Irwin King Wei-I Lee

A Decade of MOOCs and Beyond

Platforms, Policies, Pedagogy, Technology, and Ecosystems with an Emphasis on Greater China



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Foreword

Ever since the emergence of MOOCs, the education landscape has been evolving drastically. In the wake of surging demands for online learning during the outbreak of COVID-19, MOOCs have played a pivotal role in sustaining education and disseminating knowledge globally. Apart from the basic function of delivering lessons, teachers can leverage a rich palette of advanced tools available on eLearning platforms to track students' performance, evaluate the pedagogy adopted, and enhance teaching effectiveness. Given the rising popularity of MOOCs in addressing new educational norms, A Decade of MOOCs and Beyond: On Platforms, Policies, Pedagogy, Technology, and Ecosystems with an Emphasis on Greater China covers a plethora of prevailing topics, including but not limited to global policies of MOOCs, as well as MOOC ecosystems in the Greater China region, the United States, and European countries. The outlook of MOOC development worldwide is critically explored, providing insights on sustaining eLearning in years to come. Educators across the globe will gain a better understanding of the unique strengths of major MOOC platforms in the world and their profound impact on the global education landscape.

Pro-Vice-Chancellor, Vice-President (Education) Professor, Department of Statistics The Chinese University of Hong Kong Shatin, Hong Kong Isabella Poon

Foreword

The year 2012, considered by *The New York Times* as the year of MOOCs, was a milestone year for the National Yang Ming Chiao Tung University, as it began to design Taiwan's first MOOC website. The website was officially launched in the following year. Meanwhile, in mainland China, Tsinghua University started operating its first MOOC website around the same time. Over the past ten years, MOOCs have made a profound impact on the world, with development in full swing in Chinese-speaking regions. Not only have they benefited numerous people through open education, they have also made a great contribution to the development of online learning in universities and high schools. During the period from 2013 to 2022, universities in Taiwan have developed approximately 1000 MOOCs. Considering its population of 2.3 million people, Taiwan is one of the places which have produced the highest densities of MOOCs. During the COVID-19 outbreak, schools at all levels in Taiwan adapted to online learning quickly, partly due to Taiwan's past experience in developing MOOCs. A Decade of MOOCs and Beyond explores important issues related to MOOCs over the past decade and offers suggestions and expectations for future development. The authors have made keen observations on the development of MOOCs and looked at it from a broad perspective. The book, in particular, has made an inclusive discussion and comparison of the current situation in the Chinese-speaking region, which will be vital for us to plan the future development of MOOCs and online learning.

President of National Yang Ming Chiao Tung University Chi-Hung Lin Taipei, Taiwan

Foreword

MOOCs have played a vital role in the flourishing development of the open education movement in the last decade. In 2013, when I was serving as the director of the MOOCs program at National Taiwan University, I was responsible for launching two MOOCs in Chinese for the first time on Coursera: a probability course recorded by myself and a history course about Emperor Qin Shihuang by Professor Shih-Hao Lu. These first two classes attracted tens of thousands of learners from all over the world, and I could deeply feel the influence of open online learning far and wide. Over the past ten years, the MOOC movement has been prevalent and successful in different language regions worldwide, especially in Chinese-speaking regions. Therefore, I am glad to see the publication of this MOOC book by Prof. Irwin King and Prof. Wei-I Lee. The book explores many important issues in the development of MOOCs over the past decade, including policies, pedagogies, technology applications, and the eLearning ecosystem. What is especially valuable is that it presents and compares the histories as well as the current situations of the MOOC movements in different Chinese-speaking regions, including Taiwan, mainland China, and Hong Kong. I believe the book will become an essential reference for research scholars and English readers to understand the development of open education in Chinese-speaking areas.

Professor, Department of Electrical Engineering, Associate Dean, D School, National Taiwan University Taipei, Taiwan Ping-Cheng Yeh

Preface

Despite being a relative newcomer to the education scene, Massive Open Online Courses (MOOCs) have transformed the education norm significantly. Utilizing the Internet, MOOCs provide easily accessible learning opportunities and avail education resources to benefit a large number of people. Nowadays, this new mode of learning is bringing about radical changes in the education sector. The mass release of resources and ease of access to higher education curriculum have accelerated the liberalization of knowledge and enhancement of equitable education, where individuals of different financial statuses can enjoy the opportunity to acquire knowledge that used to be restricted to those who could afford higher education. MOOCs' online platform removes constraints in time, space, and subject availability that are often associated with traditional classrooms, thus making education more widely accessible. This allows a higher degree of flexibility for those with busy lifestyles or time constraints, and the elimination of the physical presence in lessons further encourages learning.

Regardless of evident benefits and influences, MOOCs as an emerging education mode have thus far seen few systematic and wide-ranging studies in academia. This book provides a detailed illustration and comparison of MOOC developments around the world in the past decade. In view of the emerging opportunities in the education landscape in Greater China, this book focuses on the latest development of MOOCs in the region. Major MOOC platforms flourished in Mainland China, Taiwan, and Hong Kong are explored in a broad array of aspects, including core functions, courses offered, operating models, collaborations with other partner institutions, MOOC ecosystem, as well as governmental and institutional policies.

The book is intended for a general audience who is interested in MOOCs and its first decade of development in a wide ranging of topics. In terms of topic diversity, the book contains a comprehensive investigation of the past and latest MOOC developments, extracting and elaborating on relevant information of platforms, policies, pedagogy, technology, and ecosystems. Subsequently, in-depth analyses of MOOC data are utilized to deduce the current trends related to the MOOC movement and to extrapolate the likeliest direction of development for MOOCs in the years to come. Having included these details, the book can inform policymakers, education

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institutions, course instructors, platform developers, investors, researchers, and individual learners of MOOCs about critical information on the present and future of MOOC development, assisting them in making crucial decisions on what initiatives can optimize their advantages in the sector.

The content is categorized into chapters by subjects and themes, i.e., the aspects of platforms, policies, pedagogy, technology, and ecosystems. Where appropriate, the analysis is presented by regions in individual chapters to facilitate a more productive review of the data available. It is hoped that upon finishing the book, readers can recognize the significance of MOOCs in the education sector and seize the opportunity to benefit not only themselves but also to introduce the means of learning to others so that MOOCs can truly unleash their potential.

The book is divided into three main parts: Part I: Overview of MOOCs introduces the origin and history of MOOCs, and the development of MOOC platforms in Greater China and global context; Part II: Key issues discuss the MOOC policies, innovative pedagogy, technology, and ecosystems worldwide; and Part III: Beyond MOOCs probes into the roles and benefits of MOOCs in times of crises, as well as the outlook of MOOCs in the future.

Part I presents readers an account of how MOOCs came their way to where it is today. Chapter 1 recounts the history of MOOCs and how their precursors molded the paths of eLearning and online learning, the influences of which can still be observed today. Chapter 2 pinpoints how technological and pedagogical factors shaped an environment ideal for the rise of MOOC platforms around the world. The development of MOOCs and their platforms in the Greater China region is identified and explained in Chap. 3, along with an exploration of the circumstances under which the platforms were created.

Part II probes into certain key issues in MOOCs, covering policies, pedagogy, technology, and ecosystems. Chapter 4 explores governmental or international policies formulated and initiatives undertaken in response to the rise of MOOCs, examining how such policies evaluate impacts, encourage adoption, or regulate the usage of MOOCs. Where possible, contexts and results of such utilization in different regions are analyzed and compared. Chapter 5 discusses pedagogical methods commonly infused with MOOCs, which help course instructors select the most suitable teaching strategies for their online courses to boost student engagement and learning efficiency. Chapter 6 covers existing and proposed technological advancements that can enhance the user experience of MOOCs, encompassing burgeoning fields such as artificial intelligence and virtual reality. Chapter 7 examines the MOOC ecosystems in the Greater China region, Europe, and the United States, investigating how various stakeholders in each ecosystem interact and shape different MOOC cultures. Common business models involving online courses are introduced so that executives of platforms can discern income streams suitable for their companies.

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Part III explores surging demand for MOOCs amid the COVID-19 pandemic and examines how MOOCs play a significant role in shaping the new normal in education worldwide in times of crises.

Hong Kong, China Hsinchu, Taiwan Irwin King Wei-I Lee

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