PREFACE

MOOCs and Open Education—Wandering and Winding Our Way to Today

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Wandering in the Global South

More than a century ago, the Spanish poet, Antonio Machado (Wikipedia Contributors, 2019a), 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, every day 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. Every day 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 of this Preface), 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 ten 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's 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 1990s, 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 the previous anecdotes from Reeves, Bonk, and Reynolds, 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 the 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 MOOC and OER designers are creating culturally sensitive and appropriate courses and contents (Zhu et al., 2019).

What the various vignettes 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 thus 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 Nicenet 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.
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> *(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.
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> *(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, 2008). 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 available to listen 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 its 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, is that 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 Stephen 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 100,000 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 of OER and MOOC-based certification programs at the tertiary education level in the Philippines (see Chapter 21 from Melinda dela Peña 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 inroads 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 Abuhamdeih, and Shriram Raghunathan). 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 & Cheung, 2014). There are no lengthy application processes 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 programing (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 21st 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 *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 previously, 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 (Commonwealth of Learning, 2019). 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 these 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 unreached 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 have been able to assemble so many world-renowned scholars who contributed to this edited volume. Some of them presented with us at the pre-conference 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

We hope 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 in 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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and Thomas H. Reynolds

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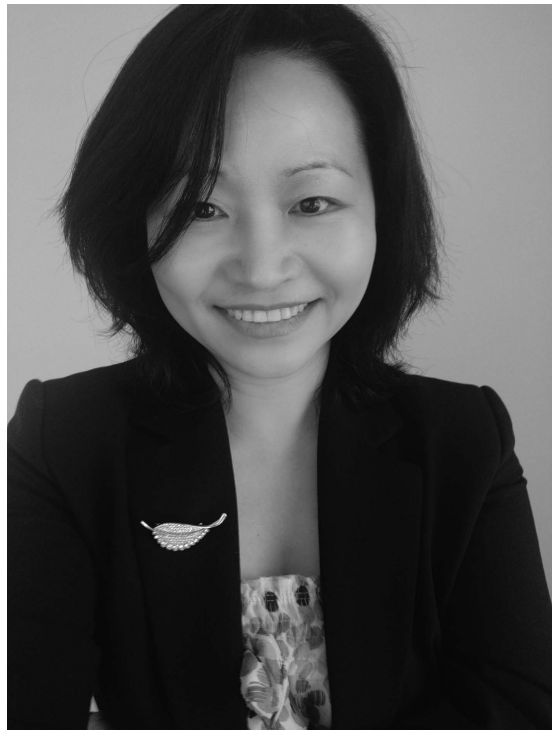

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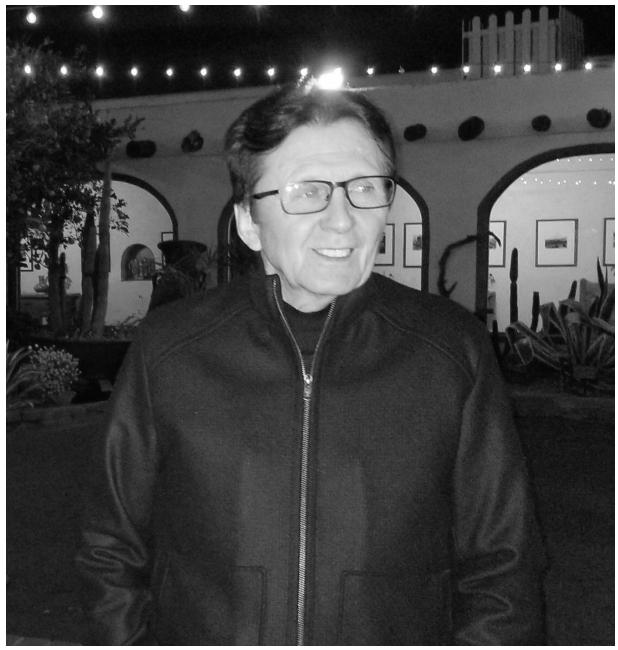

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Challenges, Successes, and Opportunities

EDITED BY
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THOMAS C. REEVES,
AND THOMAS H. REYNOLDS

ROUTLEDGE

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