

How to cite:

Adeyanju, S., Ajilore, O., Ogunlalu, O., Onatunji, A., & Mogaji, E. (2022). Innovating in the face of the COVID-19 pandemic: Case studies from Nigerian universities. In J. S. McKeown, K. Bista, & R. Y. Chan (Eds.), *Global higher education during COVID-19: Policy, society, and technology* (pp. 104-120). STAR Scholars. <https://starscholars.org/product/global-education/>

8 Innovating in the Face of the COVID-19 Pandemic

Case Studies from Nigerian Universities

Samuel Adeyanju, Oluwatoyin Ajilore, Oluwafemi Ogunlalu, Alex Onatunji, and Emmanuel Mogaji

Abstract

This chapter critically examines the impacts of the coronavirus pandemic on tertiary education in Nigeria and highlights outstanding indigenous innovations within tertiary institutions prompted by the pandemic. The Coronavirus pandemic and the associated lockdown measures have led to the suspension of in-person instruction and learning in many higher education campuses globally. In Nigeria, school closure has negatively impacted the already fragile educational system, causing further hardships for students—who previously grappled with frequent school closures due to incessant strike actions and unrest. Unlike more developed climes—where schools have quickly transitioned to online teaching, poor infrastructural facilities (ICT and Internet) make online teaching and learning an arduous task for the hundreds of higher institutions present in Nigeria. We offer managerial implications relevant for University administrators and managers towards the development of a workable post-COVID-19 education strategy and response plan.

Keywords

E-learning; COVID-19; Innovation; Nigeria; School closure; Universities

Introduction

In the 20th century, three different pandemic outbreaks of influenza ravaged the world in 1918, 1957, and 1968 (Kilbourne, 2006). One of the worst was the 1918 influenza pandemic which claimed an estimated 50–100 million lives worldwide between 1918 and 1919 (de Almeida, 2013). On 11 March 2020, the World Health Organization (WHO) declared COVID-19 caused by the coronavirus as a global pandemic. The earliest cases were discovered in Wuhan, China, and reported to the WHO Country Office in China on 31 December 2019 (World Health Organisation—WHO, 2020a).

This new coronavirus seems to be very contagious and has swiftly spread globally. Reports show that the virus has spread to 191 countries and regions with more than 81 million confirmed cases and over 1.7 million deaths recorded as of 29 December 2020 (Johns Hopkins University, 2020). Furthermore, the pandemic has taken a toll on economies, public health, education, and the daily lives of people worldwide.

The severity of the COVID-19 pandemic has prompted local and global efforts to contain the spread of the virus. Governments worldwide have responded by instituting various public health, social and economic measures (Ihekweazu & Agogo, 2020; Porcher, 2020, Roser et al., 2020). These containment measures could be broadly grouped into social, public health, and economic measures. The social measures include border closures, suspension of international and domestic travels, business and school closures, cancellation of public events and gatherings, and stay-at-home restrictions. The public health measures include molecular testing, intensive surveillance, and case-finding. The economic measures include income support and debt relief (Porcher, 2020).

In Nigeria, the first case was confirmed on 27 February 2020 (Ihekweazu & Agogo, 2020). It has increased to over 86,576 reported cases and about 1,278 deaths as of 30 December 2020 (Nigeria Centre for Disease Control, 2020). To curb the spread, the Government introduced a travel restriction on both local (inter-state) and international travel (CNBC Africa, 2020). Before the initial lockdown announcement, all schools in Nigeria were closed by the Government on 19 March 2020 (Abdulsalam, 2020), leading to the suspension of in-person instruction and learning at all levels of education.

According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO), over 60% of the world's student population were unable to attend school due to school closures (Figure 8.1), representing 1.5 billion children and youth in 195 countries, from pre-primary to higher education as of mid-April 2020 (UNESCO, 2020a, 2020b). In Nigeria, almost 40 million learners have been affected by the nationwide school closures and over 4% (1,513,371 students) are in Higher Education Institutions (HEIs) (UNESCO, 2020b). This number is spread across all the higher education institutions in Nigeria. The closure has negatively impacted the already fragile educational system, causing further hardships for students—who previously grappled with frequent learning disruptions and school closures due to incessant strike actions and unrest (Wahab, 2018). Unlike in more developed climes—where schools have quickly transitioned to online teaching within weeks (Burke, 2020; Kedraka & Kaltsidis, 2020), the poor infrastructural facilities (ICT and Internet) make online teaching and learning an arduous task for the hundreds of HEIs in Nigeria (Adeoye et al., 2020).

In this chapter, we draw on survey questionnaire data, literature and news publications, our personal experience, and research in Nigeria to critically examine the impacts of the coronavirus pandemic on tertiary education in that country and highlight outstanding indigenous innovations within tertiary institutions prompted by the pandemic. We offer suggestions on the practical

School closures during the COVID-19 pandemic, Jul 31, 2020

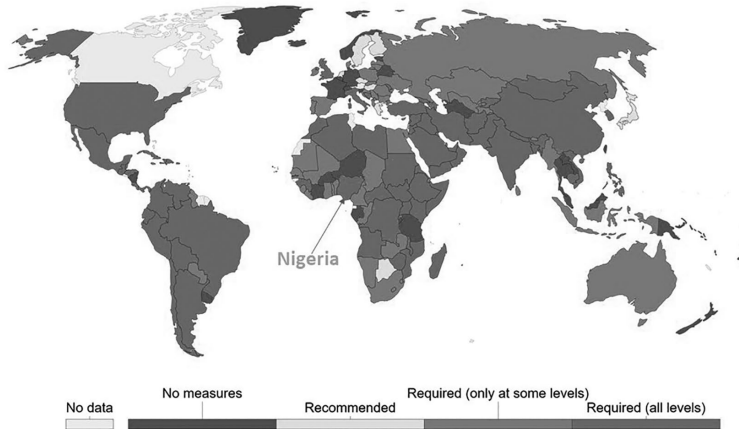
Our World
in Data

Figure 8.1 Map of global school closures during the Covid-19 pandemic as of 31 July 2020 (Roser et al., 2020). This map is licensed under a very permissive “Creative Commons” (CC) license: The CC-BY license is free to use. See here for the permission to use note <https://ourworldindata.org/how-to-use-our-world-in-data#how-is-our-work-copyrighted>

implications for the various stakeholders (the Federal Ministry of Education, Higher Education Institutions, Local and International Education NGOs, etc.) in the Nation’s tertiary education sector towards the development of a workable post-Covid-19 education strategy and response plan. The chapter begins with a literature review on the status of Higher Education in Nigeria and the impact of the Coronavirus Pandemic on Higher Education in that country. Followed by the methodology, result, and discussion sections, this chapter closes with important conclusions and identifies the main implications and recommendations for policy and practice.

Literature Review

The Status of Higher Education in Nigeria

Nigeria is the most populated nation in Africa, with over 200 million people (Akinpelu, 2020a). There are huge numbers of youths who aspire for higher education in the country. Every year, many prospective students write the Unified Tertiary and Matriculation Examinations (UTME) which is a requirement for securing admission into Nigeria University (Adeyanju et al., 2020). However, the demand for a university place is higher than the supply of universities due to the limited number and capacity of universities in Nigeria. In 2020, two-thirds (over 1.1 million) of the 2 million students who applied

for tertiary education were not admitted due to limited spaces available in all tertiary institutions in Nigeria (Akinpelu, 2020a).

Therefore, these market dynamics make university spots in Nigeria very competitive, especially in public universities mainly due to the lower tuition fees, reputation, and ranking of public universities (Adeyanju et al., 2020). The total population of students enrolled in Nigerian universities is over 2 million, which presents a considerable challenge for prospective students (Premium Times, 2020). There are 174 Universities in Nigeria, consisting of public universities that are supported by the Federal Government (43 universities), State Government (53 Universities), and privately owned (79) (Farinloye et al., 2020). The numbers of private universities in Nigeria are also increasing (from the first three established in 1999 and now 79 in 2019) (Farinloye et al., 2020). They address some of the challenges facing the Nigerian education system and for example, ensuring that their students finish their degree at the stipulated time (Olaleye et al., 2020).

Despite these opportunities, there are inherent challenges for higher education in Nigeria which questions its status in Africa and even worldwide. Nigeria has a much bigger education system in Africa, but unfortunately, there are concerns about its overall quality, unlike higher education in South Africa and Egypt (Ndofirepi et al., 2020). Nigeria has four universities in the overall Times Higher Education World University Rankings. The highest-ranking university in Nigeria is Covenant University (a private university), ranked at number 401–500 (Times Higher Education, 2020).

The Nigerian universities are underfunded which is reflected in the quality of facilities for student learning, research output, and the job prospect of the students. Nigeria allocated 6.7% of its 2020 budget to education, compared to its 2019 budget which had 7.05%, (Amoo, 2019). This reduction highlights funding problems for Nigeria's education sector especially as it is lower than the 15–20% government's budget recommendations by UNESCO (UNESCO, 2015).

There have been many disruptions to academic calendars because of industrial action by the staff protesting for funding for their Universities. Since 1999 when Nigeria moved to democratic rule, the Academic Staff Union of Universities (ASUU) has been on strike for over 15 times for a cumulative period of three years (Wahab, 2018). For instance, ASUU members are currently on a nationwide strike (Adedigba, 2020). This funding issue is however not much of a problem for the private university as their struggle is more on maintaining their reputation, facilities and accreditation process, posing some limitations on the courses they offer (most private universities offers classroom-based, easy to teach courses and less of medicine or engineering which requires more facilities) (Olaleye et al., 2020).

With these disruptions to the academic calendar, the stiff competition for University placement, and the poor perception about the Nigerian education system, many Nigerian students seek quality higher education abroad. According to UNESCO Global Flow of Tertiary-Level Students (UNESCO, 2020c), the United Kingdom, United States of America, Malaysia, Canada,

and Ghana were the top destinations for Nigerian students. In 2018, 12, 642 students went to the UK while 6,506 studied in Ghana. This educational tourism costs Nigeria a considerable amount of money as data from the Institute of International Education shows that Nigerian students spend \$514 million to study in the United States (Kazeem, 2019).

Impact of Coronavirus Pandemic on Higher Education in Nigeria

The impact of the COVID-19 on higher education in Nigeria cannot be overemphasized, as total suspension of on-campus academic activities has led to the disruption of various activities such as lectures, exams, research, thesis defenses, and graduation ceremonies (Obiakor & Adeniran, 2020; Ogunode, 2020). Since the coronavirus outbreak was reported in Nigeria and an accompanying lockdown in most of the Nation's biggest states, there has been a progressive crippling of key economic activities across all sectors (Mogaji, 2020). The educational sector—a very vital aspect of nation-building is not left out of this quagmire. Students across the board—from elementary schools to tertiary institutions have been on lockdown since 19 March with no structured alternatives to cushion the effects of the pandemic on their education (Abdulsalam, 2020; Ogundipe et al., 2020). After frequent statements released during the daily briefings of the Presidential Task Force on COVID-19 to debunk series of fake news on school resumption spreading across social media (Edeh, 2020), the Federal Government gave a list of conditions for reopening schools after calls for reopening from various stakeholder groups (Abdulsalam, 2020).

While acknowledging that the pandemic is affecting higher education on a global scale, universities in emerging countries like Nigeria have additional challenges to deal with. Generally, access to stable electricity, high quality, and affordable Internet facilities are some of the major infrastructural deficits that Nigerians have suffered for decades. The significance of these facilities (especially electricity and Internet) to educational services has gained prominence due to the lockdown and school closures occasioned by the COVID-19 pandemic (Nwaogwugwu, 2020). To provide some context, nearly 60% of Nigeria's population (186 Million) had access to electricity in 2015 (according to the World Bank), which is 86% of its urban population and 41% of its rural population (Sustainable Energy for All—SE4ALL, 2020). However, 57% of the national population experience a blackout every day (Nwaogwugwu, 2020). Internet penetration in Nigeria stood at 42% (85.49 million of the total population) in January 2020. The average speed of mobile Internet connections in Nigeria is 15.32 Mbps compared to the United Kingdom and Australia with 35.57 Mbps and 67.66 Mbps respectively (Kemp, 2020). On average, across Internet providers, one gigabyte of data costs N1,000 Naira (\$USD 2.62) which is equivalent to spending nearly 3% of the national minimum wage (N30,000 Naira - \$USD 78.70) on monthly Internet access (Ekenimoh, 2019). Electricity and Internet facilities are

essential for learning, teaching, and research. Students use the Internet for research, widen the scope of reading, tackle assignments, and prepare for examinations using a combination of self and peer learning (Apuke & Iyendo, 2018; Nwaogwugwu, 2020). In addition, without a regular power supply, technological gadgets and Internet facilities are useless, since users will run out of power/battery within hours (Apuke & Iyendo, 2018).

Similarly, many Nigerian HEIs are not prepared to adopt e-learning strategies except for some privately-owned institutions (Adeoye et al., 2020). Meanwhile, the unavailability of personal computers and poor Internet connectivity poses a challenge to online teaching and learning in Nigeria. Consequently, it is challenging to teach students in a style that is consistent with modern-day technology or carry out cutting-edge scientific research (Nwaogwugwu, 2020). Further, many lecturers (especially those in the uppermost cadre) do not have adequate literacy in computer use, which poses a fundamental challenge to running academic instructions remotely. All these summed up frustrate efforts to meaningful transition to online education (Idowu et al., 2017).

The coronavirus pandemic ravaging the world continues to place a threat to the dreams of higher education students. One of the most significant effects in Nigeria is the complete disruption of the universities' academic calendars. Unlike in developed countries with fixed academic calendars, Nigerian universities have an unstable calendar reflected in universities' varying resumption times across the country (Ejiogu & Sule, 2012). This is due to failure to maintain the same calendar over the years occasioned by industrial strikes, inadequate planning, and security concerns in certain parts of the Nation (Wahab, 2018). The advent of coronavirus has worsened the complexities involved and university administrators have to grapple with major calendar changes in the post-Covid world.

Students must undertake a three to six months internship in many Nigerian universities as part of their degree requirements. For many of these students, the pandemic started just before the resumption period for their internships. While some with internship offers were still rounding up semester exams, others were in the process of submitting applications for placement. The pandemic has largely halted this process as university administrators have little clarity on the new academic calendar. On the other hand, private establishments are also reporting job freezes and retrenchment (Adesoji, 2020). In a 2020 report by the National Bureau of Statistics, four out of every ten Nigerians have lost their jobs due to the pandemic (Akinpelu, 2020b). This is a significant threat to students looking for companies to fulfill their internship requirements and a bigger blow to fresh graduates looking for jobs. University staff are not exempted from job losses, a private university—American University of Nigeria (AUN), located in the city of Yola laid off 400 staff members as part of its restructuring for sustainability (Alao, 2020). There have been many burdens and mental toll that the pandemic has placed on the University community—leaving much anxiety about degree completion, job security, and return to normalcy (Sahu, 2020).

Method

This research extensively consulted and analyzed various news reports, university documents, and recent research publications to compile the various innovative products rolled out by Nigerian universities in the wake of the COVID-19 pandemic. To complement the findings from journal articles, university websites, and online news outlets, we carried out a survey among the university community (student and staff) to know their awareness of the innovative efforts of the universities in the country.

In July 2020, students and staff from any university in Nigeria were recruited through various online media and known contacts to participate in an online survey. The online media used for recruiting respondents include WhatsApp, Twitter, Facebook. The categories of university staff recruited included lecturers, technicians, lab attendants, non-academic staff. Google Forms survey platform was used for collecting the data for this research. At the end of the survey, 105 respondents comprising 82 students and 23 university staff members participated in the survey.

For this study, we adapted the definition of “innovation” from Brennan et al. (2014),

Innovation is a new or significantly improved product, process, organizational method or an organization itself developed by or having a significant impact on the activities of a higher education institution, other higher education stakeholders and the larger society.

Results

Items Produced by Nigerian Universities in Response to COVID-19 Pandemic

Based on the analysis of various news reports, university documents, and recent research publications, the various innovative products rolled out by universities are categorized in Table 8.1.

We identified four major innovations:

1. Locally made liquid soap and hand sanitizer (Durotoye et al., 2020; Standards Organisation of Nigeria – SON, 2020)
2. Dual-purpose hand sanitizer machine (Dada, 2020)
3. COVID-19 Self-Test App (Onaleye, 2020)
4. Ventilator (Bayero University Kano, 2020; Observer Times, 2020; SON, 2020)

Innovative Products from the Universities According to the Survey Respondents

Figure 8.2 shows out of 105 participants, 32% of innovations are hand sanitizer products, 22% of innovations are hand washing machine, 13% were

Table 8.1 An overview of items produced by Nigerian universities in response to the Covid-19 pandemic

<i>S/N</i>	<i>Item</i>	<i>Description (features and uniqueness)</i>	<i>Manufactured by</i>
1.	Production of liquid soap and hand sanitizer	<ul style="list-style-type: none"> The production made use of local products and produced at a cheaper cost. 	University of Ilorin (Durotoye et al., 2020) University of Benin - UNIBEN (SON, 2020)
2.	Production of a dual-purpose hand sanitizer machine	<ul style="list-style-type: none"> Hand sanitizer machine that functions in two ways - either as manual (enables users to use pedal systems) or automated machine. Thus, users do not need to interact with the device. It can be used in places with erratic/lack of electricity supply. The user places the hand close to the dispenser while the device dispenses soap, water which runs for 20 seconds following WHO recommendation and sanitizer in succession at regulated times. 	The Federal University of Technology, Akure (Dada, 2020)
3.	Covid-19 self-test app	<ul style="list-style-type: none"> The mobile self-test app will help Nigerians self-diagnose and find out if they are infected with the virus. Thus, reducing the number of visitors to the testing centers due to false symptoms. The mobile app has been tested and certified by the Lagos State University College of Medicine (LASUCOM), Ikeja. Available for Android download on Play Store from 7 April 2020. 	Lagos State University (Onaleye, 2020)
4.	Locally fabricated ventilator	<ul style="list-style-type: none"> The prototype was developed using locally made materials. Low cost of production: cost of fabrication was less than N500,000 Naira. The ventilator can be used for two patients at a time and it can be easily taken to interior villages. The machine can work at least 24 hours without power supply due to the battery stored energy. The machine is adjustable and it works for both the children and the adults. 	The Federal University of Agriculture, Makurdi (Observer Times, 2020). UNIBEN (SON, 2020) Bayero University, Kano (Bayero University Kano, 2020)

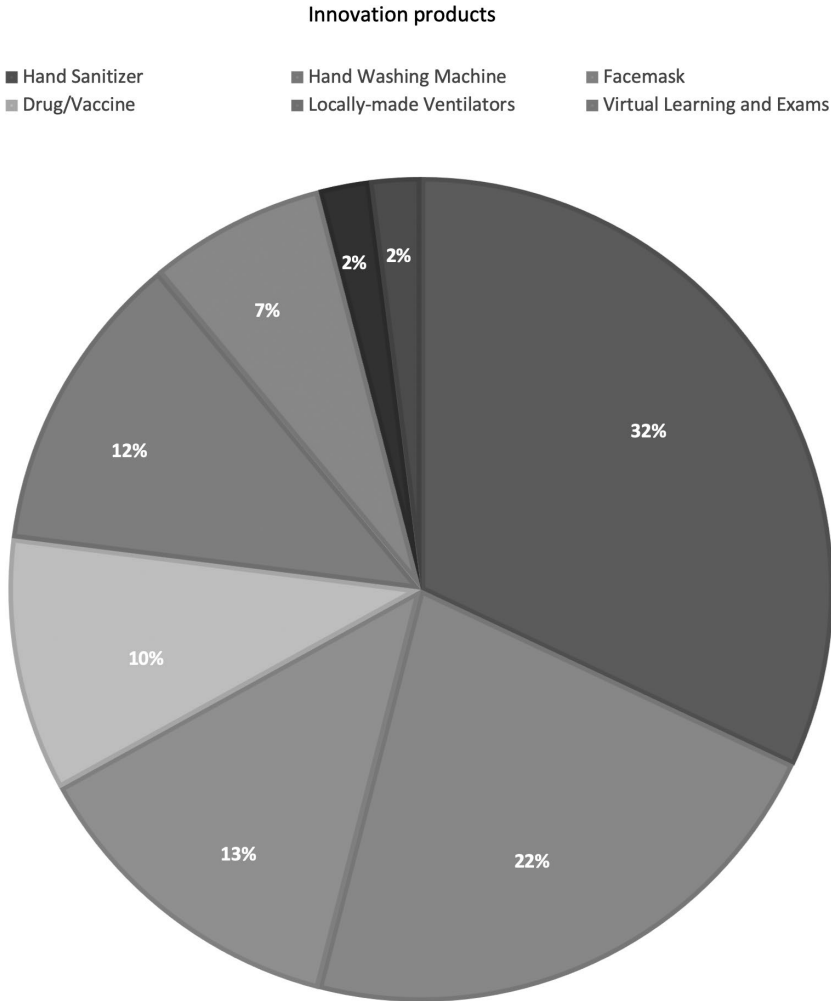


Figure 8.2 The lists of innovation products being carried out by the universities according to the survey respondents ($N = 105$).

face masks, 12% were locally made ventilators, 10% were potential herbal drugs or vaccines, virtual learning and exam platforms were 7% while robots for scans and COVID-19 testing apps were 2% each.

The Level of Awareness of the Respondents of Innovative Efforts in Response to COVID-19 Pandemic

Figure 8.3 shows that of the total 105 respondents (students and university staff), 37% of respondents chose “yes”, 48% chose “no”, and 15% of respondents are unsure in terms of their knowledge/awareness of innovative

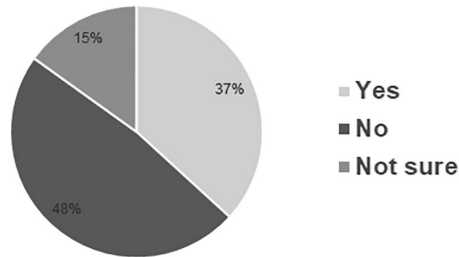


Figure 8.3 The respondents' level of awareness of the innovative efforts (vaccine development or any other material/equipment) of their universities in response to the Covid-19 pandemic. ($N = 105$).

efforts of the universities. Meanwhile, for student respondents ($N = 82$), 29.3% of student respondents chose “yes”, 56.1% chose “no”, and 14.6% of student respondents are unsure in terms of their knowledge/awareness of innovative efforts of the universities. For university staff ($N = 23$), 65.2% of respondents chose “yes”, 21.7% chose “no”, and 13% of respondents are unsure in terms of their knowledge/awareness of innovative efforts of the universities.

Discussion

According to Brennan et al. (2014), higher education institutions have three principal functions which are providing education (knowledge transmission), undertaking research (knowledge creation), and a “third” mission of service to society (knowledge transfer). In Nigeria, providing education (mainly teaching) has been limited due to the pandemic. However, despite enormous infrastructural and funding challenges facing HEIs, many Nigerian universities have undertaken innovative actions in the wake of the pandemic. Universities are producing essential materials and equipment needed to fight against COVID-19 and exploring new avenues to engage students in remote learning and offering online resources.

Some universities have made commendable efforts to provide alternative learning opportunities for their students. Foremost among public universities is the Lagos State University (LASU), which leveraged upon its existing online learning platform (ENVIVO) to provide quizzes and pre-recorded lecture videos to all students in April 2020 (Abubakar, 2020). Besides, Edo University in Iyamho town deployed the University's CANVAS Learning Management System and the Academic Information Systems (AIS) platform for its second-semester academic session in April 2020 (Ibileke, 2020). Meanwhile, for private universities such as Covenant University, the university's existing online repository of educational resources was upgraded to include real-time learning platforms such as Zoom and class-attendance management opportunities such as the admin features by WhatsApp and Telegram group services to provide real-time online learning. Other privately-owned

universities such as Crawford University, Joseph Ayo Babalola University, and Babcock Universities also use similar innovations (Abubakar, 2020).

As the world races to find a cure to the COVID-19 pandemic, global leaders have united to ensure people can access new vaccines (WHO, 2020b). In Nigeria, traditionalists and university researchers have also submitted some potential cures for the virus to the Government (Adejoro, 2020; AfricaNews, 2020; Figure 8.2). For instance, the National Universities Commission has revealed that 32 Nigerian universities are at different research stages to develop COVID-19 vaccines and other treatments (Igomu, 2020). Also, the production of critical medical supplies has been rolled out to promote quality health in society (Table 8.1). Universities are also creating awareness about the disease in their communities and enforcing safety and physical distancing protocols on their premises (Durotoye et al., 2020).

The knowledge of the innovations is different between the two groups (i.e., students and university staff. The university staff (65.2%) has a higher knowledge of innovations than the students (29.3%). This could be because staff members are superior to students and receive more correspondence from the university than students.

Conclusion

The coronavirus pandemic has exposed the dysfunctional state of the Nigerian education sector especially its Higher Education Institutions (HEIs). Over 1 million HEI students in Nigeria remain unengaged in academic learning for over five months and are still counting due to school closure occasioned by the pandemic. Most HEIs are not prepared for the rapid transition towards blended learning due to inadequate infrastructural facilities and virtual learning environments which is indicative of the agelong infrastructure deficit endemic in the nation. However, the efforts of several universities in Nigeria to produce some innovative products needed during the pandemic suggest a commendable local capacity within the country's HEIs. If supported by relevant government agencies with adequate funding, these institutions could produce cutting-edge technologies in various fields, reducing the country's overdependence on foreign goods.

Recognizing that many people were not aware of the innovations by the universities, the universities must take pride in their innovation and their contribution to society. These innovations and other research activities should be communicated to all stakeholders in form of press releases, social media posts, and possible demonstrations. This awareness can raise the reputation of the university, attract more funding and international collaborations.

Recommendations

This study presents practical implications and recommendations for University management, teaching staff, and students. These recommendations are in the areas of innovation, entrepreneurship, research, and development.

- University Managers should make an effort to address their infrastructural deficit, particularly in virtual learning. This deficit can be tackled by formulating policies that support hybrid learning (virtual & physical), the Government's political will to make necessary changes, and the involvement of donor agencies (international NGOs, private foundations, etc.). We further propose that universities should seek out a public-private partnership with EdTech companies and multinational organizations to provide needed digital infrastructure and education for teaching staff and students. In addition, the university management needs to improve its correspondence with members of its university community especially students by communicating current and ongoing research embarked upon by university faculty. This can inspire creativity as well as a sense of pride in their institution in the students.
- The Teaching Staff are also expected to develop their research expertise, build their network, and improve their teaching skills to effectively support students to be more innovative and creative. We recommend that the teaching staff prioritize continuous improvement in their pedagogy, especially in the areas of virtual teaching and learning.
- The students should take responsibility for their learning. The infrastructural deficit should not be an excuse but a motivation to be more innovative and creative – to solve problems and improve the wellbeing of society. Students should improve their ICT skills by taking advantage of various free Massive Open Online Course platforms including Alison, Coursera, FutureLearn (Ifijeh & Yusuf, 2020).
- Local and International Education NGOs can offer technical support and funding to the Ministries of education and schools in adopting various online meeting and presentation platforms as well as other virtual technologies (Ifijeh & Yusuf, 2020).

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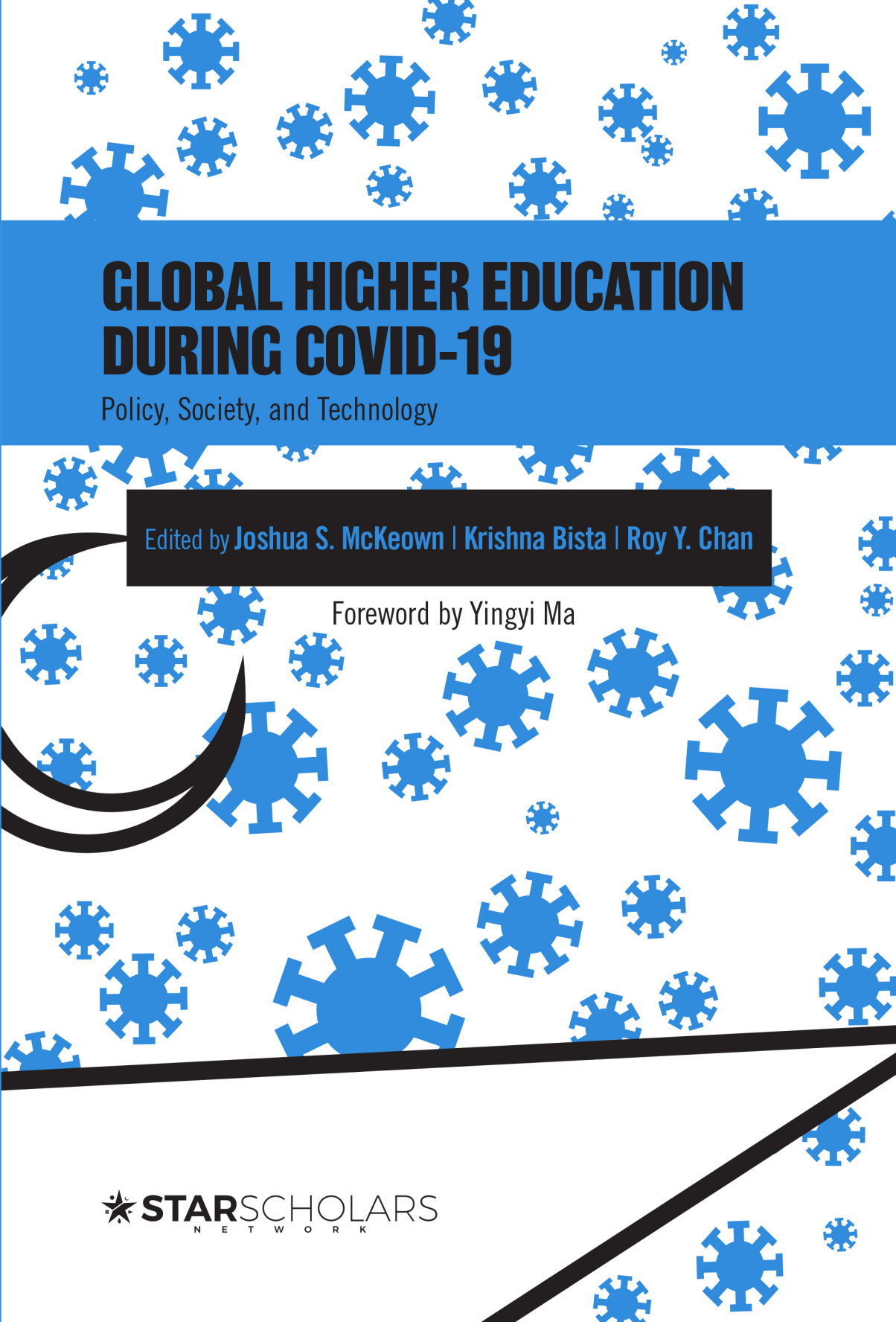
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GLOBAL HIGHER EDUCATION DURING COVID-19

Policy, Society, and Technology

Edited by **Joshua S. McKeown** | **Krishna Bista** | **Roy Y. Chan**

Foreword by Yingyi Ma

Praises for this volume

COVID-19 pandemic and digital innovation are making unprecedented disruption to the global higher education landscape. These disruptions have increased academic discussion on how to reimagine the future of higher education after post-COVID 19. Thus, the book, *Global Higher Education During COVID-19: Policy, Society, and Technology* problematized these realities from a global policy context with policy recommendations on issues of racial justice, funding, technology among others. Therefore, I would like to congratulate the editors: *Joshua S. McKeown, Krishna Bista, and Roy T. Chan* for this excellent publication.

*Dr. KS Adeyemo, Senior Lecturer, University of Pretoria,
South Africa*

Global Higher Education During COVID-19: Policy, Society, and Technology is a highly recommended resource for higher education institution policymakers and educators around the globe. Not only does this book provide invaluable insights from higher education institution policymakers, educators, and students during the COVID-19 pandemic, but it also offers useful suggestions on dealing with possible challenges and seeking opportunities in future higher education.

*Dr. Misty So-Sum Wai-Cook, Centre for English Language
Studies, National University of Singapore*

It's a timely book reporting the most recent responses of international higher education across the world during the Covid-19 pandemic. Besides providing the theoretical contributions, the book also offers practical implications for stakeholders, including policymakers, education managers and practitioners, international students, and parents.

*Dr. Hiep Pham, Director, Center for Research and Practice on
Education, Phu Xuan University, Vietnam*

Global Higher Education During COVID-19: Policy, Society, and Technology is timely and relevant providing a critically engaged reflective account of geographically diverse higher education institutions' response and practice during the COVID-19 pandemic. This book illuminates some of the current

impediments to higher education internationalization within the context of COVID-19 and provides insights into shared learning experiences that address new challenges to internationalisation imposed by the pandemic. A must read for international higher education specialists, practitioners, scholars and researchers.

*Dr. Tasmeeera Singh, Advisor, International Office,
University of KwaZulu-Natal, South Africa*

A worldwide phenomenon: Strategies and inspiration to address the challenges and opportunities for the new normal in the field of global higher education. I cannot recommend it highly enough.

*Dr. Daisy Kee Mui Hung, Associate Professor,
Universiti Sains Malaysia, Malaysia*

The movement of people across borders furthered the spread of Covid-19. This inevitably impacted international higher education, which although not reducible to student mobility is its primary form. *Global Higher Education during COVID-19: Policy, Society, and Technology* is therefore a timely edited collection that begins to unpack the multifaceted impact the pandemic has had on higher education worldwide. It adds to the growing conversation on reimagining higher education. The collection will be valuable to current and future scholars of higher education, offering an important snapshot of policy and practice during the pandemic.

*Dr. Will Brehm, Lecturer of Education and International
Development, UCL Institute of Education, UK*

With the COVID-19 crisis having upended higher education around the world, this timely book provides a deep and much-needed analysis of the roles and responsibilities of universities going forward. It sheds light not only on the shared challenges countries have faced, but also reveals how the impact of the pandemic has varied in important ways across countries.

*Dr. Rajika Bhandari, Author/Advisor,
STAR Scholar Network, USA*

Case studies provide valuable baseline information for practitioners of higher education as the world begins to emerge from the pandemic. A must-read for those looking to understand how various regions reacted, and how institutional systems changed their models to survive.

*Dr. L. Amber Brugnoli, Assoc Vice-President and
Executive Director for Global Affairs
West Virginia University, USA*

This book presents a comprehensive and rigorous worldwide account of Covid-19 impact, challenges and new opportunities. It stands out as a ground-breaking valuable companion for all those involved in the future of internationalization in higher education.

*Dr. Elena de Prada Creo, Vice Dean for International Affairs
Facultad de CC. Empresariales y Turismo, Spain*

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We seek to explore new ideas and best practices related to international and comparative education from the US and around the world, and from a wide range of academic fields, including leadership studies, technology, general education, and area and cultural studies. STAR Scholars publishes some titles in collaboration with Routledge, Palgrave MacMillan, Open Journals in Education, Journal of International Students, and other university presses. At STAR Scholars Network, we aim to amplify the voices of underrepresented scholars, epistemologies, and perspectives. We are committed to an inclusion of a diversity of racial, ethnic, and cultural backgrounds and are particularly interested in proposals from scholars who identify with countries in the Global South.

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Challenges COVID-19 and Higher

Edited by Ravichandran Ammigan, Roy Y. Chan, and Krishna Bista

Global Higher Education During COVID-19: Policy, Society, and
Technology

Joshua S. McKeown, Krishna Bista, and Roy Y. Chan

Global Higher Education During COVID-19

Policy, Society, and Technology

Global Higher Education During COVID-19: Policy, Society, and Technology explores the impacts of the novel coronavirus (COVID-19) for institutions of higher education worldwide. Specifically, this book responds to the growing need for new insights and perspectives to improve higher education policy and practice in the era of COVID-19. The sub-theme that runs through this book concerns the changing roles and responsibilities of higher education leaders and the demand to rethink global higher education post-COVID. Topics in this book include: international student experiences, pedagogical innovations through technology, challenges to existing organizational cultures and societal roles, international academic relations, and shifting national policy implications for global higher education.

With the increasing threat of COVID-19 on all aspects of the global economy and workforce, this book serves as an opportunity for teacher-scholars, policymakers, and university administrators to reconsider and reimagine their work and the role of higher education in a global context. The ultimate goal of this book is to provide a critical reflection on the opportunities and challenges brought by COVID-19 and how tertiary education systems around the world learn from each other to address them.

Joshua S. McKeown, PhD, is Associate Provost for International Education & Programs at SUNY Oswego and International Education Leadership Fellow at the University at Albany, USA.

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Global Higher Education During COVID-19

Policy, Society, and Technology

Editors

Joshua S. McKeown

Krishna Bista

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First Published 2022

by
STAR Scholars
In collaboration with
Open Journals in Education and
Journal of International Students

Category

Education/Higher Education

Series

Comparative and International
Education

Typeset in Baskerville

Series Editor: Krishna Bista

Project Advisor: Chris Glass

Copy Editor
CodeMantra

Cover Design
Srdjan Marjanovic

Printed in the United States of America

Editors

Joshua S. McKeown | Krishna Bista |
Roy Y. Chan

ISBN: 978-1-7364699-6-5

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**Library of Congress Control
Number: 2021943758**

COVID-19 and Higher Education
in the Global Context: Exploring
Contemporary Issues and Challenges
Subject: Education/Higher Education –
United States | International
Education | Student Mobility |
Comparative Education
Krishna Bista (series editor)

Library of Congress US Programs, Law,
and Literature Division

Cataloging in Publication Program 101
Independence Avenue, S.E. Washington,
DC 20540-4283

Facts and opinions published in this book express solely the opinions of the respective authors. Authors are responsible for their citing of sources and the accuracy of their references and bibliographies. The editor, series editor or the publisher cannot be held responsible for any lacks or possible violations of third parties' rights.

In memory of those who lost their lives during the COVID-19 global pandemic (as of August 2021):

4.38 Million

And to the 204 million heroes worldwide who recovered from the disease.



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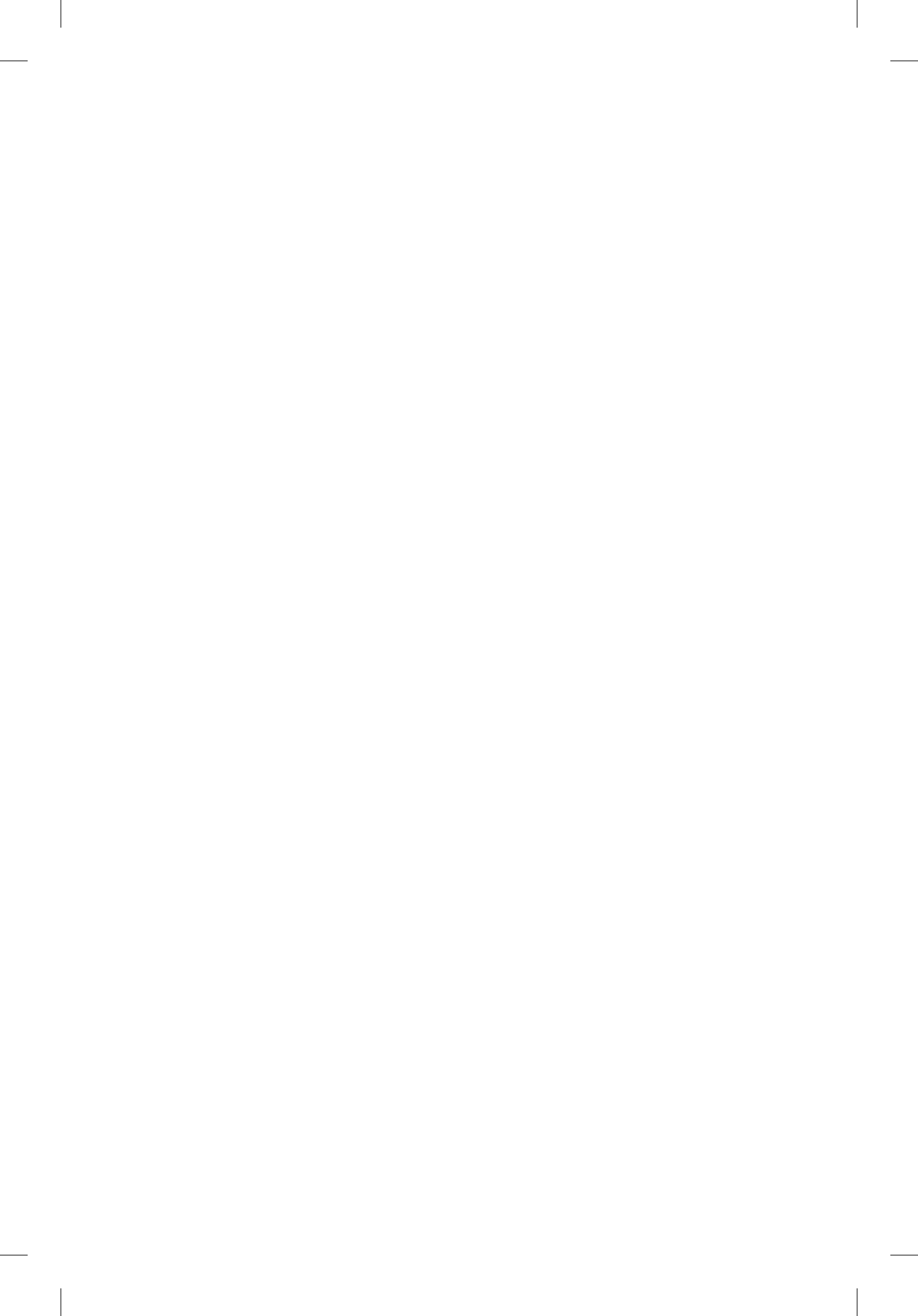
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Foreword

Yingyi Ma

COVID-19 is upending daily life, and its impact on global higher education (HE) is seismic. How to understand the impacts and improve policy and practice in the field of international HE during and post-COVID? Colleges and universities around the world are wondering about the above questions, and this book has provided a much-needed discussion for those questions.

The editors of this book have done a tremendous job in assembling a wide range of in-depth studies, both in terms of substantive topics and geographic regions. The topics range from the role of HE in society, crisis and innovation through technology in HE, international student experiences navigating the pandemic, national policies, international academic relations, public and private university responses, and the innovative engagement efforts of global HE institutions. Despite the expansive topics, various articles share the theme of exploring the traditional and changing roles of HE in society. Part I presents a few studies grounded in diverse national contexts that show how HE operates and adapts to society changed by the pandemic.

I commend the editors for their efforts to include a wide variety of contexts of HE institutions in different countries. While the impacts of COVID-19 on HE may be uncertain, what is certain is the increasing inequality among countries in dealing with the pandemic due to the unequal access to resources, technologies, and public health management. Part II in this book, in particular, focuses on the Global South (lower-income countries). The studies have shown the devastating impact on HE in countries of the global south due to the faltering economy during the pandemic as well as the incredible resilience of faculty and students in these countries to lessen the hardship through impressive innovations.

Technology-powered online education has been the quintessential innovation of 21st-century HE. Technology is liberating as much as limiting. COVID-19 has forced global HE to confront, leverage, and manage the power of technology to engage with students, experiment, and explore new pedagogy. The editors of this book have presented a wide range of empirically based studies in different HE settings to show that technology is indeed the double-edged sword, and it is incumbent on global HE leaders and educators to figure out innovative ways to use technology well, while fully recognizing and managing its limitations. Part III has been devoted to this theme.

This book is for anyone who is interested in HE in the global world, including but not limited to scholars, teachers, administrators, and students, and for any concerned citizens to reimagine and redesign the global HE in a new era.

Bio

Yingyi Ma is an Associate Professor of Sociology and Director of Asian/Asian American Studies. She is the Provost Faculty Fellow on internationalization at Syracuse University (New York), carrying the term between 2020 and 2022, where she leads and supports culturally responsive pedagogy and programs for international education and partnership. She received her Ph.D. in sociology from Johns Hopkins University in 2007. Ma's research addresses education and migration in the U.S. and China and she has published about 30 peer-reviewed articles and book chapters, in addition to books. She is the author of *Ambitious and Anxious: How Chinese College Students Succeed and Struggle in American Higher Education* (Columbia University Press, 2021). This book has won multiple awards from the Comparative and International Education Association and has been featured in national and international news media such as *The Washington Post* and *Times Higher Education*. She is the co-editor of *Understanding International Students from Asia in American Universities: Learning and Living Globalization* (2017), which has won the honorable mention of the Best Book Award from the Comparative and International Education Association's Study Abroad and International Students Section.

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Acknowledgments

We are most grateful to colleagues at the STAR Scholars Network. We also appreciate the support of colleagues with whom we have worked over the years at the Open Journals in Education, a consortium of the professional journals, the Comparative and International Education Society's Study Abroad and International Students SIG, and the *Journal of International Students*.

We would also like to acknowledge the help of all the scholars who were involved in this project and, more specifically, to the authors and reviewers that took part in the review process. Without their support, this book would not have become a reality. At Morgan State University, Dr. Bista would like to thank his colleagues for their encouragement and support including graduate students and graduate assistants in the Department of Advanced Studies, Leadership and Policy. At Lee University, Dr. Chan would like to thank his Ed.D. students for their comments and feedback in this project.

Special thanks to the following reviewers who assisted us in reviewing manuscripts received for this book. It would not have been possible to finalize the selected chapters without their evaluations and constructive feedback.

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“Global Higher Education during COVID-19: Policy, Society, and Technology is a timely edited collection that begins to unpack the multifaceted impact the pandemic has had on higher education worldwide. It adds to the growing conversation on reimagining higher education.”

—**Dr. Will Brehm**

UCL Institute of Education, UK

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We would like to thank the following colleagues for their feedback on the early draft of this book as well for their endorsements:

- Dr. Daisy Kee Mui Hung, Associate Professor, Universiti Sains Malaysia, Malaysia
- Dr. Elena de Prada Creo, Vice Dean for International Affairs, Facultad de CC. Empresariales y Turismo, Spain
- Dr. Hiep Pham, Director, Center for Research and Practice on Education, Phu Xuan University, Vietnam
- Dr. KS Adeyemo, Senior Lecturer, University of Pretoria, South Africa
- Dr. L. Amber Brugnoli, Associate Vice-President and Executive Director for Global Affairs, West Virginia University, USA
- Dr. Misty So-Sum Wai-Cook, Centre for English Language Studies, National University of Singapore
- Dr. Rajika Bhandari, Author/Advisor, STAR Scholar Network, USA
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