

## Digital Teaching, Learning and Assessment: The Way Forward, edited by Upasana Gitanjali Singh, Chenicheri Sid Nair, and Susana Gonçalves (Chandos Publishing, 2023)

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[Aller au sommaire du numéro](#)

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## Book Review: *Digital Teaching, Learning and Assessment: The Way Forward*

**Editors:** Upasana Gitanjali Singh, Chenicheri Sid Nair, and Susana Gonçalves (Chandos Publishing, 2023, 302 pages) ISBN 978-0-323-95500-3

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The pandemic has enabled digital learning to take a prominent place in the educational ecosystem. Educational institutions across the globe have adopted a digital environment for carrying out teaching and learning during COVID-19. The level of such academic experience has varied from institution to institution. Teachers and researchers have been documenting their experiences and insights to learn and decide the shape of the future educational ecosystem vis-à-vis the role of information and communications technology. This book is an effort that not only revisits the challenges and difficulties faced by the higher education system but also leaves us with the thought of building a future-ready ecosystem capable of both meeting the educational requirements of the 21<sup>st</sup> century and overcoming any physical barriers between the teacher and the taught.

Through 14 chapters, the book presents a glimpse into the educational experiences acquired during the COVID-19 pandemic and focuses on the digital teaching and learning ecosystems that evolved in ten countries: Australia, Denmark, India, Italy, New Zealand, Oman, South Africa, Sweden, United States of America, and Zimbabwe. The individual chapters reflect on their experiences and explore possibilities for the higher education system to meet future challenges and requirements hitherto unknown.

Chapter 1, “Supporting virtual student research opportunities: The Holistic Foundry Undergraduate Engaged Learners program experience,” reflects on the development and implementation of the Holistic Foundry Undergraduate Engaged Learners (FUEL) program—a fully virtual research and monitoring program for undergraduate students in the United States. The program follows a two-pronged approach: virtual and hybrid. The authors present evidence of the effectiveness of FUEL and put forth best practices from the program. The experiment is replicable in a normal situation. Chapter 2, “Digital education for a resilient new normal using artificial intelligence—Applications, challenges, and way forward,” focuses on different technologies used in the digital education ecosystem. These technologies are the Internet of Things, artificial intelligence, machine learning, deep learning, and virtual reality. A paradigm shift has taken place which has completely changed the form of higher education. These technologies influence various aspects of teaching and learning, monitoring, feedback, and assessment in ways different than ever before. The chapter presents a case for equitable use of these technologies coupled with strengths, weaknesses, challenges, and opportunities. The authors refer to some of the Government of India’s digital initiatives such as [eVidya](#), [DIKSHA](#), [SWAYAM](#), [ePathshala](#), etc.

In Chapter 3, “Endured understanding of learning in online assessments: COVID-19 pandemic and beyond,” the author presents a case of a sustained understanding of learning during the pandemic. It is important to design a sustainable digital learning ecosystem for the future. The digital learning system throws open a plethora of opportunities for online assessment. Moreover, the digital platform provides an opportunity for learners to engage in sustained understanding. The author emphasizes the need for a multi-dimensional instructional design as a response to the requirements of the post COVID-19 era. Taking technology as a tool, the online learning domain should consider the learning experiences of students as the availability of digital resources and their capacity are crucial for the effectiveness of the digital ecosystem. Chapter 4, “Transformative course design practices to develop inclusive online world language teacher education environments from a critical digital pedagogy perspective”, advocates for the use of design thinking to understand user needs and design a sustainable and effective learning ecosystem. The author uses the term “design justice” to describe an inclusive language teacher education program for an online environment. “Design justice focuses on the ways that race, class, gender, and disability structure both information asymmetries and variance in user product needs” (Costanza-Chock, 2020, p.78).

Chapter 5, “New teaching and learning strategies during the COVID-19 pandemic: Implications for the new normal,” presents the reflections of the authors on the swift transition from conventional teaching to remote teaching during the first COVID-19 wave in New Zealand. This not only resulted in the reshaping of instructional delivery mechanisms at the institutional level but also necessitated a major twist in assessment strategies. The COVID-19 pandemic created an urgent requirement to understand systemic needs and their potential and follow an integrated approach for tweaking the processes of instructional delivery, monitoring, feedback, and assessment with the intervention of digital technologies. This has significant implications for the design and delivery of a future-ready higher education system. In Chapter 6, “Birley Place: A digital community to enhance student learning,” the authors focus on a digital community, Birley Place, created to enrich the learning experiences of students of, especially, health and social care programs in Manchester, United Kingdom. This is an online digital community meant for collaborative skill development at personal and professional levels. The online participants can digitally explore the community map and visit residents. This way, they can interact and understand the indicators that impact their socioeconomic life. The chapter presents a thematic analysis of the data collected from the community based on authentic place-based learning, digital place-based learning, opportunities for collaboration, and flexibility and convenience. The results show amazing benefits to the students in the form of flexibility and accessibility to the virtual environment for learning.

Chapter 7, “Assessment: Higher education institutions’ innovative online assessment methods beyond the era of the COVID-19 pandemic,” presents a critical appraisal of the methods of teaching, learning, and assessment adopted by educational institutions. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method was adopted for this study. The authors summed up the discussion under three themes: learning and assessment in higher education institutions; innovative formative assessment adopted in higher education institutions during and post the COVID-19 pandemic; and summative assessments currently adopted and their future use in higher education institutions. The authors advocate for extensive use of technology for implementing different forms of assessment. Chapter 8, “Formative assessment in hybrid learning environments,” presents a framework for the implementation of online formative assessment. The framework for designing an online formative assessment system also

supports a self-regulatory mechanism for a hybrid learning environment. This framework can facilitate the implementation of innovative teaching and learning strategies resulting in the development of an effective online formative assessment mechanism.

Chapter 9, “Student experience of online exams in professional programs: Current issues and future trends,” examines innovative approaches to online examination. It investigates the benefits of the online examination system while studying issues and challenges. In a nutshell, the chapter presents the perceptions and experiences of students using different online assessment strategies. Three types of online examinations, i.e., non-invigilated, Zoom invigilated, and live invigilated, were used in the study. Based on the findings, the authors make recommendations on the long-term sustainability and viability of online assessment systems. Chapter 10, “E-textbook pedagogy in teacher education beyond the COVID-19 era,” investigates the potential benefits of e-textbooks in digital learning environments as compared to print textbooks in the face-to-face environment. In the digital environment, e-textbooks are easy to integrate with teaching and learning activities. The whole environment becomes interactive, promising aspects of personalized learning. The study used the Technology Acceptance Model to make sense of the experiences of participants. The findings revealed that participants were not very excited to replace their reading material with e-books. Factors such as Internet self-efficacy, perceived usefulness, facilitating conditions, and cost had a great impact on migration to e-textbooks.

In Chapter 11, “The death of the massification of education and the birth of personalized learning in higher education,” the authors examine the online behavior and preferences of students during the unplanned emergency remote teaching and learning in South Africa. The findings helped the authors in developing a new approach to pedagogy, factoring in the principles of universal design for learning. Integration of active learning, personalized learning, and problem-based learning, among others, are part of the new approach. Chapter 12, “New online delivery methods beyond the era of the pandemic: Varied blended models to meet the COVID-19 challenges,” evaluates the effects of the new modalities of remote teaching developed to combat the challenges of the COVID-19 situation in Uzbekistan. The author advocates for using a blended learning model for the effective delivery of academic programs. Some changes at the policy level might be required to assimilate the half-and-half model of blended learning into the higher education ecosystem.

Chapter 13, “Digital teaching and learning: The future of ophthalmology education,” examines two new online teaching platforms developed to meet the challenges of the COVID-19 situation. The first was developed for students of pregraduate and undergraduate programs. This platform was developed to enhance the exposure of students to the different domains of ophthalmology. The second platform was “Virtual Ophthalmology Rotation”, developed for medical students to continue their ophthalmic education in virtual and hybrid environments. In Chapter 14, “Online education which connects: Adopting technology to support feminist pedagogy—A reflective case study,” the author (also one of the editors of the book) examines the gender digital divide in higher education in South Africa. She proposes a new model to bridge the divide and advocates adopting a blended mode of teaching, learning, and assessment in higher education. The creation of social spaces and trust-building among female students would enhance the effectiveness of the use of online platforms collaboratively, according to the author.

On the whole, the book provides deep insights into the challenges faced by the higher education system during the pandemic. It also provides a way to handle such disruptions in future and make the best use of

the situation in the interest of the higher education system and the student community. It is a must-read for educators, instructional designers, and educational administrators who are engaged in blended, hybrid, and virtual modes of learning and frequently face different technological challenges.

## Reference

Costanza-Chock, S. (2020). *Design justice: Community-led practices to build the worlds we need*. MIT Press.

