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Higher education design: An emerging but cannot be ignored agenda

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Recent popular press articles show that design thinking is a widely applied theoretical framework in every educational domain, particularly project-based learning, curriculum, and research (Pande and Bharathi, 2020). The 2020 pandemic has accelerated higher education reforms by cutting off international mobility for students and faculties, replacing traditional lectures with online courses, and making the campus optional rather than necessary. Inspired by design thinking that refers to a set of creative skills for understanding and solving ambiguous and complex problems, as well as a practice that places humans at the heart of the design process (Vallis and Redmond, 2021), *Higher education design: big deal partnerships, technologies and capabilities* puts forward higher education design innovatively. This book constructs a well-structured higher education architecture with three pillars of what education technology (EdTech) establishes, namely EdTech (silicone solutions), campus options (concrete foundations), international connections (burning kerosene), and roofing through higher education supply-side and demand-side turbocharged reconfigurations of new education economy. The main purpose of this book was to design in diverse and evolving ways to engage higher education toward the future from a transformative perspective. The ideas in this book echo the urgent need for the sustainable development of higher education in the era of the knowledge economy.

This book starts with the storyline of higher education design (Chapter 1). The 10 chapters of this book were mainly divided into two parts, that is, why (Chapters 1–5) and how (Chapters 6–10), to design higher education. The topics covered in this book span a wide range of, and offer a coherent engagement with, many current problems in higher education, including internationalization, information technology, ranking, doctoral education, and public–private partnerships. Coherence is the result of the book's consistent application of one essential principle, which is how to design higher education from the perspectives of problem-solving, student-centered, and future-oriented aspects to thrive in a world full of uncertainties. Higher education design focuses on its value proposition, solutions rather than problems, and the new directions it might take in the future, which is pressing because it involves creating systems, institutions, and resources. Changes in higher education can be realized only with complete collaboration from the individuals, instructional resources, institutions, governments, and global educational organizations. The core components of designing higher education include how to assist individual students in succeeding, reform student's learning assessments, redesign partnerships, pursue beneficial growth trajectories, and highlight the characteristics of future global higher education. It is unfortunate that higher education design only receives less attention because most people are unaware of the intricacy and breadth of these fields. The author has competence in the aforementioned subjects, as evidenced by the dozens of self-cited publications that have been included in the references, and claims that the book was slow-brewing but fast-written during the global pandemic crisis.

The maturation of education technology helped digital formation of higher education to flourish, and the pandemic-induced educational shock accelerated online higher education transformation (Guo et al., 2020). With the abundance of technological products and curricula, technology became unavoidable and swamped core facets of higher education at the end of the first decade of the century. Education and institutions were enabled by technology, and a new EdTech ecosystem involving human, physical, and virtual resources is forming. Those who do not fully utilize the advantage of EdTech will fall behind. Chapter 2 points out that EdTech is the first and foremost reason and the approach to designing higher education. As a plethora of EdTech firms provide services and education products, non-governmental investment plays a significant role in consolidating and reshaping EdTech with the decline in government investment, creating the “grey-zone” services out of formal sectoral and institutional structures. Nearly all facets of higher education have been affected by EdTech and its sophisticated platform firms, and the impact of market capitalization on higher education through EdTech has grown to be a big and complex issue. Coates calls for a greater emphasis on the educationally flavored commercial orientation of education reforms, especially the new education value created by the constellation of education, technology, and business.

At present, online learning is highly functional, and students can get more affordable and intangible higher education with the help of ubiquitous online courses. Online learning shifts the learning spaces, and campuses wriggle free from the necessity of higher education. However, most of the students still prefer to learn in a traditional, face-to-face, classroom setting (Barak et al., 2016), and the “blended learning design” is the bionic university resting on the reconfigurations of online and campus infrastructure (Chapter 3). Online learning and campus life are compatible in a “blended learning design”. Coates argues for supplementing more virtual forms and displaying dominant advantages compared to solely on-campus and online learning. The blueprint of “blended learning design” enables people to escape the technology trap and turns the myth of “technology to solve education” into “education can solve technology”.

As regards higher education, institutions are the instigators of further globalization and internationalization for connecting people across regional, national, and cultural boundaries (Tight, 2021). Chapter 4 describes the international higher education design framework in detail to help readers understand the interconnected nature of future higher education. It concludes with the statement that collegial, sponsored, open, and commercial are the four precursor forms of international higher education by tracing the history, and these four established forms are not mutually exclusive but highly interrelated. Higher education bears the responsibility of empowering learners in a connected community by helping people develop through international mobility. Contemporary online forms of open education and commercial forms of higher education pave the way for occupying an enduring place in higher education. Connectivity, rather than separation, has the potential to promote the prosperity and sustainability development of higher education. Therefore, Coates advocates the connected higher education design framework to design possible futures and elaborates on the characteristics and the reform directions of higher education.

Given that the global reliance on online learning and the diversification demand for higher education turbocharged a new education economy in 2020, Chapter 5 draws on demand and supply theories to examine the market and policy design from a strategically favorable vantage position. Coates analyzes how higher education moves beyond merely meeting basic needs to fulfilling higher needs by integrating extensive analytical and empirical research to forecast the widespread socioeconomic need. Both developed countries and developing countries compete for world-class universities to raise the standard of higher education (Cremonini et al., 2014), but this macro campaign for world-class education leads universities into a reputation trap. It is appalling that homogenization of higher education submerges diversified institutional services, and student interests and the need for differentiated services create misalignment issues with institutional positioning and product offerings. Therefore, transformational shifts are required to activate the new education economy, and universities need available information about their appropriateness and potential to provide more varied education resources to diverse people. Similarly, rather than concentrating their effort in meeting necessities, students and graduates will lead the industries, organizations, professions, and communities to alter their society. To reconcile the mismatch between supply and demand, Coates addresses the university change as the market design to articulate the new education economy. With the distinct features of a neoliberal and student-centered perspective, a higher education transformed arrangement points out the future directions of market and policy design in higher education.

Higher education is about people, as Chapter 6 advocates that it is the emerging agenda for higher education to contribute to enlightenment, civilization, and the knowledge economy. Coates reiterates that advancing a progressive agenda for academic quality is the only core value of success in higher education design, and that improving the academic quality of education should be paid more attention than research functions to serve the broad interests of industries, organizations, professions, and communities. Nine qualities drawn from the experience of successful students, which were discovery, achievement, opportunity, value, connection, belonging, personalized, enabled, and identity, are presented to define the values of success.

Assessment bookends those who enter and those who leave higher education, and reforming the assessment is a plinth in strengthening people and the entire education system. Driven by the force of supporting, challenging, and enriching each student, Chapter 7 designs the “next-generation assessment” architecture, which consists of an outcome model, a resource model, an experience model, a standard model, and a business model, to help build the platform for ensuring that higher education providers implement high-quality and efficient assessments. It is worth noting that assessment reforms will take years to achieve, showing that fidelity to scientific standards and linking education with financial models are all needed in the next-generation assessment.

The first seven chapters were designed with regard to the specific aspects of higher education, and the institutional redesign proposed in Chapter 8 depicts the overall picture of higher education design. Student-centered philosophy overarches the institutional design, as Coates illustrates, the educational experience is at the core of the creation of an academic value. This is also the reason why the institutional design framework offers a succinct structure

for understanding and forecasting the actual practice. Institutional partnerships with university and commercial education service firms may stipulate shared governance and management arrangements, service standards, and characteristics of the target student markets. The innovative partnerships will take shape through existing regulatory and institutional structures because the governance and basic commercial arrangements are outsourced or cosourced. Coates claims that it is essential to understand the kinds of partnerships that will prosper in the future; therefore, higher education institutions require academic, political, and commercial capabilities.

Seeking greater community engagement through academic, social, and civic activities is the “third mission” of higher education (Khanyile, 2020). However, as research productivity manifests in the broader contribution of research and is seen in the faculty output, research quality, and academic impact, higher education has long been ensnared by bibliometric ranking, the “ivy isomorphism” brought on by world-class agenda neglects the social indicators and erodes the universities’ public value. Given that bringing universities into a broader alignment with social influence, the social contribution embraces spinning regional engagement, national development, and global impact. Chapter 9 appeals to higher education to adapt to the diverse requirements of surrounding communities and designs an education value architecture comprising education success, research productivity, social contribution, and institutional growth. Chapter 6 describes the qualities of a successful student’s experience, while Chapter 9 expands the definition of education success, which can be viewed as student engagement, learning outcomes, and career development. The implementation of these multidimensional education value indicators should be supported by the role transformation of students, universities, governments, and educational firms. It is beneficial to serve communities, encourage diversity and creativity, and make higher education more dynamic based on running an activity-based financial system.

The final chapter knuckles down to those talented in the universities—scholars, faculty, and leaders—because they are the agents who will take the innovative design idea forward. The issues of university leadership, regulation, and global governance are also explored. Considering that doctoral education determines the cultivation of a future faculty, Coates designs a doctoral program architecture that is guided by structural functionalism. Preparations, experiences, and successes are the three phases of the doctoral design structurally, with students and universities undertaking different tasks throughout the duration of doctoral study on the functional facets. However, the suggested doctoral design framework is parsimonious because doctoral education is complicated and personalized in practice. Subsequently, based on the empirical analysis of the Global University President Interviews project at Tsinghua University, Coates identifies collegial, commercial, and political leadership and concludes that future leadership may be a mixture of the three prominent forms. It is imperative to configure the global governance of higher education given the rise of the global south in global higher education. Against this background, it should not be overlooked that the Chinese model contributes to higher education governance by providing a China-to-government to a government-to-government format, making it clear that the governmental approach rather than the commercial approach will be used to guide higher education. These trends echo the prevailing idea that higher education is not business as usual. Resonating with those propositions, this book identifies the key normative and practical

features of an effective future regulation. First, regulators should have the same scope and scale as the institutions being regulated. Second, the regulation must be sufficiently borderless; be sensitive to diverse fields, disciplines, and institutions; and be based on generalizable, verifiable, and relevant evidence. Third, regulatory coherence should be guaranteed. Distributed leadership, academic autonomy, and self-regulation are all encouraged in the transformation of governance.

Higher education design: big deal partnerships, technologies and capabilities is truly a seminal book that describes how the design-thinking analysis offers profound insights into the recent and future reforms of higher education. At a time when many scholars look solely at higher education from the lens of academic research, Coates makes a significant effort to develop ideas to engage individuals who can benefit from investing in higher education *via* the ecology-based perspective. These ideas range from the visible formations to the bodiless concepts, and Coates sets the stage for understanding how design-inspired inquiry and innovation lead to positive changes by reforming the aforementioned essential formations.

This book, as groundbreaking as it is, has its faults. Coates excites the reader with a novel theory in the first few chapters, but it loses steam in the middle of the book as his tangents lead the reader to wonder how all these truly affect higher education design. Contemporary developments are true definers of higher education’s future and vital to higher education design. It is easy for readers to concentrate only on Coates’ pioneering work in cultivating future higher education and overlook the fact that he also devotes a substantial portion of the book to explaining contemporary developments. It would miss the points that change is required at all levels ranging from individual, instructional, institutional, governmental, to global. While the beginning of the book is quite pivotal in explaining Coates’ new theory, he proceeds to wander through a maze of interesting, but tangential, chapters that walk through descriptions of education economy, success expression, and more—none of which are tied to his ultimate theories in more than a tangential way. More importantly, higher education is full of complexity, for example, Chapter 6 designs higher education by acknowledging the market-orientation property; however, Chapter 10 proposes the design by valuing higher education’s nature of public good. This paradox reveals the key problem of this book, which is that it only focuses on the top research-oriented universities without addressing the typology of higher education design.

Overall, based on the resilient and evolving nature of higher education, this book offers a novel perspective that higher education design can aid higher education partnerships in understanding not only their interests but also the society needed for productive higher education in an era filled with turmoil and angst about the role of higher education. This book is recommended for those readers who require an accessible resource and a thought-provoking idea on higher education reforms, especially for those readers who have a long-term interest in Chinese national higher education design. Coates is straight-up about the need to understand Asia, particularly China, which drove him to write this book. He provides a convincing study of how Chinese developments have come to be essential to understand higher education as a whole. The contextualized review of China as the single largest market of higher education reshapes the landscape of internationalization of higher education. China’s Double World Class University Policy and the Belt and Road Initiative help build a domestic higher

education capacity and expand the export of higher education. The architecture designed with Chinese characteristics provides a compelling alternative approach to the development of higher education at a time when discourses on the marketization of higher education are ubiquitous.

Author contributions

MZ and QZ: conceptualization and writing. All authors contributed to the article and approved the submitted version.

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