

***MOOCs and Open Education Across the Global South:  
Challenges, Successes, and Opportunities***  
(In press with Routledge for 2020)

**Edited by Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds**

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### **Acknowledgments**

***MOOCs and Open Education in the Global South  
Challenges, Successes, Opportunities***

**Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds  
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**Dedication:** This book is dedicated to Fred Mulder, Emeritus Professor and Rector of the Open University of the Netherlands as well as the first UNESCO chair on Open Educational Resources. Fred was a visionary pioneer whose legacy in the Open Education field will continue to have impact for many years to come.

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**FOREWORD**

Mimi Miyoung Lee, University of Houston

The rapid rise and continuous proliferation of massive open online courses (MOOCs) and open education during the last decade have been documented in many forms of media, academic journals, and professional meetings. A cadre of high-profile trailblazers and early adopters have enthusiastically embraced MOOCs and open education for their potential to foster greater educational equity. In his 2013 keynote speech for the International E-Learn Conference in Las Vegas, one such MOOC pioneer, George Siemens, emphasized the power of MOOCs “as a keystone concept in reformulating education models and creating new ecosystems.” Others, more cautiously, have looked for firm evidence of learning success, in part, through a critical examination of attrition and completion rates.

While the impact of MOOCs and open education is global, there has always been a need and a demand for more local stories of applications and implementations from different parts of the world, especially those from emerging and less developed economic regions. Such local stories are important for several reasons. For instance, understanding the regionally specific implementation and subsequent outcomes of various MOOC or open education initiatives have huge implications for adoption and implementation policies at multiple levels of practice. Second, as the connections between formal and informal learning are becoming more seamless, MOOCs can play a vital role bridging the formal to the informal and vice versa. Third, localized cases can help policymakers and practitioners find better ways to design, implement, and evaluate new initiatives related to MOOCs and open education in their communities.

The localized examples also serve to challenge possible assumptions and beliefs behind the production and dissemination of MOOCs and open educational resources. For champions and skeptics alike, the promises and challenges of MOOCs and open education have largely been discussed within the social and cultural values based on North American and European educational systems. Locating the predominance of the MOOC and open education conversation in parts of what some now refer to as “the Global North” is not surprising as these regions continue to be the top producers of MOOCs as well as the prime investigators engaged in MOOC research. Equally important and more urgently needed are investigations into the ways these MOOCs get socially and culturally translated and interpreted in different parts of the world, especially areas with limited educational access and resources.

In response, this book makes salient all of these important issues related to MOOCs and open education in “the Global South” via powerful narratives of local and regional applications and implementations. The editors of this book, Ke Zhang, Curt Bonk, Tom Reeves, and Tom Reynolds, brought their many years of experience and recognized expertise both in research and practice to assemble and curate this much-needed platform of provocative dialogues and

reflections. As you will discover in the Preface, these four renowned scholars have been at the forefront of MOOCs and open education as well as online learning in general from the early days, serving as designers, instructors, researchers, and evaluators of many types of educational innovations.

One could not hope for a better team of experts than these four editors to address the various pivotal issues related to open education in the Global South. As this volume shows, their long record of individual and collective successes as champions of MOOCs and OER is extended in multiple novel and exciting directions with the publication of this timely and eye-opening book. Each chapter will transport you to a different part of the world where MOOCs and/or open educational resources (OER) are being deployed.

The idea for this volume was conceived during the 2017 E-Learn Pre-conference in Vancouver whose goal was to draw attention to how developing countries of the world are taking advantage of these exciting and impactful innovations known as MOOCs and open education. Interestingly, this pre-conference traces its origin back to the 2013 E-Learn Pre-conference resulting in an earlier parallel volume, *MOOCs and Open Education Around the World*, published by Routledge in 2015, of which I was personally fortunate to play a part. These two pre-conference symposia served as working sessions aimed at defining a robust research agenda around open education and MOOCs. In the process, they responded to the increasing need to better understand how people in different regions of the world are implementing and using these innovations. In both symposia, many important issues related to OER and MOOCs were identified and discussed with participants from around the world; among them, accreditation, credentialing, quality standards, instructor roles, participant motivation, assessment, and attrition. The excitement during those symposia can be experienced in many of the pages of this particular volume as well as the first.

The possibilities for transformational changes in education through MOOCs and open education, especially for learners in developing regions of the world, have been widely debated and, for many, generally accepted. However, cases from the direct narratives of local educators, researchers, and administrators have rarely been reported and shared in a common platform with such depth until this volume. Readers will find this timely edition full of valuable case studies, critical perspectives, powerful lessons, and thoughtful answers that will prompt deeper questions as well as capture the continuing evolution and growth of MOOCs and open education. As indicated, the following 28 chapters with cases from Asia, Latin America, the Middle East, Africa, the Pacific/Oceania, and the Caribbean were all masterfully curated by Zhang, Bonk, Reeves, and Reynolds. Each chapter speaks for itself but also engages in a dialogue with other chapters in ways that are sure to challenge the readers' previous assumptions and stimulate future creative initiatives.



**Mimi Miyoung Lee** is Professor in the Department of Curriculum and Instruction at the University of Houston (UH). She received her Ph.D. in Instructional Systems Technology from Indiana University at Bloomington in 2004. She is an expert in critical ethnography and design-based research as well as online, flexible, and open forms of learning. Mimi has published research on STEM-related professional development programs, global and multicultural education, cross-cultural training research, interactive videoconferencing, woman leaders in Asia, self-directed learning

from MOOCs and opencourseware (OCW), and emerging learning technologies such as wikis. Dr. Lee was co-editor of “*MOOCs and Open Education Around the World*” published by Routledge in 2015 which was awarded the 2016 AECT DDL Distance Education Book Award. At the same time, Mimi led a special issue of the *International Journal on E-Learning* on MOOCs and Open Education which simultaneously was published as a book by AACE. She may be contacted at [mlee7@uh.edu](mailto:mlee7@uh.edu).



***MOOCs and Open Education Across Emerging Economies:  
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**Preface: MOOCs and Open Education—Wandering and Winding  
Our Way to Today**

Curtis J. Bonk, Ke Zhang, Thomas C. Reeves, and Thomas H. Reynolds

**Wandering in the Global South**

More than a century ago, the Spanish poet, Antonio Machado (Wikipedia contributors, 2019), with his immortalized lines, *caminante no hay camino* (i.e., wanderer there is no path (or road)), *se hace camino al andar* (i.e., you make the path by walking (or wandering)) (Machado, 1912), affirmed the idea that much of life's direction is derived through the process of making one's way in the world. As the editors of this book, we took this idea to heart and moved forward with this project with no clear blueprint as to its final form in mind. At times, of course, we did glance behind as the poem suggests to get a glimpse of the path we had taken that most likely would never be trod again. Whereas others might call this an organic process, we think of it as in Machado's (1912) poem—we made our way by making our way.

Although we had a general idea for some of what you will find contained herein, the book was actually formulated, edited, and reformulated as we foraged through different steps in the process. In fact, even the book title was changed a couple of weeks prior to going to production. In effect, our path to completion was altered many times based on the people we encountered, the news we read, and the research we analyzed. We learned much along the way, especially through reading and editing all the chapters of the wonderful contributors, most of whom we met for the first time and many others with whom we had traveled before.

Making our way based on the experiences and events that we encountered led to our insight that this is an apt metaphor for how MOOCs and open educational resources (OER) have evolved, especially for the current generation of individuals, organizations, institutions, and consortia involved in designing, implementing, using, and evaluating them. Naturally, we were cognizant of the fact that much progress had been made since our previous book on MOOCs and Open Education in 2015 (Bonk, Lee, Reeves, & Reynolds, 2015). As the project evolved, however, we began to seriously reflect on the diverse stories, goals, and outcomes that had been shared with us. We quickly realized that different paths were being forged by all the wanderers found in this book, including those who strategically planned for MOOCs and open education in a particular country, region, organization, or institution as well as those individuals who designed and delivered them. So, too, the various MOOC researchers and evaluators contributing to this book. Each had a different purpose. Each recounted unique outcomes of that experience.

We can now attest to the fact that there is no one path for MOOCs and OER or for the creation of such an edited volume as this—rather, for all the wanderers we encountered while drafting this book, the path has been a winding road with pivotal setbacks and momentous

achievements. As such, it has taken each of us to places that we had no idea we were going to go but we are much better off for having gone there.

### **The Long and Winding Open Ed Journey**

Fast forward 84 years from when those beautiful lines about wandering were first penned by Machado (1912). The year was 1996 and Grammy award winning artist, Sheryl Crow, put out a self-titled album with a similar enchanting invitation to find one's way or path in the world by walking. The second release from that album was, in fact, "*Everyday is a Winding Road*." In it, Crow recommended that everyone just jump in and enjoy the show called life. She cautioned that there may be high days and low days and days when pretty much anything will go. Nevertheless, as Machado had argued long before, everyday would be a type of winding road and the journey would be even more difficult since there would likely be faded signs of what to do and where to go along the way. Simply put, life's pathways will never be totally clear.

One might juxtapose those lyrics with the events occurring in open and online education around that time. A few years prior to the release of "*Everyday is a Winding Road*," the road led all the way "down under" to Western Australia for the third author, Tom Reeves. A noted pioneer and scholar in the field of educational technology, Reeves, and his wonderful colleague Ron Oliver from Edith Cowan University, spent several months in 1993 evaluating an early form of online learning called telematics, being used at that time to teach English as a Second Language (ESL) to Aboriginal youth living in outback settlements as well as Japanese to children in schools located in remote mining towns (Oliver & Reeves, 1994). They traveled by small planes, rugged Land Rovers, and other vehicles to carry out their extensive evaluation studies. At each stopping point of this expedition, from Port Hedland, Karratha, and Newman in the Pilbara region to Beagle Bay and Broome in the Kimberley region, it became increasingly clear to Oliver and Reeves that online learning could provide previously unavailable language development opportunities to remote learners. At the same time, they fully realized that much research would need to be conducted before the potential of telematics and other emerging online learning systems would begin to reach their potential. This evaluation adventure for Oliver and Reeves enabled them to learn much about the cultures, norms, and geographies of the Australian outback as well as to develop a lifelong friendship. Everyday truly was a winding road.

During the rest of the decade, we four editors began pondering the exciting pedagogical possibilities of Web-based instruction. We were designing online courses and programs and writing some of the first papers on how to make Web-based learning more interactive (e.g., Bonk & Reynolds, 1997; Reeves & Reeves, 1997; Zhang & Harkness, 2002). And we were conducting research on unique forms of blended and fully online learning, including designing online interaction tools that would later be embedded in standard learning management systems (Bonk, Fischler, & Graham, 2000) and investigating innovative strategies for assessing student learning online in higher education (Reeves, 2000).

Curt Bonk (the first author), in fact, has been teaching blended learning courses since the early 1990s and his first fully online course was an undergraduate educational psychology offering from 1997 to 2000 called the "Smartweb." Preservice teachers in the Smartweb utilized online technology from a sociocultural point of view. For instance, they were crafting and sharing cases detailing problems that they had observed in schools during their early field experiences with students of Tom Reynolds (the fourth author) who was at Texas A&M at the time. Also participating were students from universities in Finland, the UK, Peru, South Korea, and the University of South Carolina, while extensions of the project to preservice teachers

working in Native American reservation schools turned out to be more difficult due to access and training issues. These students were using a free tool called “Conferencing on the Web” or COW to draft problematic case situations and then offer solutions on each other’s cases (Bonk, Daytner, Daytner, Dennen, & Malikowski, 2001). This project would evolve and eventually become known as “The Intraplanetary Learning Exchange” or TITLE project (Bonk, Hara, Dennen, Malikowski, & Supplee, 2000) which revealed interesting cross-cultural differences in terms of learner interactions and exchanges (Kim & Bonk, 2002).

As Bonk’s research showed, ideas related to how the Web could be used for global collaboration and exchange, including critical thinking and in-depth analysis of contextually rich and localized online cases, were on full display in this project (Kim & Bonk, 2002). Students in Indiana could quickly get feedback and ideas for addressing or solving their case problems from peers in East Asia, Europe, and South America. While not yet fully open, the COW, and later, TITLE, cases were available for anyone with the website URL and proper passcodes to contribute. The next step toward openness, however, was a set of best practice cases that were soon made open to the world community in the “Caseweb.” As a prime example of a rich open educational resource, cases on the Caseweb were widely used by educational psychology instructors and students across the planet.

The fourth author, Tom Reynolds, also understood the cross-continent collaborative potential of the Web; however, he soon felt the power of the Internet as a platform for online educational delivery of contents and resources for upskilling local communities. The year was 1998 when Reynolds was on a lecture tour of around 10 Peruvian universities as a Fulbright scholar. Ironically, he gave the very first lecture at the Universidad Nacional De San Cristobal in Ayacucho since the armed military guards had been removed from the university entrance earlier that same day. The guards had been a long standing and welcome sight during the tumultuous and violent years of the Shining Path terrorism in the region.

Exiting that well attended event, Reynolds observed the lack of lighting in the city streets so the taxi ride to the hotel was more than welcomed. Arriving at the hotel, he noticed a light-filled storefront in the darkness about a block from his hotel; so, he very cautiously walked up the narrow street to gain a better view. To Reynolds’ surprise, there, in the middle of an otherwise darkened and quiet city, was the glowing presence of an Internet café full to overflowing with students taking an MSWindows class. In the poverty that characterized Ayacucho in the late 1990’s, throngs of young learners were willing to stake their last Sole (Peruvian currency) and invest in technological literacy and the potential it held to transport their lives to better surroundings.

It was clear from that experience and across the year that Tom Reynolds spent in Peru, as well as a more recent Fulbright year in Colombia, that the Internet offered vital educational opportunities to those in the Global South. But what if they could access those same sorts of online educational contents and courses for free? Would they no longer need to part with their Soles to advance their educational skill-base and professional growth?

Also in the mid-1990s, Ke Zhang (the second author) was heavily involved in designing e-training modules in China that were highly interactive and rich in multimedia for clients like Siemens and PepsiCo. However, instead of learning a language in the Australian outback via telematics, discussing and debating globally shared OER in the form of problematic cases and other forms of collaboration with distant peers one would likely never physically meet, or immersing oneself in on-demand instruction from Internet cafes, as detailed by anecdotes from Reeves, Bonk, and Reynolds above, such efforts were limited to company intranets. As was

perhaps inevitable, just a few short years later, Zhang was creating interactive e-books for undergraduate classes, while revising large statistics classes with online collaborative activities that fully embraced and exploited the Web (Zhang & Harkness, 2002; Zhang & Peck, 2003). Clearly, the pace of change on the Internet was astounding in those early years of Web-based instruction.

More recently, Ke Zhang has collaborated with educators, researchers, and public health professionals to create mobile training systems on HIV prevention and patient communications for barefoot doctors (World Health Organization, 2008) in remote China. In this groundbreaking mobile project, she and her colleagues utilized authentic case scenarios collected from the diverse populations in those remote areas. Later Zhang was consulted on a major international initiative by the World Bank to address global food crisis. The significance of knowledge sharing was stressed throughout the projects, and e-learning was strategically leveraged in the Eurasian region (World Bank, 2015).

Of vast importance to those reading this book, in these various projects, Zhang and her team discovered that mobile learning research is much more pervasive in the Global South than the Global North (Hung & Zhang, 2012). Not too surprisingly, they also found that issues of culture and language were among the most important factors for successful designs of learning technologies, programs, and experiences. Such findings beg the question about whether the pervasiveness of mobile technology in the Global South has impacted the design or delivery of MOOCs and open education in such regions of the world. In addition, it is crucial to start asking to what extent are MOOC and OER designers creating cultural sensitive and appropriate courses and contents (Zhu et al., 2019)?

What the various vignettes above disclose is that each of us has had different open and online learning experiences with people and places considered part of the Global South; some were direct physical experiences, whereas others were part of global collaborative exchanges. But just what is the Global South? And what does it represent? Per Wikipedia (2019b), “The **Global South** is an emerging term which refers to countries seen as low and middle income in Asia, Africa, Latin America and the Caribbean by the World Bank. These nations are often described as newly industrialized or in the process of industrializing.” Some definitions also include most of the Middle East and other parts of the world (Wikimedia, 2019).

While the term is somewhat controversial (Toshkov, 2018), we feel that it best suits the assembly of chapters found in the present book. In providing an historical overview of the evolution of MOOCs and open education, the next section is more focused on the Global North than the Global South; a central reason for that focus is that pedagogical experiments in the United States were a key factor in the history of the open education movement.

### **The Emergence of Open Educational Resources**

During the next decade, our respective online and blended learning projects continued to meander and evolve. As Sheryl Crow stated, every day was indeed a winding road in terms of Web-based learning in the 1990s. Back in the early days of the Web, we would get excited about any new education-related website, whether it was the World Lecture Hall for sharing faculty syllabi from the University of Texas at Austin in April 1995 or the Lesson Plans Page from the University of Missouri launched in October 1996 to help K-12 educators with their instructional ideas and plans.

The following year something even more exciting was brewing called MERLOT. Designed by Dr. James Spohrer, Distinguished Scientist in Learning Research at Apple

Computer, MERLOT was purposefully created by the California State University Center for Distributed Learning to help share valued educational content over the Web (Bonk, 2009). MERLOT dramatically extended beyond portals of online educational resources like the World Lecture Hall and the Lessons Plans Page as it allowed for the formation of communities around shared knowledge bases of learning materials, primarily focused on the higher education sector. These communities could rate, discuss, and share contents. Even at this early stage of Web development, MERLOT stuck out as an interesting trend in education. In fact, Bonk engaged in several research studies related to why higher education instructors and others would freely share their creative designs and innovative course content online (Bonk, 2002).

The 1990s were also a time of content sharing experiments via online portals of educational resources whether it was course syllabi, lesson plans, practice tests, or rich multimedia about complex concepts. Such openly shared course items were early versions of what would later be known as open educational resources (OER). The MERLOT and TITLE projects offered a unique lens on what the Web offered, especially because the materials were reviewed and vetted by peers and this could be trusted.

Such tools and projects pushed the educational world to think about the Web as a space for dialogue, community building, idea generation, learning object exchanges, and curation and repositories. And when early learning management systems of the mid-1990s like Niconet were coupled with asynchronous conferencing tools like FirstClass and experimental video conferencing systems like CU-SeeMe, education on the Web would no longer be limited to simple knowledge portals. Instead, significant learning activities could transpire virtually anytime and anywhere as long as one had Internet access and sufficient time.

For savvy and novice educators alike, whether in the Global North or Global South, the 1990s was the age of the learning portal. While the specific websites might be different for each country or region of the world, The Lesson Plans Page and the World Lecture Hall exemplified it for those of us in the Global North. At the time, a teacher could go online and learn how to design an assessment rubric, record grades in an online gradebook, or take attendance online.

But would that be it? Was the excitement about the Web simply relegated to the land of online forms and teaching efficiencies? What about the learner? Where, if anywhere, was active learning in this equation? The Smartweb and COW offered some hints of what was becoming possible for supporting active, engaging, and effective learning online. Fortunately, what happened next was much more than a faded sign or subtle hint of the learning possibilities for the masses. While initially centered squarely within the Global North, the OER movement was a stunning eye opener as to the power of the Web to offer open education to the masses, from the North, South, East, and West.

### **The Emergence of OpenCourseWare**

Within a few years, the world moved to the next stage. In 2001, not only was Wikipedia launched, but Charles Vest, then President of MIT, announced the OpenCourseWare (OCW) initiative which would place key parts of all MIT courses on the Web for anyone to freely access (MIT News, 2001). As he put it,

I have to tell you that we went into this expecting that something creative, cutting-edge and challenging would emerge...OpenCourseWare is not exactly what I had expected. It is not what many people may have expected. But it is typical of our faculty to come up with something as bold and innovative as this...It expresses our belief in the way education can be advanced -- by constantly widening access to information and by

inspiring others to participate...OpenCourseWare combines two things: the traditional openness and outreach and democratizing influence of American education and the ability of the Web to make vast amounts of information instantly available (MIT News, 2001).

While that speech from Vest was momentous, OCW was actually an idea that had popped into the head of MIT Professor Richard (Dick) Yue while on his exercise machine. Not necessarily a eureka moment, however, Yue admitted that the idea came to him after many years, and perhaps even decades, of contemplation about his educational experiences both in Hong Kong as a child and later on as an adult in the United States (Bonk, 2009). An Internet-related planning committee Yue led at MIT debated the idea and eventually gave it the green light. With that, course syllabi, readings, assignments, lecture slides, images, course calendars, instructor insights, and so on from some of the most brilliant minds on the planet were made available for free to masses of people who previously never contemplated learning from award winning MIT professors.

Importantly, most MIT faculty members and staff embraced this idea. In fact, in less than seven years, content from all 2,000+ MIT courses (MIT, 2007) was open to anyone in the world with an Internet connection (or access to one) to explore and learn from. Astoundingly, since inception, there have been over 1.4 trillion page views from 166 million unique visitors of MIT OCW and 158 million views of MIT OCW videos in YouTube (MIT, 2018).

While impressive numbers to be sure, this was a much bigger deal than a solitary initiative from MIT. As Vest stated in his OCW proclamation signaling that educational contents should be free and open:

This is about something bigger than MIT. I hope other universities will see us as educational leaders in this arena, and we very much hope that OpenCourseWare will draw other universities to do the same. We would be delighted if -- over time -- we have a world wide web of knowledge that raises the quality of learning -- and ultimately, the quality of life -- around the globe (MIT News, 2001).

That far-reaching vision from Vest is exactly what happened. Universities in the United States such as Tufts University, Utah State University, the University of Notre Dame, and Johns Hopkins University quickly joined in the OCW movement, as did numerous other institutions of higher learning from throughout the world including the UK Open University, Beijing Normal University, and the Japan OpenCourseWare consortium (Carson, 2009; Caswell, Henson, Jensen, & Wiley, 2007). In addition, in early 2008, seven Indian Institutes of Technology (IITs) began uploading a wealth of free lecture content to YouTube without much fanfare but with national as well as global intentions to increase the quality of engineering education (Bonk, 2009). Suffice to say, there was much momentum for notions of openness! Charles Vest, Dick Yue, and others at MIT simply opened the spigot.

As an example, our friend, Lucifer Chu, translator of *The Lord of the Rings* (to traditional Chinese) and the founder of Fantasy Foundation, began to use personal funds acquired from sales of his bestselling books as well as a grant from the Hewlett Foundation to translate MIT and other university OCW contents to simplified and traditional Chinese. Chu led an all-volunteer organization called the Opensource Opencourseware Prototype System (OOPS), headquartered in Taiwan (Bonk, 2009). This project brought up many issues and questions as to

the purpose and goals for online global education communities to localize resources such as the OOPS (Lee, Lin, & Bonk, 2007).

As such translation projects began receiving attention, critics began raising legitimate questions and issues related to how Western culture from these top tier research universities would be significantly influencing, and potentially dominating, educational practices in developing parts of the world community. In effect, for each deemed success in this open educational world, there were many challenges and issues that needed addressing.

Despite the criticisms, there was much intended and unintended success and impact (Bonk, 2009; Iiyoshi & Kumar, 2008); so much so, that one must ask whether these open education pioneers fully realized what they were doing. The gold-plated entry gates, obscure passcodes, and secret handshakes that had locked out billions of potential learners from higher education for centuries were now unlocked, revealed, and permanently left open for anyone to enter at any time and from any place. Fortunately, assorted OCW and other open education efforts soon resulted in millions of people browsing or downloading content from MIT OCW and other OCW sites each month (MIT, 2012). Surprisingly, the goals of these OCW users were not necessarily degrees or credentials (Bonk & Lee, 2017; Bonk, Lee, Kou, Xu, & Sheu, 2015). Actually, what most people desired, and still do to this day, is the freedom to learn when, how, where, and what they wish.

In today's landscape, OCW is only part of the open education movement; there are numerous other kinds of learning portals and forms of OER for teaching and learning. For example, the complete works of significant literary, musical, scientific, cultural, and historical figures are now easily accessed, rapidly searched, and freely listened to or interact with online (Bonk, 2009; Iiyoshi & Kumar, 2008). When surveyed and appreciated in sum, these learning portals decisively disrupt the balance of power from those who previously controlled access to knowledge --- to those seeking to learn from such open online resources. Arguably, we had entered a new era of learner-directed or learner-selected learning, which was made possible, at least in part, by the sharing age.

### **The Sharing Age**

As MIT was completing the initial version of their OCW project, something fundamentally remarkable arrived on the scene; specifically, MOOCs or “massive open online courses” sprung up. While stating exactly who to credit for offering the first MOOC is somewhat contentious, according to most sources, the MOOC trend started in 2008 in Canada with a massively open online course offered by George Siemens and Stephen Downes (Downes, 2012). Once the word got out, the notion of MOOCs swiftly spread to the United States and many other parts of the world. In addition to MIT, universities in the Global North such as Harvard University, Stanford University, Duke University, the University of Pennsylvania, the University of Michigan, Georgia Tech, and the University of Edinburgh, were among the prominent early MOOC adapters; many of which conducted research on the design and implementation of their early MOOC offerings (Bonk, Lee, Reeves, & Reynolds, 2015; Bonk, Lee, Reynolds, & Reeves, 2015; edX, 2014).

MOOC-related technology platforms, companies, programs, and governmental initiatives arose during these same years as this new form of educational delivery was widely and critically examined, discussed, promoted, and implemented. Entities to deliver MOOC courses such as Udacity, Udemy, edX, NovoEd, FutureLearn, XuetangX, and Coursera were the focus of

considerable attention, classification (e.g., see Liyanagunawardena, Lundqvist, Mitchell, Warburton, & Williams, 2019), speculation, and in some cases, alarm (Finkle & Masters, 2014).

What may come as a surprise for some, however, MOOCs were not the only educational headline at the time. By the mid to late 2000s, there were numerous people in and out of academia playing around with different forms of openness with their courses and programs. Many of us had already been teaching online for over a decade and wanted to extend our classes even more. We noticed that friends and colleagues of ours such as David Wiley at Utah State University and later BYU were offering certificates of completion from their university to anyone who wanted to complete their coursework (Wiley, 2008). Other colleagues like Ron Owston at York University in Toronto were experimenting with putting their course syllabi in a wiki and allowing students to structure and negotiate it. Correspondingly, during the decade of the 2000s, Curt Bonk was building a suite of nine “sharing” sites including CourseShare, ResourceShare, PublicationShare, LibraryShare, SurveyShare, Quizshare, BookstoreShare, InstructorShare, and TrainingShare as a means to experiment with the sharing of educational content or links to such content. What was beginning to become clear to folks like Wiley, Owston, and Bonk was that, at a very minimum, courses in higher education were increasingly reliant on OER. With OER, OCW, and other forms of openness, online learning innovation and sharing of such pedagogical and technological innovations was occurring on an unprecedented pace and scale.

There was a growing awakening and eventual embrace of OER in higher education, corporate, and military settings and later in K-12 ones as well (Bonk, 2009). Nonetheless, few people fully realized that the course being offered by our friends George Siemens and Stephens Downes in Canada, mentioned earlier, in which anyone could enroll, was the initial seed of what was soon to germinate and take root around the world; namely, Massive Open Online Courses or MOOCs. Although we heard the excited voices of our own students when we mentioned this free and open course to them, we did not foresee how quickly collegial conversations about our respective teaching loads would go from teaching a dozen or two students to having thousands, if not tens of thousands, of enrollees in our courses. In fact, by the summer of 2012, Bonk had 3,800 people enrolled in his MOOC, the first one ever offered by Blackboard, related to how to teach online. At the time, that was actually a modest-sized MOOC (Jordan, 2014).

Those were exciting times. Not only was 2012 the celebrated “Year of the MOOC” (Pappano, 2012), it was the dawn of the age of rapid course experimentation and course content sharing for the masses. Although only a few courses at that time were truly free and open ones, those that were, drew thousands, and, in some cases, more than one hundred thousand participants. There were no strings attached. And open truly meant open. MOOCs quickly emerged that focused on a wide range of topics, some of which had never before been imagined. With the resulting explosion of open access courses and contents, many of us were acting like little kids in open education candy stores. We wanted to take this one and that one and a few other courses just for luck. There were typically no fee payments required if you wanted a certificate of completion or to complete a specialization. Not surprisingly, various constraints and limitations were soon introduced (Schaffhauser, 2018). As Wiley (2015) noted, what was once totally “free” and “open” was no longer the case.

### **Stepping Into and Out of this Book**

Can the world return to the day when all MOOC content was free and open? Or will some other technology or educational innovation be fashioned that allows learners worldwide to access



educational contents to reskill and upskill themselves? The many contributors to this book have penned their chapters from vastly different geographical, economic, social, and educational situations and perspectives. What they all have in common is an increasing reliance on projects, initiatives, and policies related to MOOCs and other forms of open education.

As you will see in the respective 28 chapters of this edited book as well as in the foreword and this preface, MOOCs and open education are having marked impacts across regions of what was once labeled as the “developing world” and is now more commonly termed the Global South. For example, government officials and other stakeholders are attempting to improve the quality OER and MOOC-based certification programs at the tertiary education level in the Philippines (see Chapter 21 from Melinda dela Pena Bandalaria). Of course, in this fast-changing economic age, such quality enhancements are particularly important for continuing professional education. Other innovative educators are providing high school students with a sense of accomplishment and identity as successful learners in Nepal (see Chapter 9 from Baman Kumar Ghimire and Bishwa Raj Gautam). MOOCs are also being deployed to address serious societal problems such as better preparing the local citizenry for climate change in Fiji (see Chapter 8 from Deepak Bhartu and Som Naidu) as well as to teach about global environmental education and civic ecology in the Bahamas (see Chapter 16 from Marianne Krasny and her colleagues). Still other initiatives aim to extend access to university education, as in the islands of Indonesia (see Chapter 6 from Tian Belawati) or meet specific societal goals, such as training farmers in India about emerging agricultural production, protection, and processing techniques (see Chapter 25 from Balaji Venkataraman and Tadinada V. Prabhakar). Each of these situations and experiences as well as many other highly impactful undertakings are chronicled in the chapters of this book.

The various passageways through this book encompass a wide range of applications and innovations. For instance, one moment you will be in Brazil where you will learn about open access policies and issues encouraging OER developments and in-roads across more than 100 higher education institutions (see Chapter 19 from Tel Amiel and Tiago Chagas Soares). Or, you could find yourself in Egypt where many different faces and formats of openness will present themselves (see Chapter 4 from Maha Bali and Nadine Aboulmagd). Journey on and learn about government policies and efforts related to advancing MOOCs and open education throughout the Middle East (see Chapter 22 from Abtar Darshan Singh, Sumayyah Abuhamdieh, and Shriram Raghunatha). You will soon discover that there are an interesting mix of countries in the Middle East representing stunning extremes in technological connectivity that range from fully modern to scarce availability. Keep moving and you might also find yourself in Turkey—a country that appears to be on the cusp of an explosion of MOOC-related professional development efforts (see Chapter 12 from Kursat Cagiltay, Sezin Esfer, and Berkan Celik).

In effect, you can open most any page of this book and you will learn about many exciting projects, potential opportunities, and pitfalls and problems of the OER movement. Despite the problems and delays in open access, the underlying fiber of this book is one of accomplishment and hope. What has been accomplished gives rise to hope. Hope for openness. Hope for expanding one’s place in the world. Hope for accessing a goldmine of valuable educational materials that can bring one a step closer to admission, graduation, employment, or promotion. Hope for a sense of self-worth and personal growth. And a sincere hope that the minimum requirements to enroll in a MOOC will be the same for one’s children and grandchildren.

## MOOC'ing an Impact

People become fairly glassy-eyed when they read about MOOC enrollments. What they too often fail to realize is that whether it is a median size MOOC of 40,000 participants (Jordan, 2014) or much lower figures (e.g., 8,000, see Chuang & Ho, 2016), the fact is that MOOCs offer access to top-tier institutions and well known experts from places that MOOC participants will likely never visit, let alone study and live. As Trang Phan alludes to in Chapter 11, MOOCs offer wondrous connections to international peers; each MOOC has an extraordinary variety of fellow learners with highly diverse backgrounds, skills, and interests. Such a situation can contribute to a deeply valued and enriched learning environment that is beneficial to all participants and observers (Hew & Chung, 2014). There is no lengthy application process or logistical restrictions (Kop, 2011). Do you have access to the Internet or know someone who does? If so, come on in.

Before you enter the land of MOOCs, it is important to ask in what massively open courses might you enroll? In 2014, the most popular MOOCs included those on statistics, learning how to learn, computer science, strategic management, finance, and R programming (Shah, 2014). The following year, when our previous book on MOOCs and open education was released (Bonk, Lee, Reeves, & Reynolds, 2015), the top rated MOOC courses had switched entirely to such gems as “A Life of Happiness and Fulfillment,” “The Great Poems Series,” “What is Mind,” “Fractals and Scaling,” “Mindfulness for Wellbeing and Peak Performance,” “Algorithms for DNA Sequencing,” and “Programming for Everybody” by Chuck Severance (Shah, 2015) who wrote a chapter in our previous book (Severance, 2015).

Clearly the reason people signed up for MOOCs had undergone a significant change in a short time. Whether a function of an expanding curriculum or personal needs and preferences, the road quickly shifted from computer science and business courses to MOOCs for personal growth and development. As the contents of this book head to press in May 2019, the most popular MOOCs include ones on weight management, mathematical game theory, computer networking for teachers, innovation management, and the role of nurses around the world (Shah, 2019b). What a diverse array of courses for personal selection and consumption! If you recheck that list every year or six months, you will see that MOOCs might be deemed a reflection of life in the 21<sup>st</sup> century.

According to recent data from Class Central, the number of people engaging in MOOC activities is growing at a mind-boggling rate. The year in which we were completing our previous book on *MOOCs and Open Education Around the World* (Bonk, Lee, Reeves, & Reynolds, 2015), some 400 universities around the globe offered 2,400 assorted MOOCs to around 17 million participants (Shah, 2014). At the time of this writing, just four years later, such numbers had widened to 900 universities offering over 11,000 MOOCs to more than 100 million learners (Shah, 2019a). Extrapolate such data for a decade and it is relatively easy to envision MOOC enrollments numbering near a billion. As this occurs, MOOCs will surely play a significant role in 21st century literacy development and skill upgrades with up to one out of every ten humans on the planet participating. As with other mass adoptions, we may quickly lose count of the total courses offered or learners participating. However, as that happens, the questions will hopefully shift to more momentous ones such as to what extent MOOCs have helped sustain a planet undergoing a series of crises including climate change, sustainable food production, marine plastic pollution, species extinction, depopulation as well as overpopulation, massive waves of immigration, and a prevailing lack of human decency and compassion.

Outside the higher educational context, MOOCs are being used as an alternative to traditional corporate and governmental training. Statistics show that Coursera, one of the fastest

growing MOOC providers, is working with over 1,400 companies globally to fulfill the training needs of 34 million working professionals (Schaffhauser, 2018). As these numbers continue to escalate, MOOCs are transforming both formal and informal educational practices with more viable, scalable, and sustainable opportunities (Selwyn, Bulfin, & Pangrazio, 2015). With at least 35 master's degrees currently available via the MOOC (Pickard, 2019) at significantly reduced pricing levels (McKenzie, 2018), and perhaps hundreds of possible MOOC-related specializations, nanodegrees, and micro-credentials (Coursera, 2019; Ravipati, 2017), MOOCs are increasing the professional credentials and work-related skills and competencies of many individuals.

Of no surprise given the rapid expansion and variety of content noted above, MOOCs have come to mean different things to different people. For some, MOOCs are allowing instructors unique opportunities to diversify one's student base. For others, the emphasis is on the creation of global learning communities that share ideas, resources, and best practices. Still others view MOOCs as a tool for expanding access to education and perhaps stacking an online credential received from taking a series of MOOCs into an application for an on campus or online master's program (DeVaney & Rascoff, 2019). According to DeVaney and Rascoff, it is in such stackability options wherein MOOCs, at present, seem to be the most disruptive to the status quo in higher education. As shown in this particular book, such disruptiveness may be even more vital and pronounced in economically emerging parts of the world.

New acronyms are proliferating along with the divergent visions that drive MOOC development and use. For example, there are cMOOCs (testing the theoretical and practical viability of connectivist-styled learning), xMOOCs (highlighting massive quantity of throughput with thousands of students in some cases), pMOOC (experimenting with problem or project-based forms of learning), and, most recently, PD-MOOCs (related to the professional development of teachers and other professionals). Still other types of MOOCs are targeting remedial education, advanced placement, and many other niche areas.

Globally, organizations and institutions are engaged in fascinating experiments to take advantage of advances in digital technologies and e-learning design to educate, train, or otherwise empower people around the world. For example, the World Bank, UNESCO, the Commonwealth of Learning (COL), and the Inter-American Development Bank all have exciting initiatives and regional as well as international projects to provide education, training, and professional development opportunities to people across many populations who previously could not partake of these educational openings and innovations. Even though MOOCs and various MOOC-like derivatives as well as OER are proliferating and benefitting millions of people around the globe each week, enormous potential for expansion and improvement remains.

What about specific MOOC vendors? Well, in 2017, Coursera alone had over 30 million registered users, signaling an increase of 7 million users from 2016. By the end of 2018, Coursera's enrollments spiked again to 37 million participants (Shah, 2019b). Not too surprisingly, interest in certification and micro-credentials from MOOC completion has exploded during the past few years. Today, sequences of MOOCs can lead a learner to one of over 250 different specializations and credentials. In terms of MOOC vendors and platforms, Coursera has created more than 160 such specializations including popular ones in data science, robotics, creative writing, game design and development, inspired leadership, Python programming, virtual teaching, Spanish, music production, investment management, and cybersecurity, among many other topics (Coursera, 2019). Similarly, edX offers MicroMaster's degrees in big data, cybersecurity, solar energy engineering, human rights, instructional design and technology,

supply chain management, artificial intelligence, international hospitality management, and much more (Gordon, 2018; McKenzie, 2018).

It is clear from such data that learning opportunities and outcomes are being transformed. Unfortunately, limited attention has thus far been placed on how specific regions of the world are taking advantage of these new forms of technology-enabled learning—even though many exciting and impactful innovations are currently occurring. As digital forms of informal and formal learning proliferate, there is an increasing need to better understand how people in fast-changing regions of the world are implementing MOOCs and OER. Clearly, a better understanding of the outcomes of different projects and initiatives could aid researchers as well as government managers, trainers, MOOC instructors, and instructional designers.

As detailed in this book, organizations like the Commonwealth of Learning (COL) have worked diligently to find unique ways to deliver open content to educators and learners, especially in parts of the world with the most rapidly emerging or changing economies. COL efforts have benefitted farmers in Jamaica, Antigua, and rural India, K-12 teachers and university instructors in Pakistan, St. Lucia, and Uganda, and other traditionally underserved learners in Sri Lanka, Samoa, and Nigeria. COL is also providing support for instructional innovations such as flipped classrooms, MOOCs for development, blended online teacher training models, and many other distance learning innovations and models. Clearly, the COL is among the organizations leading the way toward a more equitable, sustainable, and empowering educational future. Accordingly, COL members have authored two chapters of this book (see Chapter 14 by Sanjaya Mishra and his colleagues and Chapter 25 from Venkataraman and Prabhakar).

### **Assembling this Book**

Although e-learning continues to proliferate globally, minimal attention has been placed on how emergent economic countries and regions, especially across the Global South, are taking advantage of technology-enabled learning. The possibilities for transformational change in these regions are widely accepted as is the notion that e-learning is impacting young as well as older learners around the planet. The emergence of new forms of blended learning as well as variations and inroads in MOOCs and OER have made these developments front page news across all continents and societies. Nonetheless, there is scant knowledge related to the inroads actually being made in emerging economies; especially scholarship focusing across countries in the Global South. To that end, this book offers dozens of candid looks at many of the challenges, successes, and opportunities that exist right now in the Global South.

As new digital forms of informal and formal learning proliferate, there is an urgent need to better understand how people in different regions of the world are implementing and evaluating MOOCs and assorted OER. Even more importantly, educators, researchers, educational change agents, politicians, and countless others want to better understand the outcomes of these initiatives and how they can be improved. So, along with the current tidal wave of changes in educational practices and participants enabled by blended and fully online e-learning, those fostered by MOOCs and open education have caused institutions and organizations to grapple with issues of accreditation, credentialing, quality standards, and learner motivation and attrition, among numerous other areas of concern.

There are many other challenges affiliated with understanding MOOCs and OER. For instance, institutions and organizations continue to struggle with notions of plagiarism, copyright, and innovative assessment—to name but a few. Alignment among eight essential learning dimensions (i.e., objectives, content, instructional design, learning tasks, learner roles,

instructor roles, technological affordances, and assessment) is another vital issue (Reeves, 2006), as is finding effective ways to use technology to empower women and girls to shape their own futures. At the same time, researchers are exploring critical issues such as openness, ethics, privacy and security, fiscal responsibility, and different business models of success. Many educators are looking for answers and ideas in fields such as learning analytics, adaptive learning, and alternative assessment. In addition, there are impact and outcome studies that are geared to address what the designers and implementation teams had envisioned when fashioning and later piloting their MOOCs or OER projects.

In response to the above issues, this book project explores and probes unique implementations of MOOCs and open education across several rapidly changing and economically emergent regions of the world from Egypt to India to the Philippines to Fiji to Chile to Brazil to South Africa and onward. We also focus on the various opportunities as well as the dilemmas presented in this new age of technology-enabled learning.

By now it should be clear that there are numerous goals underpinning this book. First, we intend to help the reader better understand the wide array of MOOC initiatives and open education projects in rapidly changing, highly diverse, and economically emergent Global South countries and regions. At the same time, we hope to help others learn how MOOCs and open educational resources are impacting learners in different ways. A better grasp of the potential global impact of these open educational contents is also a key goal. Third, we expect that those perusing this volume will be better equipped to identify emerging trends, projects, and innovations in e-learning as well as new possibilities for professional development at a distance. The casual reader will also have an enhanced understanding of the educational, cultural, political, and economic challenges and issues facing various stakeholders in open education environments. Different chapters will highlight pressing issues and controversies where there presently is impassioned debate and controversy.

Readers of this volume will have their own intended goals. Whatever the premise for leafing through different pages of this book, we hope that readers become inspired to contribute to the prevailing research and discussion related to MOOCs and open education. Some chapters may answer the concerns of critics, whereas several others may add fuel to their talking points. Still other chapters might be embraced by both MOOC advocates and critics, but for vastly different reasons.

While the editors of this book have been involved in online learning, including MOOCs and open education, since inception, no one person or small group of people can know the entire story. Fortunately, this edited volume has 68 contributors who describe what is occurring in this realm in around 47 different countries, primarily in the Global South. Our contributors were purposely selected to tell individual stories from the viewpoint of their initiative(s), institution(s) or organization(s), and region(s) of the world. When reading across the different sections of this book, you will discover many wondrous stories being told. As such, the chapter contributors will effectively offer insights into the role of MOOCs and open education for individual learners as well as for policy makers intending to use such new forms of educational delivery to address some of the learning needs and gaps found in their own situation.

This book also offers varied historical perspectives in terms of open education movements in different countries and regions of the world. The opening chapters from China and Korea discuss the evolution of distance learning in addressing the educational needs of its citizenry (see Chapter 2 from Yong Kim, Ock Tae Kim, and Jin Gon Shon and Chapter 3 from Jianli Jiao and Yibo (Jeremy) Fan). Several chapters attempt to lay out many new initiatives and

their actualized impact to date as well as their sustainability and envisioned growth or unreachd potential. In addition, insights will be offered in terms of current design practices and delivery mechanisms for such massive courses and the results to date.

In the end, we are most fortunate to been able to assemble so many world-renown scholars who contributed to this edited volume. Some of them presented with us at the preconference symposium on “*MOOCs and Open Education in the Developing World*” that was held in Vancouver, Canada in October 2017. We also invited other researchers, educators, and world leaders of the movement toward open education and MOOCs; most of whom are involved in advancing or researching different learning technologies. They may have designed and taught a MOOC, tested a unique MOOC platform or system, authored strategic plans on MOOCs and open education for their institution or organization, written or advocated for needed open education policies, or conducted research and evaluation of MOOCs and open education contents. Their stories and reflections should lend insight into the present state of open education around the world. They might also inspire others to do the same.

### **Final Thoughts**

Hopefully this book can shine a light on the path toward globally transformative educational change. However, the changes required will not be easy; in part, since the road toward such change will never be clearly marked or smoothly paved. Nevertheless, each person reading this book may make distinctive contributions in some aspect of the world of MOOCs and open education; they might be targeted for parts of the world most in need of development such as in countries across the Global South. These contributions might also be on behalf of the entire planet and beyond. For the billions of learners in the Global South yearning for access to high quality and respected educational opportunities, this is our Sputnik moment, moonshot, Panama Canal, and Great Pyramid of Giza all rolled into one. Learners in the Global South as well as the Global North can no longer wait a decade or two for things to change. They need wide and pervasive access to education today. Accordingly, we hope that this book adds to the world of open possibilities and potentialities for those in the Global South and all over the planet.

Our intended goal is to take you on a journey through an expansive array of MOOC-related developments and initiatives in Global South regions of the world. As you “wander” through the pages of this book, as Machado’s (1912) lines of poetry at the start recommended, you will be exposed to dozens of key innovators, educators, and stakeholders in this wonderful world of MOOCs and open education. Your journey will also bring to light myriad challenges, successes, and opportunities as seen through the eyes of those in the Global South. As singer-songwriter Sheryl Crow suggested, let’s all take a moment to step back and enjoy the show, both as found the 28 chapters of this book as well as in everyday news, research reports, video documentaries, and various open and online resources, tools, courses, and programs. On whatever learning path you wander, we four editors wish each of you a most pleasant journey down this winding road. Keep wandering!



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# ***MOOCs and Open Education Across Emerging Economies: Challenges, Successes, and Opportunities***

**Edited by Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds  
(In press with Routledge for 2020)**

## **Chapter 1 MOOCs and Open Education in the Global South: Successes and Challenges**

Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds

The United Nations (2015) announced ambitious goals for sustainable development, including Goal 4, to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” by 2030. Further, in *Education 2030* (UNESCO, 2015) framework for actions, UNESCO expressly suggested that massive open online courses (MOOC) (p. 40) and open educational resources (OER) (p. 31 and p. 41) should be promoted as powerful strategies to increase access to education and to improve the quality of learning as well. During the past decade, many other scholars have also consistently confirmed the potential of MOOCs and OER for development and to perhaps even transform education in fundamental ways (e.g., Anderson, 2013; Hodgkinson-Williams, & Arinto, 2017; King, Pegrum, & Forsey, 2018; Koller, 2012). As people become familiar with these and other forms of open and distance learning, the advocacy base continues to expand.

Yet, not enough is known about the landscape of MOOCs and OER in the Global South. In fact, the Global South is a relatively new designation for countries that are emerging economically, mostly, but not exclusively located in Asia, Africa, the Caribbean, the Middle East and Latin America, in comparison to wealthier countries (Hollington, Salverda, Schwarz & Tappe, 2015). Gunawardena (2014) wisely argues, even if they are free and open, MOOCs will be of scant value to those in the Global South if they do not fit their specific context. The resources and examples connected with a particular MOOC must be relevant to the local community. In fact, a recent systematic review of publications on MOOCs and OER (King et al., 2018) revealed that more research is necessary to investigate how learners in countries or regions of the Global South manage to negotiate with the various challenges in MOOCs. Clearly, their stories and research findings should be integrated into the foundations of the design, delivery, and evaluation of MOOCs and OER in the Global South as well as in the rest of the world.

Despite the growing number of publications on MOOCs and OER, over 82% of published empirical MOOC research through 2015 has been from North America and Europe (Veletsianos & Shepherdson, 2016) and those trends have continued (Zhu, Sari, & Lee, 2018). Perhaps more interesting, findings from the developed economies and those from the Global South are often inconsistent, and, in some cases, even contradictory. In a recent study by Reich and Ruipérez-Valiente (2019), for example, a large data set of 5.63 million MOOC learners in edX courses was analyzed. The study examined data across six years (2013 to 2018) from courses developed at MIT and Harvard University and provided through the edX platform. The trends in MOOC participation clearly indicated that the growth of MOOC learners was mostly from some of the richest countries. Among the more than five million MOOC participants in this

study, less than 1.5% were from the Global South. Worse still, as is often criticized in the MOOC research literature and prevailing press, MOOC completion rates continued to be very low with less than 4% of participants completing the MOOCs in which they had enrolled. Unfortunately, trend analyses did not project likely increases in completion rates in the near future.

Surprisingly, another study, focusing on MOOC usage in Colombia, the Philippines, and South Africa (Garrido, Koepke, Anderson, Felipe Mena, Macapagal, & Dalvit, 2016) found that 80% of the participants in professional development MOOCs completed at least one course. More impressively, roughly half of the participants (i.e., 49%) earned certifications. The divergent results of these two studies signal that much additional research and experimentation is needed for better understanding and appreciation of MOOCs and other forms of open education in the Global South.

Despite the limitations of each of these studies, the dramatic differences in their findings naturally raise some striking questions including the following:

- Why are MOOC and OER related phenomena so different in the North and the South?
- What are the challenges and opportunities in the Global South?
- How does the Global South negotiate with various challenges inherent in MOOCs and OER developed elsewhere?
- What may have contributed to much higher rates of MOOC participation and completion in the Global South?
- In what ways does the Global South benefit from MOOCs and OER?
- What can we learn from the Global South to leverage MOOCs and OER for sustainable development?

The collection of chapters in this book attempts to answer critical questions, such as those above, with first-hand accounts of MOOC and OER research, projects, programs, initiatives, evaluations, and policy development in the Global South. The 28 chapters cover a total of 47 countries, including 8 in Africa, 11 in Asia, 3 in the Caribbean, 16 in Latin America, 8 in the Middle East, and 1 in the Pacific. The following lists summarize the various countries that are directly addressed or reported on in the book.

**Table 1.1. List of Countries Discussed in the Book**

Region	Countries & Chapters
Africa	<ol style="list-style-type: none"> <li>1. Egypt (Chapter 4, 22)</li> <li>2. Kenya (Chapters 24, 26)</li> <li>3. Somalia (Chapter 24)</li> <li>4. South Africa (Chapters 15, 16)</li> <li>5. Tanzania (Chapter 24)</li> <li>6. Uganda (Chapter 24)</li> <li>7. Zambia (Chapter 24)</li> <li>8. Zimbabwe (Chapters 16, 24)</li> </ol>
Asia	<ol style="list-style-type: none"> <li>1. China (Chapters 3, 16)</li> <li>2. India (Chapter 25)</li> <li>3. Indonesia (Chapters 6, 17)</li> <li>4. Malaysia (Chapters 17, 20)</li> </ol>

	<ol style="list-style-type: none"> <li>5. Nepal (Chapter 9)</li> <li>6. North Korea (Chapter 2)</li> <li>7. Philippines (Chapters 17, 21)</li> <li>8. Sri Lanka (Chapter 7)</li> <li>9. South Korea (Chapter 2)</li> <li>10. Thailand (Chapters 13, 17)</li> <li>11. Vietnam (Chapter 17)</li> </ol>
Latin America	<ol style="list-style-type: none"> <li>1. Argentina (Chapters 10, 18)</li> <li>2. Belize (Chapter 18)</li> <li>3. Bolivia (Chapter 18)</li> <li>4. Brazil (Chapters 10, 18, 19)</li> <li>5. Chile (Chapters 10, 18)</li> <li>6. Columbia (Chapters 10, 16, 18)</li> <li>7. Costa Rica (Chapters 10, 18)</li> <li>8. El Salvador (Chapter 10)</li> <li>9. Ecuador (Chapter 18)</li> <li>10. Guatemala (Chapter 10)</li> <li>11. Honduras (Chapter 10)</li> <li>12. Mexico (Chapters 10, 16, 17, 18)</li> <li>13. Paraguay (Chapter 10)</li> <li>14. Peru (Chapters 10, 18)</li> <li>15. Uruguay (Chapter 10)</li> <li>16. Venezuela (Chapter 18)</li> </ol>
The Caribbean	<ol style="list-style-type: none"> <li>1. Bahamas (Chapter 16)</li> <li>2. Barbados (Chapter 18)</li> <li>3. Dominican Republic (Chapter 10)</li> </ol>
The Middle East	<ol style="list-style-type: none"> <li>1. Israel (Chapter 22)</li> <li>2. Jordan (Chapter 22)</li> <li>3. Kuwait (Chapter 22)</li> <li>4. Lebanon (Chapter 22)</li> <li>5. Qatar (Chapter 22)</li> <li>6. Saudi Arabia (Chapter 22)</li> <li>7. Turkey (Chapter 11)</li> <li>8. UAE (Chapter 22)</li> </ol>
The Pacific/Oceania	<ol style="list-style-type: none"> <li>1. Fiji (Chapter 7)</li> </ol>
Total Countries	45

What is clear from Table 1.1 is that a huge swath of the Global South is represented in the chapters of this book. They include both top 20 economies like China, India, Brazil, Mexico, Indonesia, Saudi Arabia, and Turkey as well as much poorer ones like Zimbabwe, Zambia, Uganda, the Bahamas, Somalia, and Fiji. Clearly, the educational resource base for the Global South is quite varied and differentiated. As shown by Atieno Adala in Chapter 24, research on

OER in teacher education in six countries in Africa indicates that the creation, repurposing, use, and sharing of OER dramatically vary by country as well as by institution within each country. Issues of accessibility, awareness, and policy have considerable impact on ultimate use and extendibility of OER.

While we highlight the unique chapter from Adala here, we hope that the reader will find critical perspectives on the landscape of MOOCs and OER in the Global South across the 28 chapters of this book as well as the preceding Preface by us editors and Foreword by Mimi Lee. The chapters describe an assembly of national initiatives, international design and development projects, systematic literature reviews, empirical studies, and institutional policies. Of course, it also includes various design and development frameworks, applications, and evaluation criteria. To help you more quickly locate needed information, Table 1.2 summarizes the chapter topics, foci, and organizations found in this book.

**Table 1.2. Chapter Foci, Topics, and Organization**

<b>Section 1: Historical Perspectives</b>			
Chapter	Region of Focus	Countries covered	Main Topics
2	Asia	South Korea  North Korea	<ul style="list-style-type: none"> <li>• Evolution and innovative roles of K-MOOC</li> <li>• Unique opportunities to bridge two sister countries via K-MOOC</li> <li>• Cultural sensitivities</li> <li>• National initiatives</li> <li>• International collaborations in MOOC and OER</li> </ul>
3	Asia	China	<ul style="list-style-type: none"> <li>• Landscape of MOOC in China: Trends and issues</li> <li>• Systematic analysis of MOOC research in China: A critical review</li> <li>• National initiatives by the Ministry of Education in China</li> </ul>
<b>Section 2: Current Practices and Designs</b>			
Chapter	Region	Country	Main Topics
4	Africa	Egypt	<ul style="list-style-type: none"> <li>• Localized designs of MOOCs for the Global South</li> <li>• Contextualization and globalization</li> <li>• Cultural sensitivities and diversifications</li> <li>• Access</li> <li>• Localization and translation of content</li> </ul>
5	Global	n/a	<ul style="list-style-type: none"> <li>• OER challenges and solutions: The critical perspectives</li> </ul>

			<ul style="list-style-type: none"> <li>• Contextualization and globalization</li> <li>• Cultural sensitivities and diversifications</li> </ul>
6	Asia	Indonesia	<ul style="list-style-type: none"> <li>• MOOCs and MOOC-inspired courses and initiatives</li> <li>• A critical review of MOOCs in Indonesia</li> </ul>
7	Asia	Sri Lanka	<ul style="list-style-type: none"> <li>• Contextualized MOOC design and development</li> </ul>
8	Oceania and the South Pacific	Fiji	<ul style="list-style-type: none"> <li>• Culturally sensitive design of MOOC architecture</li> <li>• Contextualization and globalization</li> </ul>
9	Asia	Nepal	<ul style="list-style-type: none"> <li>• High school students in MOOC</li> <li>• Younger generations of learners</li> <li>• Innovations in teaching and learning</li> </ul>
10	Latin America	Argentina Brazil Chile Columbia Costa Rica Cuba Equator Guatemala Mexico Peru	<ul style="list-style-type: none"> <li>• Systematic review of publications on MOOCs in Latin America</li> <li>• Trends and issues as evident in research publications</li> </ul>
11	n/a	n/a	<ul style="list-style-type: none"> <li>• Emotional benefits of diversity in MOOCs</li> <li>• Design MOOCs for diverse learners</li> </ul>
<b>Section 3: MOOC and OER for Professional Development</b>			
12	Middle East	Turkey	<ul style="list-style-type: none"> <li>• pdMOOC: Transforming professional development via MOOCs</li> </ul>
13	Asia	Thailand	<ul style="list-style-type: none"> <li>• Thai MOOC for lifelong learning and open education</li> <li>• Continued education</li> <li>• Lifelong learning</li> </ul>
14	International organization initiatives	Commonwealth of Learning (COL)	<ul style="list-style-type: none"> <li>• Technology-enabled MOOC</li> <li>• Faculty professional development</li> </ul>
15	Africa	South Africa	<ul style="list-style-type: none"> <li>• Institutional learning</li> </ul>



			<ul style="list-style-type: none"> <li>Incubation of meaningful and innovative learning processes at different levels of the university</li> </ul>
<b>Part 4: Multi-Country Collaborations and Global Perspectives</b>			
16	Multi-national: Africa, Asia, Latin America, North America, The Caribbean	Bahamas China Columbia Iran Mexico Zimbabwe South Africa	<ul style="list-style-type: none"> <li>MOOC for a course of change</li> <li>Contextualization</li> <li>Cultural sensitivities and diversifications</li> <li>MOOCs as a transformational approach to sustainable changes and development</li> </ul>
17	Asia and South America	Asia-Pacific Economic Cooperation (APEC)  Indonesia Malaysia Mexico Philippines Thailand Vietnam	<ul style="list-style-type: none"> <li>MOOC development in APEC countries</li> <li>Contextualization and globalization</li> <li>Cultural sensitivities and diversifications</li> <li>Trends, research and recommendations</li> </ul>
18	International organization initiatives  Latin America and Caribbean	Inter-American Development Bank (IDB)	<ul style="list-style-type: none"> <li>Landscape of IDBx MOOCs</li> <li>Impacts of MOOCs on the academic, professional, and social life of learners in Latin America and the Caribbean</li> </ul>
<b>Section 5: Government Policies and Strategies</b>			
19	Latin America	Brazil	<ul style="list-style-type: none"> <li>Development of open education in Brazilian higher education</li> <li>National and international policies advancing open education</li> </ul>
20	Asia	Malaysia	<ul style="list-style-type: none"> <li>Policies and implications for sustainable development of MOOCs</li> </ul>

			<ul style="list-style-type: none"> <li>National and institutional policies</li> </ul>
21	Asia	The Philippines	<ul style="list-style-type: none"> <li>OER for development</li> <li>Design and implementation of OER</li> </ul>
22	Middle East	Jordan Saudi Arabia UAE	<ul style="list-style-type: none"> <li>Arab MOOCs</li> <li>Disruptive learning</li> </ul>
<b>Section 6: Organizational Innovations</b>			
23	International organization initiatives  Multi-national	The World Bank	<ul style="list-style-type: none"> <li>World Bank initiatives</li> <li>Dividend for development</li> <li>Sustainable development</li> </ul>
24	Multi-national	6 African countries:  Kenya, Somalia, Tanzania, Uganda, Zambia, and Zimbabwe	<ul style="list-style-type: none"> <li>Does adoption of open educational resources (OER) lead to open education practices (OEPs)?</li> <li>Faculty use of OER as a resource for course development, training new faculty, lesson preparation, and student readings.</li> <li>OER uses lead to practices of repurposing, creation, and sharing of open education</li> </ul>
25	Asia	India	<ul style="list-style-type: none"> <li>16 MOOCs on agriculture in India</li> <li>MOOCs for sustainable development</li> </ul>
26	Africa	Kenya	<ul style="list-style-type: none"> <li>Instructional design framework for online degree programs using MOOC and OER</li> <li>Instructional design</li> </ul>
<b>Section 7: Future of MOOCs and OER</b>			
27	n/a	n/a	<ul style="list-style-type: none"> <li>Intelligent MOOCs</li> <li>Future of MOOCs and OER</li> </ul>
28	n/a	n/a	<ul style="list-style-type: none"> <li>Future of MOOCs and OER</li> <li>Predications</li> </ul>

### Challenges facing the Global South

Various scholars have examined the countless challenges to fully realize the potentials of MOOCs and OER in the Global South (e.g., Hodgkinson-Williams, & Arinto, 2017; James & Bossu, 2014; Khan, Hameed, Yu, Islam, Sheikh & Khan, 2018; King, Pegrum, & Forsey, 2018;

Nkuyubwatsi, 2014). The most prevailing challenges include: (a) limited access to the Internet or bandwidth; (b) significant technological barriers; (c) the lack of prerequisites in terms of knowledge, skills, and language and digital literacy, and, perhaps most critically, (d) mis-alignments between MOOCs and OER developed in the Global North and the cultures, languages, pedagogies, and local contexts of the Global South. It appears to be clear that, despite all the promising potential, MOOCs and OER originating in the Global North have rather limited capacities to provide localized or contextualized learning opportunities for the diverse populations in the Global South (e.g., Bidaisee, 2017; Castillo, Lee, Zahra, & Wagner, 2015; Ichou, 2018).

### **Successes in the Global South**

In the few years since the Incheon Declaration (UNESCO, 2015), MOOCs and OER have been scaled up across the Global South through a wide range of local, national, and international initiatives as well as individual and organizational efforts. Chapters in this book showcase some of the most influential and impactful projects, frameworks, policies, research, programs, and evaluations, which are enjoying notable success in overcoming the varied challenges in the Global South. By featuring them in one book, there is a greater opportunity for insightful and creative applications and replications. The chances that they can be further refined and extended is also elevated.

The Global South has a long history in distance education (DE). For decades, DE has been tactically leveraged and engineered at the national level as a powerful strategy to address the ever-growing demands for education (e.g., Bonk, Lee, Reeves, & Reynolds, 2015; Carr-Chellman, 2005; Carr-Chellman & Zhang, 2000; Garrido et al., 2016; Hodgkinson-Williams & Arinto, 2017; King et al, 2018; Zhang & Hung, 2006, 2009; Zhang, Liang, & Sang, 2013). The MOOC phenomenon has spurred new initiatives in those countries with a long record in DE. For example, during the past few years, China has proactively responded to the MOOC explosion started in the Western world. In 2015, the Chinese Ministry of Education (MoE) published an aggressive national plan to “to strengthen the construction, use and management of MOOCs” (MoE, 2015). Less than three years later in January 2018, the MoE in China introduced 490 National Elite Online Courses, which were selected and recognized as the best open online courses in China. With the goal to offer approximately 3,000 national elite online courses free to the general public by 2030, the Chinese government provides generous funding and resources for the creation and delivery of online open courses.

Likewise, as Young Kim, Ock Tae Kim, and Jin Gon Shon examine in detail in Chapter 2, the South Korean Ministry of Education has also been pressing the development and promotion of MOOCs in Korea, known as K-MOOC. Further, Kim and colleagues have proposed innovative and promising applications of K-MOOC to connect the two sister countries, North Korea and South Korea through national initiative and developments. Similarly, nationwide, government-driven MOOC movements are widespread in the Global South. For instance, our authors critically review Thai MOOCs (Chapter 13), the MOOC portal in Turkey (Chapter 12), MOOC-like or MOOC-inspired OER in Indonesia (Chapter 6), and MOOCs and OER integrated as open education practices in Africa (Chapter 24), to name a few. These national initiatives and government supported structures and programs have generated a rapid, massive growth of MOOCs and OER in the Global South.

Consequently, the western-born MOOC hype has taken various new forms and perspectives (e.g., Weiland, 2015; Zheng, Chen, Burgos, 2018; Zawacki-Richter, Bozkurt,

Alturki, & Aldraiweesh, 2018) in the Global South to serve the different needs in countries and regions, where the demands for education are ever growing, while resources and access are quite limited. The Global South has generated an enormous amount of newly created MOOCs for the specific populations and needs there. For instance, they must be offered in their languages (e.g., Arabic, Chinese, Korean, Portuguese, Spanish, etc.), and with culturally sensitive customizations. More remarkably, with strong government support and national initiatives, the South has created many culturally contextualized, country-specific, or language-specific MOOC platforms and OER portals. Proactively through such MOOC platforms, the Global South has been contributing to the global community with new knowledge, ample resources, and innovative opportunities for continuing, lifelong learning, and much more. Table 1.3 summarizes some of the most popular country-specific MOOC platforms developed by countries or organizations in the Global South.

**Table 1.3. A Partial List of Country-specific MOOCs in the South**

<b>Country-specific MOOC Platforms in the South (in alphabetical order)</b>	<b>Country of Origin</b>
Edraak	Jordan
K-MOOC	South Korea
IndonesiaX	Indonesia
Mena Versity	Lebanon
MexicoX	Mexico
National Programme on Technology Enhanced Learning (NPTEL)	India
Rwaq	Saudi Arabia
SkillAcademy	Egypt
Study Webs of Active-learning for Young Aspiring Minds (SWAYAM)	India
ThaiMOOC	Thailand
XuetangX	China

These various MOOC platforms serve a great number of people in the Global South. In fact, many of them have millions of registered users. Several of these MOOC platforms have been integrated into formal educational systems, again with governmental support and guiding policies at the national level. For example, in India, students may earn up to 20% of their degree program from SWAYAM, the Indian MOOC platform. SWAYAM also enables schools to reach remote, rural areas in India. With SWAYAM, India is able to increase its Gross Enrollment Ratio (GER) in higher education from 24.5% in 2015-16 to 25.8% in 2017-18; the Indian government further aims to reach 30% of GER by 2021 (Press Information Bureau, 2018a). Additionally, in December 2018, the Indian government signed a memorandum with Afghanistan, another country in the Global South, for Afghanistan educational institutions and students to offer MOOCs and take courses on SWAYAM (Press Information Bureau, 2018b).

In addition to leveraging MOOCs to supplement and transform traditional higher education or degree programs, MOOCs and OER are also widely applied in the Global South to provide non-traditional opportunities for informal, lifelong learning, professional development initiatives, and micro credentials (e.g., Commonwealth of Learning, n.d.; Dodson, Kitburi, &

Berge, 2015; Garrido, Koepke, Anderson, Felipe Mena, Macapagal, & Dalvit, 2016; IBL News, 2019; Shah, 2019; Wagner, 2018; XuetangX, n.d., Zhang, 2015; Zhang & Gao, 2014). It is noteworthy that XuetangX, a MOOC platform developed by China, for instance, has reached 16.3 million users in January 2019 (IBL News, 2019) with over 200 corporate partners and MOOC offerings in multiple languages (XuetangX, n.d.). It is now the world's third largest MOOC platform in terms of users, only after Coursera (37 million) and edX (18 million) (IBL News, 2019). Many chapters in this book discuss in detail the design, development, implementation, research, and evaluation mechanisms of these Global South oriented MOOCs.

MOOCs and OER in the South also boast creative ways of integration and application by employing diverse learning modalities (e.g., IBL News, 2019; XuetangX, n.d.). For example, Rain Classroom, a mobile app featured on XuetangX, empowers over seven million users with interactive learning activities and instant assessments for blended learning or in flipped classrooms via smart phones. Paired with XuetangX Cloud, a teaching platform for faculty to use on campus, instructors can easily integrate Rain Classroom into their daily teaching practices. Another novel product by XuetangX, is AI Xuetang. Backed by the Online Research Center of China's Ministry of Education, AI Xuetang specializes in K-12 education where it provides personalized learning and enables dynamic assessments for K-12 students. XuetangX even offers a virtual teacher using AI technology, named Xiaomu for learners. Xiaomu monitors learner's progress, while guiding them with prompts as well as questions and answers. It also engages learners with constant encouragement and suggestions at different stages of the learning process. Such innovative technologies and new ways of teaching are gradually transforming education in the Global South.

As evident in the stories of success from the 40 countries highlighted in this book, MOOCs and OER have provided a wide variety of participants in the Global South with much needed opportunities for education, especially for adult learners. In particular, they can offer unique opportunities for professional development, and skill-focused or job-critical training and learning. For example, chapters in Section 3 of this book share details of MOOCs for professional development in Turkey, Thailand, South Africa, and various countries of the Commonwealth.

### **Open Education: Open Educational Resources to Open Education Practices**

Intense research studies as well as the everyday press have articulated numerous challenges in the Global South as related to OER, and more broadly to open education (e.g., Arinto, Hodgkinson-Williams, King, Cartmill, & Willmers, 2017; Commonwealth of Learning, n.d.; de Oliveira Neto, Pete, Daryono & Cartmill, 2017). Nevertheless, open practices in the Global South continue to grow and remain emergent and responsive, as consistently confirmed in several studies from researchers in South Africa (e.g., Czerniewicz, Deacon, Glover & Walji, 2017; Czerniewicz & Goodier, 2014; Hodgkinson-Williams & Arinto, 2017). In fact, in a comparative international study, the reported uses of OER in the Global South were remarkably higher than that reported in more developed countries (de Oliveira et al., 2017). What may have contributed to the differences in OER uses and open education practices between the North and the South? The collection of chapters in this book provide rich, contextualized and culturally diverse insights that will help readers consider different perspectives on these complex issues.

Different frameworks are proposed to help understand the difficulties and issues in open education. For example, Hodgkinson-Williams (2014) identifies technical, cultural, legal, pedagogical, and financial dimensions of openness. Next, she explains the ease or difficulty of

adopting open education from the five dimensions or perspectives. A couple of years prior, Beetham and colleagues (Beetham, Falconer, McGill, & Littlejohn, 2012) proposed six main features of open education practices, and encouraged educators to: (a) allow non-registered students to access learning materials, (b) re-use course materials, (c) engage practitioners in the creation of course documents, (d) share knowledge with the public, (e) encourage others in open education practices, and (f) use open networks for teaching. While such frameworks will continue to be fine-tuned in the coming decade, they already serve a vital role in understanding issues related to the design, adoption, and use of open education.

The many Global South scholars found in this book share concrete examples, projects, strategies, and institutional and national policies associated with OER and OEP in countries and regions like Africa (Chapter 24), APEC (Chapter 17), Brazil (Chapter 19), Egypt (Chapter 4), Indonesia (Chapter 6), Kenya (Chapter 26), Malaysia (Chapter 20), and the Philippines (Chapter 21). At the same time, some of these lenses extend more globally via critical perspectives (Chapter 5) whereas others offer international perspectives with organizations like the World Bank (Chapter 23), the Commonwealth of Learning (Chapter 14), the Inter-American Development Bank (Chapter 18), and much more.

## **In Conclusion**

This book is a compilation of the experience and wisdom of many different scholars and education leaders. None of them warrant that they have all the answers, or all the questions, for that matter. In fact, they would probably all agree that there are many serious issues and concerns that must be confronted as MOOCs and Open Education evolve around the world. For example, if someone in the Global South completes a MOOC offered by a prestigious university in the North such as Harvard, MIT, or Stanford, and even has earned a certificate of completion, what is its ultimate value or worth?

While the knowledge and skills gained will certainly have intrinsic value, it is important to ponder whether employers will place any faith in certificates, nanodegrees, digital badges, micro credentials, or other forms of certification emanating from MOOCs and OER. Although in the North this acceptance may seem to be up to individual employers, strong national policies in many Global South countries have been promoting awareness and acceptance of such varied forms of open education, including the implementation of MOOCs and OER. As MOOCs and open forms of education evolve, will the elite institutions continue to stand behind and support these products; and if so, how? If government support or incentives fade, how would the practice of open education be sustained? Similar issues arise when considering home-grown forms of open education.

The editors of this volume have vastly different experiences in the Global South. The first author has extended roots in the Global South, together with substantial experiences in educational research and development at the national, international and organizational levels in Asia and Eurasia. The third and fourth authors have been Fulbright scholars in Peru and Columbia, and have been involved in research in several other Global South countries; in fact, the fourth author conducted OER research when in Columbia a decade ago. And the second author has made dozens of visits to parts of the Global South in higher education settings related to online and blended learning, including MOOCs and open education. We have learned much from each journey there; in fact, we met many contributors to this particular book during our professional experiences in the Global South. While each of us had a unique set of personal experiences and stories on which we drew upon when drafting and editing this book, we

structured this book in the hopes of sharing a widely diverse range of views and perspectives that may stimulate important new conversations flowing South and North as well as East and West.

If successful, some of the ideas and perspectives presented in the ensuing chapters will spark new collaborations in research and development at the national, international, regional, local, organizational or individual levels. They may also attract new and continuing investments from government agencies, educational institutions, not for profit organizations and corporate interests. These are among the key goals that have driven our efforts to curate this book. We trust that you share some of them and welcome you to add many of your own goals, targets and purposes.

It is now time to journey ahead to the next 27 chapters. We hope that you glance back to this introductory chapter from time to time, and compare and contrast the insights that may gently, or more forcefully emerge in your own interpretations and conclusions with what we, the team of editors have attempted to highlight for you. Nevertheless, each of you should have personally meaningful and professionally relevant themes and takeaways that are solely your own. As you generate such personal insights and conclusions, we welcome you to share them with us or forward any reviews of this book that you may produce or oversee. Let's work together to realize the sustainable development goal for "inclusive and equitable quality education" (United Nations, 2015) across the world, North, South, East, and West!



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