ITU Academy
empowering minds

Georgia Tech

2nd ITU-Academia Partnership Meeting: Developing Skills for the Digital Era

Atlanta, Georgia, 2-3 December 2019

DRAFT OUTCOMES, CONCLUSIONS AND RECOMMENDATIONS

The 2nd Partnership meeting between ITU and Academia was held from 2-3 December 2019 in Atlanta, Georgia, USA, to discuss capacity building challenges and priorities facing academic institutions related to the rapid changes in information and communication technologies (ICTs), under the theme "Developing skills for the digital era".

Delegates held thought provoking discussions and exchanged ideas over a wide range of topics, covering: the kind of skills required in the digital era; the role of universities in building capacity for the digital future; the role of universities in driving innovation; new ways of teaching and learning in the digital era; and innovative ways of collaboration between ITU, universities, and industry. In particular, participants discussed ways by which universities could play a greater role in leveraging their unique knowledge resources and innovative capabilities in new digital technologies in developing students who have the skills that industry needs to be productive in the labor market. This short report is a summary of the deliberations over the two days, highlighting the main outcomes and recommendations of the event.

The following are the highlights drawn from the event.

1. The world is undergoing a major digital transformation, driven by new digital technologies. This transformation is changing the current social and economic order, creating new business models and requiring new skills sets. Academic institutions need to adapt in order to stay relevant in the digital environment.

2. Digital transformation is rendering some university programs obsolete and at the same time it is creating demand for new academic programmes. Universities are called upon to be agile, nimble and fast in their decision making processes in introducing new curricula and retiring programmes that are no longer relevant to the market.
3. Universities were urged to improve the ways they use digital technologies to create and deliver content, leveraging on technology enabled innovations and the use of data analytics to provide personalized learning pathways for students. They should modernize and digitize some of their core services, such as credentialing, to reflect better what the student learned.
4. Universities should introduce curricular interventions that advance interdisciplinary inquiry, such as introducing entrepreneurship education which provides societal perspective to the impact of technology. An entrepreneurial focus helps to deepen students' understanding of the impact of technology on people and society.
5. Universities should produce graduates for the twenty-first century workplace, where skills are not just technical but include cognitive skills, such as problem solving and creativity; interpersonal skills, such as communications and leadership; and intrapersonal skills, such as adaptability and discipline.
6. Digital transformation for a university should be holistic, involving understanding the mission, goal, governance and culture of the institution. The governance design within a university must encourage and not stifle innovation.
7. Students should be seen as stakeholders in the process of reforming the learning process and learning environment. How learners spend time online informally, their personal interests and social networks, can inform how students need to learn in the formal setup. University need to factor these into their innovative pedagogical reforms.
8. The future of learning will be driven by machine learning and artificial intelligence (AI), and will largely be a confluence of technology, strategy and pedagogy. Methods of building these skills have to evolve to align with the connected world. The use of virtual reality (VR) and of gaming technology was mentioned by some speakers as a new way of teaching and reaching the students.

9. Different approaches to teaching and learning in the digital era were shared during the meeting. These approaches and methodologies display a new paradigm in teaching and learning compared to the traditional way that most universities are accustomed to. Most approaches focus on integrating knowledge and skills with design thinking, and creating a learner-centered learning environment. The learning models in the digital era emphasize competencies such as problem solving and innovation. The use of data analytics to provide personalized learning pathways for students was pointed out. Effective learning needs to identify different categories of students, and to design learning that suits each category.
10. Universities face the dilemma of opposing forces as they enter the digital era. For example:
    - A scalability model for universities might on the one hand help on issues of diversity and inclusivity, but may on the other hand create a winner-takes-all environment.
    - Openness characterized by big data and its online availability has to content with the challenge of data firewalling and the wrong use of data to manipulate opinion.
11. Universities are urged to collaborate closely with the private sector to ensure that graduates coming out of universities are fit for purpose and have the skills and competencies that industry wants. This collaboration must be built on trust and continuous communication between the key stakeholders of universities, industry and Government.
12. The digital transformation risks widening the gap between developed and developing countries. While there are a number of commonalities, there are also huge differences when it comes to resources, infrastructure, governance models etc. Universities from the developed countries should work with and support counterpart universities in developing countries.
13. At the same time, the digital revolution also provides an opportunity for disrupting traditional educational systems in developing countries and accelerate their educational reforms.
14. Universities are the centres for AI research and innovation. As such, they should lead in product design and application before the products are taken to market.

15. Industry needs to have an understanding of what universities are doing in the area of research in AI. Industry should join academic Industry Engagement Programs (IEPs) to have direct access to some of the world's top emerging experts in AI.
16. Digital technologies are becoming more ubiquitous especially in disciplines such as health and medicine. They therefore need to be leveraged in interdisciplinary teaching.
17. The meeting concluded with a number of suggestions on how ITU and academic institutions could establish mutually beneficial partnerships. These include:
    a. ITU should play an active role in fostering collaboration and building trust between academia, industry and policymakers in Governments. ITU could establish an online platform where all academic members could have a presence and network among each other.
    b. ITU and academia could collaborate in the development and delivery of training in the field of emerging technologies, for example ITU-certified curricula.
    c. ITU could set up research think tanks bringing together academics from all over the world to carry out cutting edge research in the field of digital development (beyond the technical aspects) and to develop ethical guidelines on the development and applications of digital technologies.