability to mobilise initial capital. Teachers of entrepreneurship offer free consultation to students or alumni starting new ventures. At present the university is working on a project for setting up an Innovation, Incubation and Business startup consultation centre.

## Dr Mahfuzul Hoque Chowdhury

Vice Chancellor, Chittagong  
Independent University (CIU)



The most significant existing skills gap in Bangladesh is between the theoretical and conceptual knowledge of the university graduates and the practical skills required in jobs. To overcome this, we offer a course called Live-in-Field-Experience (LFE) to the students. Here, students engage in practical work under the supervision of faculty members, to acquire skills such as leadership, people management, teamwork, adaptability to new environment. They have the opportunity to interact with the renowned professionals. CIU students also need to complete internships as part of their curriculum which enables them to get familiar with the work environment. Moreover, students are taken for industrial visits to give them a clear perception of the work going on there.

In general, one challenge that universities in our country face is that the government and UGC have absolute control over revising the existing courses as well as introducing new ones. Universities should be given enough freedom to design and conduct courses.

We try to promote entrepreneurship among students through motivational speeches, workshops, seminars, corporate talks and inviting guests who are successful entrepreneurs in the country. However, challenges such as generating adequate funds, unavailability of required infrastructure, bureaucratic hurdles, obsolete rules and regulations, political uncertainty, social, cultural risks and legal protection, etc., still act as a barrier for entrepreneurship amongst the young people.

Currently, we are trying to move towards more research-based activities. There is no alternative to increasing the range of creativity skills and knowledge. It is necessary to create skilled manpower in terms of craftsmanship, trade, commerce, economy, industry and state structure.

Students should also form the habit of reading books and articles and possibly write reviews on them. In this way, their written competence will increase. Educational institutions can encourage students in this regard.

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