

Editorial

Digital Transformation in Higher Education Institutions in a Limited-resource Setting: A Luxury or a Must Despite Challenges?

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Although Digital Transformation (DT) increases productivity, value creation, and social welfare [1] some still view it as a luxury that cannot be achieved in limited-resource settings. This editorial considers how the value of DT is increased when geopolitics, economic, and pandemic crises are combined with digitalization, particularly in a resource-limited setting.

Although DT is a hot topic right now, the benefits of digital products, services, and channels for academic ecosystems have been widely recognized since the 1990s. However, there is currently no commonly accepted definition for the term DT [2].

Digital transformation is broadly used in business models. It is defined as “a process in which digital technologies cause disruptions, prompting strategic reactions from firms seeking to shift their value creation paths while managing structural changes and organizational constraints that influence the positive and negative results of this process” [2]. Higher education institutions can be considered a business model; hence the exact definition is applied.

In light of the recent innovation in products, processes, and business models, coupled with the unprecedented impact of COVID-19, higher educational approaches to entrepreneurship are being reshaped in a way that emphasizes the social and local dimensions of innovation. In addition, over the last decade, digital technologies have enabled people to access big and open data, the Internet of Things, and crowdsourcing platforms. As a result, higher education institutions are encouraged to collaborate, create, and share knowledge and resources with the outside world using the new Information and Communication Technology (ICT) tools. More efficient, sustainable, and fair uses of the new or existing ICT tools will ultimately lead to innovation [3].

There are two global trends that seem particularly relevant at the moment: the UN's Sustainable Development Goals (SDGs) initiative, launched in 2015, and the Education

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for Sustainable Development as a critical enabler of all SDGs. In addition, SDG 4 on quality education, which calls for inclusive and equitable quality education and lifelong learning for everyone, combines both approaches [3].

Higher education institutions must adapt their existing teaching and learning strategies to survive and maintain their competitive position in the long run. Higher education leaders have highlighted four principal aims. These objectives include improving the learning environment for students, increasing operational efficiency, increasing computer capacity for cutting-edge research, and stimulating educational innovation [4]. Higher education institutions are primarily tasked with strengthening students' employability skills for a specific vocation to prepare them to survive in the labor market for the next 30 or 40 years. As a result, higher education institutions must prioritize the development of students' self-efficacy and adaptive skills [5]; digital transformation can assist with learning contextualization. Courses and modules, as well as all learning environments, must focus on such competencies. If we can accomplish this, we will begin to revolutionize education by building concrete visualizations of "critical thinking in a field" and enhancing the ongoing learning there [4].

In response to COVID-19, new methods have emerged for conducting education and business. These include hybrid or pure e-learning and e-work, which require an active digital transformation in the workplace [6]. Moreover, when a firm has DT, it has lower cost, better operating efficiency, and better innovation success leading to better performance [7]. Higher education institutions in low- and middle-income countries (LMICs) need to reduce their costs, operate efficiently, and innovate to reach a better performance. These objectives can be fulfilled through efficient DT. Moreover, learning or working from home through DT can save time and effort and reduce transportation costs, especially in areas with a wide geographical distribution of employees, students, or clients. Furthermore, unstable political situations or lack of safety can be overcome by DT.

Nevertheless, DT is not just about technology. Recent research has increased our understanding of specific aspects of the DT phenomenon. In line with previous findings on IT-enabled transformation, research has shown that technology is only one piece of the intricate puzzle that must be addressed for businesses to remain competitive in the digital age [2].

Companies invest millions into "digital transformation" initiatives, but the results are often not worth it. That is because they focus on technology rather than driving change. They should not just align technology investments with professional goals, but also lean on internal knowledge rather than outside consultants, acknowledging job losses

that may be felt, and using insider knowledge before outside consultants. Moreover, they should understand how changes will affect customer experience and use process methods borrowed from the tech world to facilitate change (8).

Still, many challenges may face the implication of DT in higher education, particularly in LMICs, including prioritization, decentralized decision-making, human resistance to change, gaps in digital tech talent, and a narrow view of return on investment (ROI) [4].

Despite all challenges, DT remains a must. Higher education institutes with limited resources have to make intelligent collaborations and successful innovations to forge their path to the future.

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