Chapter 8
Digital Technology Integration in Different Educational Fields: Design, Architecture, Tourism, and Business Engineering

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ABSTRACT

The perception of learning and teaching in the educational universities have been affected by digital technology. With the industrial concern over sustainability of resources and efficiency in operation in a digital environment, the need arises to implement digital technologies in the educational setting so that digital competence of the future workforce can be elevated, and better industrial output-based education is provided. In this chapter, an attempt has been made to describe and discuss the current scenario of digital integration in higher educational disciplines. The issues concerning this integration include teacher inability to incorporate digital thinking into student learning, student non-adaptability to modern technologies, unreliability of digital educational resources, and lack of infrastructure/power supply in most of the educational institutes. An active digital learning approach in students and extensive training sessions for digital utilization excellence in teachers and educators are a few ways to solve issues regarding the above-mentioned integration.

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INTRODUCTION

Digital technologies have emerged as one of the most versatile achievements of mankind which today finds its use in a number of industrial fields and government departments, requiring more skilled manpower. Digital technology integration into the education system has enhanced the learning process and the skills to solve complex tasks of the students for a better future workforce in the modern smart industries. The industries today are driven by the innovations and skills of work personnel who are expected to think fast, innovate, find solution and build optimized product employing digital devices and tools for a smart information exchange, design and co-ordination of departments. A number of research papers suggest integration of digital technologies in the pedagogical field (Selwyn, 2007) so that the efficiency of learning of the students and their skill developments in adapting to new technologies for fulfilling ever changing demands in market enhances. With the higher mismatch in the skill level of the industry requirement and the workforce currently serving in terms of quick adaptation to technology and innovation at a complex level of understanding of processes and phenomenon in a digitally inspired environment, need arises to incorporate computer technology in the higher educational format.

Students go through a critical transformational phase in their transition to universities including high expectation, excitement and motivation. Policy makers have suggested plans for the higher education sectors to implement competence level of the students towards their own well being, active employment, active citizen and entrepreneurship skills. This transitional period to universities can be hard for the students with disabilities with many of them even quitting to enrol their names for higher studies (Tinto, 1993; Kochhar-Bryant et al., 2009). Even if few survive to pursue their dreams, they got to stick to one place with textbook based learning. Digital technology integrated learning can have major contribution towards facilitating students with disabilities (Pacheco et al., 2018) in learning their tasks not only by textbook learning but also by participating in various events and projects employing computer technology as key tool.

Information and communication technology (ICT) including digital technology helps creating a self sustaining learning environment for students where information on any concerned topic or concept can be easily accessed by students without much effort just by browsing the internet and then visualizing using different digital tools. This incorporation of ICT technology enables the concept of personalized learning or the ability to self apply ICT in their learning activity, to flourish in universities and schools, the effectiveness of which can be felt by the discussion provided by (Schmid & Petko, 2019).
Student Personality Characteristics Differ in MOOCs Versus Blended-Learning University Courses
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