EDITORS' OVERVIEW

Yakut Gazi[a] and Nelson Baker[b]

The year 2020 will go down in history as an "unprecedented" time, marked by the public health crisis caused by the SARS-CV-2 (coronavirus) and the resulting disease, COVID-19. In responding to this emergency, many of us in higher education found ourselves in a remarkable effort to prepare our institutions for emergency remote course delivery. Those divisions and units that carried out the online and professional education operations for their institutions received a stronger call to duty than ever before.

While some of us in these units have been in the forefront not only online but also of at-scale and affordable learning, especially since 2012, "the Year of the MOOC", the scale of which we have been leaders has largely been a "*vertical*" scale, where we built *a limited number of programs and courses that sustain a vertical growth of enrollments*. Responding to this global health crisis on our campuses on the other hand, entailed wide collaboration and coordination of not only technological capabilities but also human talent distributed across our institutions, to be able to quickly pivot to a *"horizontal" scale of many students distributed over many courses, taught by many faculty*.

As leaders of at-scale affordable learning, we have impressive and complex technology infrastructures and the people know-how distributed in our organizations on how to create programs that respond to a large need in the marketplace, design and produce courses and learner experiences for these programs, find and implement innovative technologies to deliver them, achieve program affordability and financial sustainability, while ensuring data privacy (FERPA, GDPR, etc.), and protecting and promoting our institutional educational quality and brands. In many cases, it is these successes that caused our institutions to turn to us to lead, coordinate, or contribute to the COVID-19 emergency delivery of courses. How did we respond to this challenge? How did we fare? Now that everyone is online, how will the future of our vertical and horizontal scaling efforts look? What can we learn from these efforts that will enable better responses for the future, not just in times of pandemics or emergencies, but always?

[a] Georgia Institute of Technology, yakut@aggienetwork.com, ORCID: 0000-0001-6988-1887
[b] Georgia Institute of Technology, nelson.baker@pe.gatech.edu, ORCID: 0000-0001-9913-3230

This book is an international compilation of institutional responses to the "horizontal scaling" of remote and online delivery of courses. Each chapter gives the context of activities at each institution/organization, followed by the strategy or operational tactics of the coordinated emergency response, highlighting successes, sharing lessons learned, charting future ambitions. The goal of this book is to distill strategies for responding to the need to quickly pivot and meet the needs of a horizontal scaling of learning as a result of emergencies.

Mary Walshok introduces us to the book with a thoughtful strategic view on the meta forces that are shaping the higher education institutions and the pressures that COVID-19 exacerbated. Section I presents two specific examples of how previous tools and approaches that were utilized for the vertical scaling up of programs benefited Georgia Institute of Technology and University of Illinois Urbana-Champaign to horizontally scale remote delivery. These two institutions became forbearers of the affordable at-scale learning realm with their groundbreaking Online Master of Science in Computer Science (OMSCS) in 2014 and on online MBA (iMBA), respectively. Many programs followed since then.

Section II exemplifies strategies and tactics involved pre- and during COVID to respond to the horizontal scaling of remote learning at Georgetown University, University of California at Davis, and at Louisiana Tech University. These are not only starkly different types of higher education institutions, but they were also at varying levels of maturity in terms of infrastructure and services for remote delivery when COVID-19 hit these institutions. Each of their journeys uses an interesting lens through which these stories are told; pivoting while staying true to the Jesuit values, pivoting of a continuing education unit to serve the broader institution, and building the infrastructure from scratch, leveraging the new human and infrastructure resources.

Section III takes the activities and examples of COVID-19 and posits a broader perspective of a culture of continuing innovation, inquiry, and progress. The Kirwan Center for Academic Innovation masterfully weaves their typical approach to innovation that is grounded in problem solving and thoughtful experimentation into their pivot to serve the varying components of the University of Maryland. The Center for 21st Century Universities researchers describe how yesterday's pilot studies at Georgia Tech serve today's crises, stressing the importance of continuing research and development culture for tomorrow's issues, large or small. The Dutch higher education administrators shed light on what innovation looks like in a context where growth is not fueled by financial concerns as a result of public-financed higher education.

Section IV brings the concept of scale to the forefront again. We first start with a story of scaling for learning at a place where scale is in the DNA. The early stages of recognition for the education needs in Kerala and the value it brings to society provided an excellent background,

which in combination with preparations for scale with technology placed this Indian state in a position to respond quickly and quite effectively. There are lessons here for all, especially in the coordination and collaboration across government and NGO entities and efforts. The authors bring us a concept of scale in the state of Kerala that we do not experience within our local educational systems. An at-scale learning platform leader, edX, makes a case for how the move to blended education is now on an accelerated track that will irreversibly change education to a blended modality and will be here to stay post-COVID. The University of Washington's approach concludes the institutional stories with a unique perspective on scaling not only learning but also the other aspects of horizontal delivery of education, such as learner services, engagement, career services, which all need to operate at-scale now and in the future but retain the personalization to each individual.

The book culminates with a perspective on not only our experience at Georgia Tech with vertical and horizontal scaling of learning, but also our thoughts on the role of affordability and scale for the future of learning in a post-COVID world.

Last, but not least, we could not have done this work without our family's unwavering support for us throughout our careers, but certainly especially during this year of the pandemic, 2020.