

## Digital Economy and Distance Learning

Eshqobilov Axmad Javliyevich

Assistant of the Department of Agribusiness, Accounting and Digital Technologies,  
Termiz Institute of Agrotechnologies and Innovative Development

### ABSTRACT

Education is changing because the digital economy is shifting the skills and talents needed to lead a successful life and foster personal well-being. Talent gaps persist and are deepening around computer science and creativity. Learners need to be cognitively adaptive, and able to constantly learn new things and apply old knowledge to new contexts. Lifelong learning is the new normal. Three major shifts in education are identified: (1) changes in the funding of education; (2) changes in the duration of learning; and (3) changes in how we learn. Collaborations between industry, government, and education institutions will be the hallmark of education in the digital economy.

**KEYWORDS:** *development, economy, commerce, culture*

The digital economy is changing what we need to be able to do cognitively to lead successful lives and pursue well-being. Artificial intelligence, the Internet of Things, 3D printing, virtual reality, distributed ledger technology, biotechnology, and robotics are combining to change how we work and live.<sup>1</sup> Talent gaps persist and are deepening around computer science and creativity. The gig economy is changing employment and benefits structures around the globe as platforms enable people to share resources. Employment disruption is predicted to be considerable, though the pace of technological uptake, the nature of the welfare state, and the demographics of a given country will help determine the scale and duration of unemployment due to the automation of human work (OECD, 2018).<sup>2</sup> There will be new tasks and competencies in high demand. Higher education, in particular, will play a key role, in reskilling, upskilling, and educating the global labor force of the Fourth Industrial Revolution.

All that is technologically possible still may not be politically or economically rational or feasible.<sup>3</sup> This is why we are likely to see significant initial job displacement for the digital economy, regardless of what education institutions can do to upskill, reskill, and educate talent. The pace of change is such that there is likely to be considerable unemployment in the near term. Education institutions will be able to help individuals manage a transition to a new reality.

What is needed to thrive in the digital economy involves cognitive competencies matched with technological skills. The competencies are a shifting set of skills. Learners need to be adaptive, cognitively curious, and able to constantly learn new things and apply old knowledge to new contexts. The key to employability is cognitive adaptability. Employees will need to learn and unlearn constantly. Education systems need to prepare learners, both adult and youth learners: what I call, *learning resilience*. Learning resilience is about the ability to adapt with ease to new truths in your knowledge, repeatedly. It is about being accepting of your

prior knowledge being rendered irrelevant under new circumstances.

The current global education landscape was designed to meet the needs of the Industrial Revolution that emerged in the 1850s with the mechanization of physical labor. There has long been a growing divide between graduate skills and employer expectations. For universities and high schools alike, there is a battle for time between soft skills and hard skills—or social-emotional competencies versus technical skills. There is resistance from academics, who see themselves as content knowledge experts who develop and verify knowledge, to teach vocational skills. Yet in countries where higher education is not subsidized by the government, the burden of debt students take on in order to be employed cannot be serviced or justified by content knowledge alone. The change is that universities are no longer the sole purveyors of information. Information is everywhere. It is what you do with information that matters. Furthermore, the jobs that are available in the digital age are shifting so quickly that technical degrees cannot guarantee preparation for the future of work. This is why learning resilience is essential.

Primary, secondary, and tertiary education need to shift their focus to *how* to learn, not *what* to learn. And recruiters need to shift their metrics of talent to acknowledge soft skills and resilience

This is not to say that education as we know it is obsolete; indeed, it is essential to inclusive economic growth. What do you want a formal education to deliver to your future employee? Many jobs require technical skills and that content has to be learned. You cannot do coding without calculus. You cannot model economic outcomes without sound econometrics skills. And you cannot conduct research in the social sciences without sound information literacy. These competencies have to be learned in order to perform the associated trade. Content is still essential. But it is insufficient. Primary, secondary, and tertiary education need to shift their focus to *how* to learn, not *what* to learn. And recruiters need to shift their metrics of talent to acknowledge soft skills, and resilience. Content knowledge is still essential, but it is what you do with that information that really matters.

Competencies are the current focus of good education, however, and the mainstream literature in this area is leading the charge. The current books coming out on what education should be in the digital economy advocate for a specific set of skills being developed by universities. Joseph Aoun, the president of Northeastern University in Boston, famously calls for creativity, entrepreneurship, and numeracy in *Robot-Proof* (Aoun, 2017). Angela Duckworth (2016) calls for grit in *Grit: The Power of Passion and Perseverance*. In one of the most important books on this

issue, Erik Brynjolfsson and Andrew McAfee, in *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies* (2014), write that talent needs enhanced capacities in the areas of ideation, large-frame pattern recognition, and complex communication. And for the very high-end employee, Cynthia Solomon and Xiao Xiao have edited a 2019 volume with MIT Press, *Inventive Minds, Marvin Minsky on Education*, musing on how to develop inventive thinkers who can create. All of these publications offer important insights; however, none of them identifies the most important ingredient, though they are useful predictors and elements of leading a successful life in the digital economy and address ways in which education institutions can help get graduates there.

This has always been the approach of liberal arts Colleges. Liberal arts colleges, such as Ashoka University in India, NYU Abu Dhabi in the United Arab Emirates, Williams College in the United States, and Yale-NUS in Singapore, are developing truly global talent. They do this through small enrolment sizes per class, where undergraduates have access to the world's best researchers, and apply authentic learning with student-centered pedagogy. Real effort is made to integrate the messaging of global movements, such as the Sustainable Development Goals (SDGs), and this is made tangible through innovative curriculum and experiential learning in the field. These learning environments are designed and developed to help learners be comfortable with ambiguity, and to transfer knowledge from one context to another and apply it in new ways.

These colleges graduate a small number of students annually relative to the global labor supply. The liberal arts model is too expensive per pupil to scale up to address the anticipated hundreds of millions of people who need to be reskilled over the next decade or two. However, the liberal arts model, of interdisciplinary understandings of humanity's challenges, remains an excellent pool from which to draw on future-ready talent for the digital economy because graduates are taught to inquire, analyze, and create regardless of discipline, and to use a global outlook for addressing problems. These students are able to apply science, arts, and social science to strategic questions while developing social skills in an international setting. They have numeracy, digital literacy,

and emotional intelligence. This is the thinker of the Fourth Industrial Revolution that we seek. The challenge is to scale its best attributes.

Small classroom sizes are costly, but essential to students receiving quality feedback and access to the professor or high-school teacher

The "how" of developing these skills is expensive. There is simply not enough financial support currently being spent on education and reskilling in the public sector in most countries today. The scale of the talent gaps means industry needs to collaborate with government and higher education to implement a skill shift in the global labor population. Small classroom sizes are costly, but essential to students receiving quality feedback and access to the professor or high-school teacher. Experiential learning is well evidenced to bring students to authentic learning environments that allow them to apply content in the real world, aiding retention of material as well. This, combined with internships, enables students to get exposure to how the content of a course or major will play out in a given workplace or type of industry. The combination of these things allows a student to reach a higher order thinking that results in the ability to problem-solve and create new knowledge. Regardless of what area a student chooses to study in, they must be able to write, to communicate ideas clearly (both quantitatively and qualitatively), and to understand how knowledge is created. Inside the classroom, having cutting-edge researchers who bring their work into the classroom helps students understand how knowledge is actually created. This is essential in the age of fake news, augmented imagery, big data, and algorithm bias.

#### Literature

- [1] <https://review.uz/en/post/obzor-centra-ekonomicheskix-issledovaniy-i-reform-razvitiy-cifrovoy-ekonomiki-v-uzbekistane-za-chetre-goda>
- [2] [www.economyofuzbekistan.uz](http://www.economyofuzbekistan.uz)
- [3] Kobil Ruziev (2021) Uzbekistan's Development Experiment: An Assessment of Karimov's Economic Legacy, *Europe-Asia Studies*, 73:7, 1303-1329, DOI: 10.1080/09668136.2021.1919602