10 Chinese College Students' Experiences of Using the Learning Management System and Their Sense of Online Classroom Community during the COVID-19 Pandemic

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Abstract

This study examines Chinese college students' experiences of using the learning management system (LMS) including their technology anxiety (ANX) of using an LMS, perceived ease of use of an LMS (PEU), computer self-efficacy (CSE), and their sense of classroom community (CCS) in synchronous, asynchronous, and blend of both synchronous and asynchronous online courses during the COVID-19 pandemic. This study further investigates the relationship between CCS, ANX, PEU, and CSE using ANX, PEU, and CSE as predictors. Results indicate that students' ANX and CSE are associated with their CCS regardless of the learning formats. It is expected that this study would enlighten Chinese higher education professionals to enhance students' online learning experience and establish a supportive online community.

Keywords

online learning; perceived ease of use; sense of classroom community; technology anxiety; higher education

Introduction

Distance learning has been identified as an efficient way to deliver educational opportunities to a wide range of audiences in a flexible and convenient way (Croxton, 2014; Yamagata-Lynch, 2014), especially during the COVID-19 pandemic (Adedoyin & Soykan, 2020; Lassoued et al., 2020). Universities in China have established online programs but specifically for continuing or vocational education (Li & Zhang, 2009). In higher education, however, face-to-face instruction predominates, while online teaching is used as a supplement

to in-person courses. At the end of 2019, universities in China shut campuses in response to COVID-19, and all schools moved from face-to-face to online teaching and learning in early February during the 2020 Spring semester. This was the first time that all college courses were completely delivered online across the nation, and it was also the first time that many Chinese college students were taking courses online. To improve students' online learning experiences, building a sense of classroom community is significant as the feeling of being a member of the community positively influences student engagement, performance, and retention (Stubb et al., 2011; Trespalacios & Uribe-Florez, 2020). Meanwhile, students' experiences of using the online learning management system (LMS) additionally influence their sense of classroom community, especially those who are taking online courses for the first time. As a result, this study investigates (1) Chinese college students' experiences of using an LMS and their sense of classroom community (CCS) in synchronous, asynchronous, or a blend of both synchronous and asynchronous online courses, and (2) the relationship between college students' experiences of using an LMS and CCS in synchronous, asynchronous, or a blend of both online courses.

Literature Review

Online Course Formats and Students' Sense of Classroom Community

Building a sense of classroom community in online learning environments is important. Scholars identified that a sense of classroom community is the feeling of membership and belonging within a group (Yuan & Kim, 2014). Berry (2017) further discussed that "in a learning community, students work with peers, instructors, and staff to learn collaboratively and support each other in pursuing academic, social, and emotional goals" (p. 2). When students experience a sense of community, they will receive academic and social benefits in an online classroom (Lai, 2015). Additionally, a sense of community also enhances classroom participation and students' abilities to manage stress and emotional well-being (Stubb et al., 2011).

However, the different course formats may contribute to students' sense of classroom community within an online context. Generally, there are three types of online courses: asynchronous, synchronous, or a blend of both online learning formats (Shoepe et al., 2020). Synchronous online learning refers to the learning activity that both students and instructors engage in learning at the same time through audio or video conferencing (Ruiz et al., 2006). In synchronous online environments, students develop a strong connection with their instructor and peers, and they are often engaged in classroom activities (Clark et al., 2015; Yamagata-Lynch, 2014). In other words, the real-time lectures and the instance interaction enhances students' engagement in learning because the real-time communication could shorten students' feelings of distance with their peers and the instructor so as to build a strong sense of community (Abdelmalak, 2015; Francescucci & Rohani, 2019; Pattillo, 2007; Watts, 2016).

In asynchronous learning environments, however, the learning activities do not happen in real time. Instead, instructors use emails and online discussion boards to develop interaction (Ruiz et al., 2006). Students have more flexibility in this learning format as they do not have to be online at the same time, and they are able to manage their learning process at their own pace (Hrastinski, 2008; Pang & Jen, 2018). In terms of conducting the discussion activity in asynchronous online learning environments, students can fully express their thoughts as they have more time to think before discussing topics in greater detail as well as responding to others (Brierton et al., 2016).

A combination of both synchronous and asynchronous online course formats has been considered as an efficient learning approach (Gregory, 2003). The mix of these two formats could bring various benefits to student learning. For instance, asynchronous learning environments allow the instructor to provide additional content to students who need extra time without slowing down the class. On the other hand, when synchronous teaching and learning happens, the instructor could read students' body or facial language to determine whether they understand the learning content or they need more assistance (Horvitz et al., 2019). Moreover, the blended online learning format has been proved to be more efficient than a single asynchronous and synchronous teaching method in some cases (Ge, 2012; Xie et al., 2018).

Experiences of Using Technology and Students' Sense of Classroom Community

The use of an LMS may additionally impact students' sense of classroom community in online learning environments (Haar, 2018). For example, Rideout and colleagues (2008) investigated the influence of implementation of an LMS on 34 pre-service teachers in Canada, and they found that these participants received a high sense of classroom community when interacting with their peers, professors, and supervisors through the online platform. They also discovered that the experiences of using an LMS were the primary predictor of learners' sense of community. In other words, interactions would be encouraged through various activities such as group discussion, announcements, and instructional videos in an LMS, and these activities would help establish a strong online community (Aldosemani et al., 2016).

Meanwhile, students' perspectives of using an LMS would influence their online learning experiences, which may further impact their sense of classroom community. Generally, most previous studies focus on how students' anxiety of using technology affects their interaction with this technology (Agbatogun, 2010; Tuncer, 2012). Students with technology anxiety usually experience feelings of frustration, the potential of embarrassment, disappointment, and fear of the unknown (Tuncer, 2012). Specifically, students with a high level of technology anxiety often have a low level of academic performance, and they intend to avoid using the technology for academic purposes (Mooney, 2007). In contrast, students who have a low level of technology anxiety are more likely to have a positive experience towards using technology such as an LMS

(Stiller & Köster, 2016). Additionally, students would have a better attitude towards using the technology if they find that the technology could be useful in their studies (Heinecke & Adamy, 2010).

Scholars identified perceived ease of use (PEU) as an important factor that influences the intentions of students to adopt a technology, as well as their satisfaction with using this technology (Abdel-Maksoud, 2018; Juha-Matti & Niklas, 2014; Teo, 2011). For example, Juhary (2014) investigated whether students' PEU has a significant influence on their attitude towards using an LMS, and the results indicated that PEU had influenced students' attitudes towards an LMS. Specifically, a positive PEU results in a positive attitude towards using an LMS. Similarly, Ajijola and colleagues (2019) explored PEU of an LMS among distance learners, and they found that students with positive PEU of an LMS often hold positive perceptions towards adopting an LMS. Distance learners who have a positive PEU also hold a positive perceived usefulness of an LMS. Moreover, the degree of PEU of an LMS would further influence learners' academic performance and learning outcomes within the context of online learning (Sun et al., 2008).

Additionally, computer self-efficacy (CSE) also influences students' online learning experiences. Self-efficacy refers to an individual's "ability to organize and implement the course of action required to achieve specific accomplishments" (Bandura, 1977, p. 3), and CSE refers to individual's beliefs in their ability to use technology to solve problems, make decisions, and create and use electronic information (Hagger et al., 2005). In other words, CSE is a combination of self-confidence and skill, and it is defined as individuals' perceptions of their ability to use technology to complete a task (Bandura, 1977; Compeau & Higgins 1995; Gupta, 2017). The CSE is identified to have a positive impact on students' learning outcomes, as well as their adoption and attitudes towards using the technology (Compeau et al., 2006). Previous studies discovered that a high level of CSE improves college students' learning, while a low level of CSE impacts their use of skills for learning (Schlebusch, 2018).

While most previous studies focus on influences of technology anxiety, PEU of technology, and CSE on college students' attitudes of adopting technology and their learning outcomes, it is possible that these factors would meanwhile impact students' sense of online classroom community, specifically when using an LMS. Therefore, this study investigates:

1) Chinese college students' experiences of using an LMS and their sense of classroom community (CCS) in synchronous, asynchronous, or blended online courses;
2) the relationship between college students' experiences of using an LMS and CCS in synchronous, asynchronous, or blended online courses.

Methods

A convenience sampling procedure was used to recruit participants. College students in two northeastern universities in China were invited to participate in

the study. An invitation email with the link to the survey was sent through these universities and lasted for one week. A total number of 211 students participated in the survey with 187 usable responses (usable response rate equals 88.6%). All the students have taken synchronous, asynchronous, and blended online course formats using the LMS provided by their universities during this time. The LMS that bring used was Rain Classroom, which integrates the information publishing before class, the real-time answering, and multi-screen interaction in class (Li & Song, 2018). This software has been used in over 2,300 Chinese universities (Lew, 2018). By using this online learning platform, students and their instructors conduct major tasks including having synchronous online courses, watching the pre-recording course lectures, conducting online discussion, taking online quizzes, and completing assignments.

Students were asked to think about a course format before answering the survey. Data reported that among those who completed the survey, 52 (27.8%) of them expressed their feelings towards synchronous online courses, 41 (21.9%) of them shared their thoughts regarding asynchronous online courses, and 95 (50.8%) of them conveyed their experiences about blended courses that use both synchronous and asynchronous formats.

Instrument

The instrument for measuring students' online classroom community was adopted from the Classroom Community Scale (Rovai, 2002). This scale is a 20-item 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This questionnaire assesses students' overall classroom community with two subscales: connectedness and learning, each with 10 items. Connectedness refers to students' feelings of the community "regarding their connectedness, cohesion, spirit, trust, and interdependence" (Rovai, 2002, p. 206). Three items were reversed, and a higher score indicates a higher level of connectedness. Sample questions include "I feel that students in this course care about each other," "I feel isolated in this course," and "I feel confident that others will support me." Learning refers to

> the feelings of community members regarding interaction with each other as they pursue the construction of understanding and the degree to which members share values and beliefs concerning the extent to which their educational goals and expectations are being satisfied. (Rovai, 2002, pp. 206–207)

Seven items were reversed, and a higher score indicates a higher level of interaction with community members when sharing the understanding of the course content. Sample questions include "I feel that I am encouraged to ask questions," "I feel that it is hard to get help when I have a question," and "I feel that this course does not promote a desire to learn."

The instrument for measuring students' experiences of using the LMS was adopted from Saadé and Kira's (2009) measurement. This assessment

includes PEU of technology with 4 items, ANX with 4 items, and CSE with 10 items. PEU and ANX are 5-point Likert-type scales, ranging from 1 (strongly disagree) to 5 (strongly agree). CSE was revised into a 5-point Likert scale to make it consistent with other surveys. PEU refers to the degree that students expect an LMS to be easy to use, such as "I think that learning to navigate the online course components using an LMS will be easy for me," and "I think that I will find it easy to get the online course components in an LMS to do what I want them to do." A higher score indicates an easier degree of using an LMS for learning. ANX presents students' anxiety of using an LMS for online learning, such as "I feel apprehensive about using the LMS," and "I hesitate to use the LMS for fear of making mistakes I cannot correct." All items were reversed. Thus, a higher score implies a lower level of anxiety in using an LMS. Finally, CSE refers to students' confidence in using an LMS for online learning. Sample questions include "I could complete the required tasks using the LMS if there was no one around to tell me what to do as I go," and "I could complete the required tasks using the LMS if I had seen someone else using it before trying it myself." A higher score refers to a higher level of belief in their capability of using an LMS.

A few modifications such as minor wording changes were made to the original items so that to make them fit into the context of this study. The original internal consistency Cronbach's alpha of connectedness, learning, PEU, ANX, and CSE were 0.92, 0.87, 0.89, 0.93, and 0.78, respectively (Rovai, 2002; Saadé & Kira, 2009). The Cronbach's alpha for each factor in this study were 0.85, 0.89, 0.90, 0.82, and 0.94, respectively.

Procedure

The recruited students clicked on the survey link provided in the invitation email. They then read the informed consent and decided whether to participate in the study or not. The survey was anonymous which would take approximately eight to ten minutes to complete. Students were able to withdraw from doing the survey by closing the website at any time. The original items were in English and needed to be translated into Chinese. To guarantee the validity of the Chinese version of the measure, a standard translation and back-translation procedure was used (Hambleton & Patsula, 1998).

Data Analysis

Data were analyzed through SPSS version 27. Descriptive analysis was used to examine the students' perspectives of using an LMS, and regression analysis was applied to investigate the relationship between the experiences of using an LMS and students' sense of classroom community in synchronous, asynchronous, or blended online courses. The alpha level was set at 0.05.

Harman's single factor score was examined, and the total variance (ranges from 14.1% to 37.2%) for a single factor is less than 50%. Thus, results indicated that common method bias did not affect the data (Podsakoff et al., 2003).

Results

RQ1: What Are Chinese College Students' Experiences of Using an LMS and Their Sense of Classroom Community (CCS) in Synchronous, Asynchronous, or Blended Online Courses?

Descriptive analysis was conducted to examine college students' experiences of using an LMS for online learning (see Figure 10.1). Overall results show that students hold a positive attitude towards PEU of an LMS (M = 3.49, SD = 0.81), and a neutral attitude of the anxiety to use an LMS (M = 3.01, SD = 0.81). However, students hold a higher degree of self-efficacy in using an LMS for online learning (M = 4.21, SD = 1.01).

In synchronous online courses, students have a positive attitude towards the easiness of using an LMS (M = 3.49, SD = 0.92). They also hold a slightly low degree of anxiety towards using an LMS (M = 3.29, SD = 0.83), while they have high self-efficacy in terms of using the LMS for online learning (M = 4.19, SD = 1.23). In asynchronous online courses, students' attitude towards the ease to use an LMS is slightly positive (M = 3.26, SD = 0.75). They also have high self-efficacy towards using an LMS (M = 3.94, SD = 0.87). However, they hold a high level of anxiety to use an LMS (M = 2.74, SD = 0.80), which indicates that students are slightly anxious when using an LMS in an asynchronous online
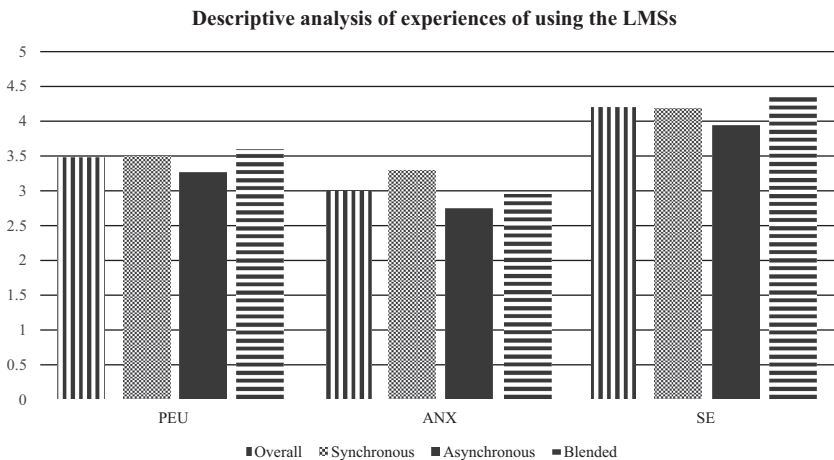
Figure 10.1 Descriptive analysis of experiences of using an LMS.

environment. Similar to asynchronous online courses, students are worried about using an LMS when in blended online courses ($M = 2.97$, $SD = 0.77$). Yet, they think a LMS is easy to use ($M = 3.60$, $SD = 0.74$) and they are confident in using an LMS for online learning ($M = 4.34$, $SD = 0.93$).

RQ2: What Is the Relationship between College Students' Experiences of Using an LMS and CCS in Synchronous, Asynchronous, or Blended Online Courses?

A series of multiple regression analyses using a stepwise procedure were conducted to investigate the relationship between students' experiences of using an LMS and their sense of classroom community in three learning formats (see Table 10.1). Asynchronous and blended online courses were dummy coded as 1 and 0, respectively, using synchronous online courses as a reference category. Specifically, when a synchronous online course was set as a reference group, the asynchronous online course was coded as 1, and the rest were coded as 0. Similarly, using synchronous online courses as a reference group, blended online courses were coded as 1, and the rest formats were coded as 0.

Results indicated that only the level of ANX and CSE are associated with the level of connectedness, $F_{(2,186)} = 55.3$, $p < 0.001$. Thirty-seven and five percent of the variance in the level of connectedness can be accounted for by the linear combination of the levels of ANX and CSE ($R^2 = 37.5\%$).

Table 10.1 Multiple regression results ($N = 187$)

DV	R^2	F	df	p	Predictors	β	t	p
Connectedness	0.375	55.31	2,186	<0.001	Tech anxiety	0.16	3.74	<0.001
					Computer self-efficacy	0.27	8.15	<0.001
					Ease to use	0.16	1.77	0.08
					Asynchronous (*coded as* 1)	0.09	1.48	0.14
					Blended (*coded as* 1)	−0.01	−0.09	0.93
Learning	0.438	71.75	2,186	<0.001				
					Tech anxiety	0.34	7.89	<0.001
					Computer self-efficacy	0.21	6.07	<0.001
					Ease to use	0.09	1.04	0.30
					Asynchronous (*coded as* 1)	0.02	0.39	0.80
					Blended (*coded as* 1)	0.05	0.86	0.39

Note: Synchronous online course was set as a reference group.

For every unit the level of ANX increases, the level of connectedness increases by 0.16 unit while the level of CSE remains the same ($b = 0.16$, $t = 3.74$, p <0.001). Additionally, for every unit the level of CSE increases, the level of connectedness increases 0.27 unit when the level of ANX unchanged (b = 0.27, t = 8.15, p <0.001). However, the regression results indicate that learning formats and PEU do not significantly influence students' connectedness.

Similarly, only the levels of ANX and CSE are related to students' levels of learning, $F_{(2,186)} = 71.75$, p <0.001. 43.8% of the variance in the level of learning can be accounted for by the linear combination of the levels of anxiety and self-efficacy ($R^2 = 43.8\%$). To be specific, when the level of CSE stays the same, for every unit the level of ANX increases, the level of learning increases by 0.34 unit ($b = 0.34$, $t = 7.89$, p <0.001). Meanwhile, for every unit the level of CSE increases, the level of learning increases by 0.21 unit when the level of ANX remains the same ($b = 0.21$, $t = 6.07$, p <0.001). However, the regression results show that learning formats and PEU do not significantly influence students' learning.

Discussions and Conclusions

Regarding Chinese college students' experiences of using an LMS and their sense of classroom community in synchronous, asynchronous, or blended online courses, results of the study indicate that students hold a positive PEU of an LMS and they are confident to use an LMS for online learning, regardless of the course formats. However, some students expressed their anxiety towards using an LMS for online learning especially in asynchronous online courses. It is possible that these students were not well prepared for fully online courses without real-time support from their instructors during the transition from face-to-face to online learning. However, further study should be conducted to explore this finding.

In terms of the relationship between college students' experiences of using an LMS and their sense of community in different online formats, results show that the learning format does not influence students' sense of online classroom community. These findings argue with previous conclusions that students in synchronous online courses or blended online courses usually feel a stronger classroom community than in asynchronous online courses (Abdelmalak, 2015; Clark, et al., 2015; Francescucci & Rohani, 2019; Ge, 2012; Pattillo, 2007; Watts, 2016; Xie et al., 2018). Although previous studies identified PEU as an important factor that influences students' intentions and attitudes of using an LMS (Abdel-Maksoud, 2018; Juha-Matti & Niklas, 2014; Teo, 2011), students' PEU of an LMS does not influence their sense of online classroom community according to this study.

However, students' sense of classroom community is affected by their ANX and self-efficacy of using an LMS for online learning. Previous studies discovered that a low level of ANX and a high CSE would lead to a positive attitude towards using an LMS (Agbatogun, 2010; Schlebusch, 2018; Tuncer,

2012). This study further indicates that students who have a lower degree of ANX while a higher level of confidence in using an LMS for online learning usually have a stronger sense of classroom community. Moreover, these students hold a stronger feeling "regarding their connectedness, cohesion, spirit, trust, and interdependence" (Rovai, 2002, p. 206). Similarly, students who are less anxious and more confident in using an LMS for online learning have a stronger feeling of "community members regarding interaction with each other as they pursue the construction of understanding and the degree to which members share values and beliefs concerning the extent to which their educational goals and expectations are being satisfied" (Rovai, 2002, pp. 206–207).

In conclusion, while online courses were often used as a supplement to traditional face-to-face classes in Chinese universities, the COVID-19 pandemic has forced higher education institutions to use distance learning as a main course delivery method (Lin & Gao, 2020). This study specifically examined Chinese college students' experiences of using an LMS focusing on the relationship between their ANX, PEU, and CSE of using an LMS with their sense of classroom community. Findings indicate that positive attitudes toward using an LMS will positively influence students' sense of community in online courses. Therefore, to improve Chinese college students' sense of classroom community in online learning environments, educators should pay attention to reduce their anxiety about using an LMS while enhancing their confidence to use an LMS for online learning. For example, instructors could show students how to efficiently use an LMS step by step on the first day of the online class. Online office hours should be arranged to help students with any questions related to using an LMS. Graduate teaching assistants should be assigned to help answer questions raised by students as well. Additionally, instructors should provide students with adequate support resources such as the contact information of the university IT personnel, so that to help students with any technology-relevant challenges when using an LMS for online learning. Finally, the Ministry of Education of the People's Republic of China has proposed the "Guidance on the Organization and Management of Online Teaching in the Higher Education Institutions During Epidemic Prevention and Control Period" (Ministry of Education, 2020) which requires national and local governments to support colleges and universities, together with the society, to joint implementation of online education (Zhu & Liu, 2020). Therefore, related policy and strategies should be proposed to encourage online learning and the development of LMSs so as to enhance students' online learning experiences.

Limitations and Future Study

Several limitations exist in the study. First, this study should take instructors' characteristics into consideration. It is possible that the different teaching styles and their levels of familiarity with online teaching may impact college

students' feelings of classroom community. Additionally, this study should compare students' sense of classroom community in STEM (e.g., math, physics) and non-STEM fields (e.g., English, higher education). It is possible that more interactive activities would be arranged in non-STEM courses that would create a stronger classroom community, while instructors may often apply teacher-centered lectures in STEM courses. Therefore, future studies should compare students' sense of classroom community in different areas. Moreover, students' previous experiences of taking online courses may influence their experiences of using an LMS as well as their sense of classroom community. As a result, future studies should control for their previous online learning experiences. Additionally, students were not recruited from a specific course, therefore, the different ways that the instructors using an LMS for online teaching may influence students' online learning experiences. Thus, future studies should take the course curriculum design into consideration. Lastly, this study recruited participants from two first-tier four-year public universities located in Beijing, a well-developed city in China. However, universities with lower ranks and in rural areas may have few instructors who have experience in using technology, fewer online resources, and limited technology support. Students in those universities probably have contrasting feelings towards online learning compared to those studying in first-tier universities located in well-developed provinces. Therefore, future studies should explore college students' online learning experiences who are studying in lower ranked universities and those located in less-developed provinces so as to indicate more comprehensive conclusions.

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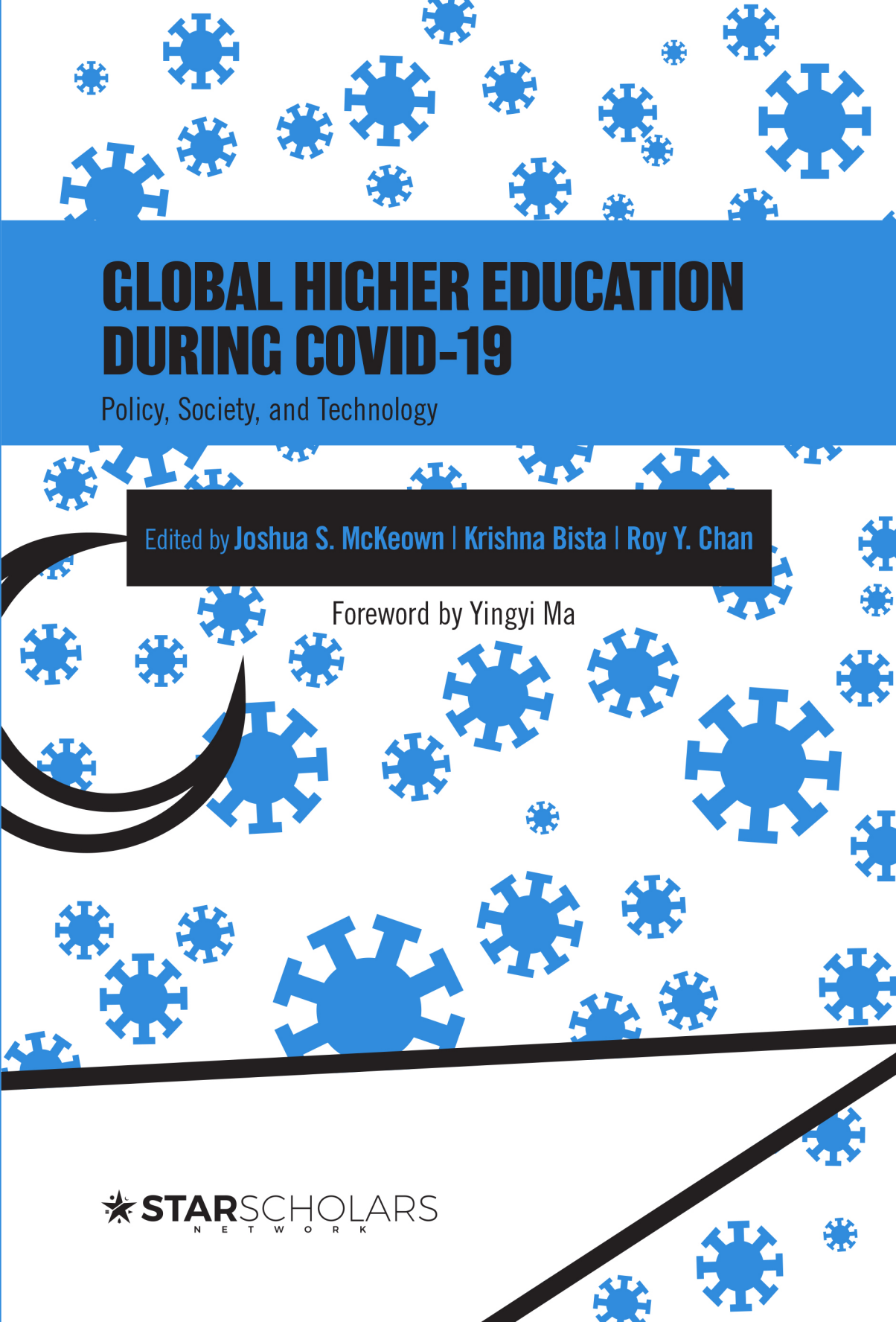
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GLOBAL HIGHER EDUCATION DURING COVID-19

Policy, Society, and Technology

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

Foreword by Yingyi Ma

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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 Y.* 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. Tasmeera 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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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.

Krishna Bista, EdD, is Professor of Higher Education in the Department of Advanced Studies, Leadership and Policy at Morgan State University, Maryland, USA.

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Global Higher Education During COVID-19

Policy, Society, and Technology

Editors
Joshua S. McKeown
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STARSCHOLARS
N E T W O R K

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

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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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

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Cover design by Srdjan Marjanovic

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Dr. Bista serves on the editorial review boards for *Kappa Delta Pi Record*, *Teachers College Record, Journal of Leadership and Organizational Studies,* and *International Journal of Leadership in Education*. Dr. Bista has organized more than 70 professional development workshops on a variety of topics related to college student experience, international student/faculty mobility, internationalization and exchange programs, and cross-cultural studies; he has published 15 books, and more than 80 articles, book chapters, and review essays. He is the founding Chair of the Comparative and International Educational Society (CIES) Study Abroad and International Students SIG and the editor of the Routledge Global Student Mobility Series. Previously, Dr. Bista served as the director of Global Education at the University of Louisiana at Monroe, where he was also Chase Endowed Professor of Education in the School of Education. He holds a doctoral degree in Educational Leadership/Higher Education, a specialist degree in Community College Teaching and Administration, both from Arkansas State University, an M.S. in Postsecondary Education/Higher Education from Troy University, Alabama. E-mail: krishna.bista@morgan.edu

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