Chapter 12
Importance and Challenges of Online Learning in Higher Educational Institutions During COVID-19 in Uttarakhand State of India

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EXECUTIVE SUMMARY

This chapter assesses the importance and challenges of digital learning in HEIs during COVID-19 in Uttarakhand. It conducted an online survey of 500 students studying in various programmes of HEIs. Quantitative and qualitative data are collected from the students. A total of 396 respondents recorded their responses on various questions related to study. The descriptive results claimed that the skills and learning capacity of most of the students were adversely affected due to online teaching during COVID-19 in HEIs. Teachers and students have faced several challenges to accomplish their objectives related to teaching and learning in online mode. Content-based analysis was applied to explore the impact of digital platforms on skills and learning of students. It inferred that digital platforms possess a negative impact on HEIs. HEIs, therefore, should create appropriate ICT infrastructure and e-platform to increase skills of the students and teachers during online learning.

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1. INTRODUCTION

The higher educational institutions (HEIs) are the important drivers to increase social and economic development in multiple ways (Tadesse & Muluye, 2020; Singh & Kumar, 2022). HEIs are the knowledge and innovative creator organizations that enhance the skills and scientific understanding of the students and make them socially and economically active. HEIs also create an appropriate ecosystem where students are prepared to face the real challenges pertaining to the social and economic problems more efficiently. HEIs also help to generate several innovative ideas in the brain of the students and teachers, thereby they can be economically and socially productive (Ramane et al., 2021). Consequently, the future of the coming generation greatly depends on students' skills and knowledge received through education imparted in various disciplines or programs in HEIs. The HEIs also help to encourage science & technological development that promotes innovation, knowledge, technology know-how and technical devices (Singh & Kumar, 2022). Manufacturing sector creates and discovers new products using the innovation and technology developed by the students in HEIs (Singh & Ashraf, 2019). Consequently, manufacturing firms meet the requirement of new goods and services in the society (Singh et al., 2019). Thereupon, HEIs have a spillover effect on industrial and manufacturing growth (Singh et al., 2019).

HEIs also create a bridge between research organizations and the manufacturing sector (Singh & Kumar, 2022). Manufacturing sector can buy the advanced and innovative technologies from the HEIs and has the greater possibilities to produce new products to satisfy the current needs of the consumers (Singh et al., 2020). Hence, these technologies are also being implemented by manufacturing firms to increase their production, efficiency of inputs and productivity (Singh et al., 2019). Hence, HEIs have a positive contribution to increase the technical and economic efficiencies of the manufacturing and industrial sector. Moreover, the manufacturing sector hires the skilled workforce (i.e., engineers, scientists, designers, etc.) from HEIs (Singh et al., 2019). The growth of the manufacturing sector helps to increase innovation in the market, competition across firms, jobs for workers and infrastructural and industrial development (Singh & Jyoti, 2020). The HEIs also create a favorable ecosystem to increase industrial development and entrepreneurial activities (Singh & Kumar, 2022). Further, the growth of other sectors also depends on advanced technologies developed and discovered by HEIs. For instance, agricultural technologies, appropriate technology, digital technologies and artificial intelligence are beneficial to increase production of the agricultural sector (Ashraf & Singh, 2022; Jyoti et al., 2023). Many studies also provided the significance of digital technology in HEIs, agricultural sector, business activities, financial sector etc. (Singh & Jyoti, 2023c).

Information and communication technology (ICT) is a vital driver of digitalization and it also creates a favorable ecosystem of digital infrastructure (Sreeraj et al., 2021; Singh & Jyoti, 2023 a,b). Online education highly depends on the effectiveness of ICT and appropriate digital platforms in HEIs (Dayal, 2023). While effective implementation of ICT needs extensive training to the students and teachers in HEIs. However, extensive movement of digitalization can create disturbance in the education, health and commerce sector due to many reasons (Kampa, 2023). Despite that, most economic activities are transferring from offline mode to online mode due to application of digital processes across countries (Jyoti & Singh, 2023). Hence, most countries are moving towards the digital economy as increasing their dependency on technologies developed by either HEIs or manufacturing industries (Singh & Jyoti, 2023a). Financial stability and inclusion have already improved due to use of various digital technologies that are invented by HEIs (Singh & Jyoti, 2023c). Thus, HEIs are working as a catalyst to increase the transformation of global countries towards a digital or green economy. The HEIs are prime originators