

ONLINE, OPEN, AND
EQUITABLE EDUCATION

**Center for Engaged Learning
Open Access Book Series**

Series editors, Jessie L. Moore and Peter Felten

Pedagogical Partnerships: A How-To Guide for Faculty, Students, and Academic Developers in Higher Education

Alison Cook-Sather, Melanie Bahti, and Anita Ntem

<https://doi.org/10.36284/celelon.0a1>

The Power of Partnership: Students, Staff, and Faculty Revolutionizing Higher Education

Edited by Lucy Mercer-Mapstone and Sophia Abbot

<https://doi.org/10.36284/celelon.0a2>

Writing about Learning and Teaching in Higher Education: Creating and Contributing to Scholarly Conversations across a Range of Genres

Mick Healey, Kelly E. Matthews, and Alison Cook-Sather

<https://doi.org/10.36284/celelon.0a3>

What Teaching Looks Like: Higher Education through Photographs

Cassandra Volpe Horii and Martin Springborg

<https://doi.org/10.36284/celelon.0a4>

Writing Beyond the University: Preparing Lifelong Learners for Lifewide Writing

Edited by Julia Bleakney, Jessie L. Moore, and Paula Rosinski

<https://doi.org/10.36284/celelon.0a5>

Becoming a SoTL Scholar

Edited by Janice Miller-Young and Nancy L. Chick

<https://doi.org/10.36284/celelon.0a6>

Online, Open, and Equitable Education

Lessons from Teaching and Learning
during the Global Pandemic

*Edited by Nancy K. Turner, Nick Baker,
David J. Hornsby, Aline Germain-Rutherford,
David Graham, and Brad Wuetherick*

Elon University Center for Engaged Learning
Elon, North Carolina
www.CenterForEngagedLearning.org

©2024 by Nancy K. Turner, Nick Baker, David J. Hornsby, Aline Germain-Rutherford, David Graham, and Brad Wuetherick. This work is made available under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International](https://creativecommons.org/licenses/by-nc-nd/4.0/) license.

Series editors: Jessie L. Moore and Peter Felten
Copyeditor and designer: Jennie Goforth

Cover art is *Area Broken by Perpendiculars* by Joseph Schillinger. Smithsonian American Art Museum, gift of Mrs. Joseph Schillinger.

Cataloging-in-Publication Data

Names: Turner, Nancy K. | Baker, Nick | Hornsby, David J. | Germain-Rutherford, Aline | Graham, David | Wuetherick, Brad

Title: Online, Open, and Equitable Education / Nancy K. Turner, Nick Baker, David J. Hornsby, Aline Germain-Rutherford, David Graham, and Brad Wuetherick

Description: Elon, North Carolina : Elon University Center for Engaged Learning, [2024] | Series: Center for engaged learning open access book series | Includes bibliographical references and index.

Identifiers: LCCN 2024938941 | ISBN (PDF) 978-1-951414-12-2 | ISBN (PBK) 978-1-951414-13-9 | DOI <https://doi.org/10.36284/celelon.0a7>

Subjects: LCSH: Distance education | Education, Higher – Computer-assisted instruction | Educational equalization

Classification: LCC LC5803.C65 O55 2024 | DDC 378.1734 On5tu

TABLE OF CONTENTS

1 The Importance of Online, Open, and Equitable Education during the Global Pandemic	1
Lessons and Implications for Teaching, Learning, and Scholarship <i>Nick Baker, David J. Hornsby, and Nancy K. Turner</i>	
Section 1: Student Learning	38
2 Remote Teaching during the COVID-19 Pandemic	39
A Personal Reflection <i>Ufuoma Akpojivi</i>	
3 The Importance of Teamwork for First-Year Students' Motivation and Belonging During COVID Online Delivery	62
A Canadian Engineering Case Study <i>Janice Miller-Young, Marnie V. Jamieson, and Seth Beck</i>	
4 Cue Logs and Equity	84
A Poverty Activity Redesign in the Age of COVID-19 <i>Andrea Arce-Trigatti and Shawn Gaulden</i>	
5 Teaching the Pandemic	108
Building an Online Community and Knowledge through Multidisciplinarity, Compassion, and Conversation <i>Sofie Lachapelle, Elizabeth Finnis, Colin DeMill, and T. Ryan Gregory</i>	
6 Pedagogical Adaptions in Undergraduate Health Sciences Courses during the COVID-19 Pandemic at Hispanic-Serving Institutions	126
<i>Thomas A. Clobes</i>	
7 The Transition to Online Education amid the COVID-19 Pandemic and the Impact on International Students' Mental and Physical Health and Well-Being	148
<i>Eugena Kwon, Min-Jung Kwak, Steven Smith, Michael Zhang, Katelynn Carter-Rogers, and Megan Manels-Murphy</i>	

Section 2: Faculty Development	178
8 Online Learning, Open Education, and Equity in the Age of COVID-19	179
Fulfilling the Promise of Higher Education through Blended Learning <i>Dianne Bateman and Karen Zacy Benner</i>	
9 “Knowing that We Are Not Alone”	201
Nurturing Faculty Members as Adult Learners through Technology-Rich, Task-Oriented, Experiential, and Relational Supports <i>Lucas Wright, Kari Grain, and Charlyn Black</i>	
10 “Thrust into the Fire”	224
Supporting Faculty Development, While Building a Teaching and Learning Centre, Amidst a Global Pandemic <i>Sarah Driessens, Kyle Charron, Denyse Lafrance Horning, and Patrick T. Maher</i>	
11 What We Do Today Will Change What Happens Tomorrow	245
Learnings from University Teaching during COVID-19 for Post-Pandemic Times <i>Joerdis Weilandt, Richelle Marynowski, Rumi Graham, Lorraine Beaudin, Sandra Dixon, Stavroula Malla, and Angeliki Pantazi</i>	
12 Conclusion and a Call to Action	272
<i>Nick Baker, David J. Hornsby, and Nancy K. Turner</i>	
Index	276

CHAPTER 1

The Importance of Online, Open, and Equitable Education during the Global Pandemic

Lessons and Implications for
Teaching, Learning, and Scholarship

Nick Baker, *University of Windsor, Canada*

David J. Hornsby, *Carleton University, Canada*

Nancy K. Turner, *University of Saskatchewan, Canada*

As we emerge from the global COVID-19 pandemic, this volume considers how institutions of teaching and learning in higher education responded. Much focus has been given to the notion of how the pandemic advanced the digital transformation of higher education, particularly in online or virtual teaching (Chyi 2020; Grajek 2020; Martin-Barbero 2020; Pulsipher 2020). But few contributions have sought to reflect on how the pandemic pivot impacted approaches, experiences, and understandings of online, open, and equitable education practices.

While we certainly agree with Damm's (2020) assertion that the pandemic has challenged presumptions that in-person instruction is of higher quality than online instruction, it is rarely the modality alone that impacts learners' experience; rather it is the pedagogical practices adopted in learning environments that matters most to the outcomes for learners. Focusing on questions of equity and openness in pedagogy for online learning is of particular importance. The issues of equity and openness have arisen in higher education systems across the world for decades prior to the pandemic bringing acute focus to them. This volume documents, analyzes, and shares pedagogical practices adopted in response to the pandemic that provide

new frames and advance the conversation around these challenges through the lens of practitioners who experienced the disruption first-hand. Through such reflections, we hope that inspiration is derived around how to integrate equity and openness in online learning, ensuring and enabling equitable, inclusive, and quality education going forward.

Ideas and debates of what constitutes high-quality online, open, and equitable education can be seen in the work of scholars such as Bates (2019, 478) who posits that quality education is: “teaching methods that successfully help learners develop the knowledge and skills they will require in a digital age.” Terosky and Conway (2020, 442) establish the student-teacher relationship as the primary determinant of a quality education, which is in turn driven by the ambition to bring about and instill change: “In short, a quality education prepares students for change, even as it, too, changes in seeking to meet this aim.” Felten and Lambert (2020) advance the idea of what they call relationship-rich education as a critical factor in fostering student success in university spaces.

Invariably notions of quality online, open, and equitable education intersect with ideas around what constitutes quality education. Mollenkopf et al. (2020, 69) argue that learner-centered teaching and support techniques are the basis for quality online education.

Online learning requires instructors to actively learn about their students, match delivery modes to their needs, provide resources for learning that support student autonomy, make sure assignments are meaningful, offer students opportunities to improve and master learning, and provide clear feedback and positive interactions.

Fostering inclusivity and equity within one’s learning environment is considered an important indicator of quality, as necessary as ensuring practices are evidence-based (EDUCAUSE 2021).

In defining equitable education, UNESCO (2021a, 10) describes it as “ensuring fairness, where the education of all learners is seen

as having equal importance.” Further, they note that equitable education is about recognizing the many ways knowledge can be expressed, such as through Indigenous Knowledge Systems (UNESCO, 2021b, 26). The OECD (2023, 83, 147) considers equity being achieved in education when the personal and social circumstances of students do not hinder their educational potential, by ensuring that pedagogical and curricular strategies intentionally include considerations of factors such as gender, sexual orientation, socioeconomic status, ethnicity, immigration status, disability, and Indigeneity.

Equitable education aims to question and dismantle oppressive teaching and learning practices and systems that reproduce inequities caused by factors such as racism and poverty. Further, equitable and inclusive education requires acknowledging “humanity’s many forms of knowledge and expression” (OECD, 2023, 26) and valuing them equally in the educational environment and structures.

Pandemic Pedagogy: Approaches to Online, Open, and Equitable Education

With the pandemic shutdowns of early 2020, transitional pedagogies, which became referred to as emergency remote teaching (e.g., Bond et al. 2021; Bozkurt et. al. 2020), emerged as a temporary response to providing continuity of teaching and learning. The initial focus of these pedagogical adaptations was on rapidly modifying and transitioning, often within a few days, all remaining teaching and learning activities to an online approach in order to complete the term. Many instructors achieved this by using virtual classrooms and web conferencing tools that facilitated synchronous classes, while others moved to asynchronous formats to avoid potential challenges with limited bandwidth (Miller, Sellnow, and Strawser 2021). Highly accomplished and experienced teachers overnight found themselves feeling like novices again as they had to learn a whole new skillset and navigate unfamiliar systems. Many took the advice of teaching and learning centres and developed alternative assessments, planned the simplest approaches to completing the

term, and applied compassionate strategies to address the acute trauma students were experiencing.

As the weeks in isolation dragged into months, it became clear that the “temporary” pedagogical changes implemented to provide continuity and see out the end of term would not be sustainable or appropriate in the longer term, and educators globally started to explore the possibilities and challenges of the new teaching environment they found themselves in. Hodges et al. (2020) pointed out early in the pandemic response that well-designed online learning experiences are substantively different than what was possible at a mass scale within a few days, and that this should be kept in mind when the inevitable attempts to compare delivery modalities arose. Others posited that the pandemic instigated changes would spark a digital revolution that would not only last beyond the pandemic, but also trigger the evolution of higher education within a timeframe that would never normally be possible, accelerating decades worth of change in just a few months (e.g., Strielkowski 2020).

A number of challenging questions about digital equity and access to higher education rapidly emerged, however, and demanded to be addressed (Brownlee 2022). Where the digital divide could previously be largely ignored as there were usually alternatives available, the potential that social inequality and injustice would be exacerbated by emergency approaches caused the sector to confront uncomfortable realities (Bozkurt et al. 2020). Who had access to high-speed internet, unlimited data, and devices? Who gets priority in a household that shares an internet connection and screen time? Who was now excluded who had not been before, and conversely, who suddenly had access in the ways that they needed to be successful in pursuing higher education?

Many universities sought to adapt or temporarily suspend a raft of policies (e.g., Devaney et al. 2020) to open up flexibility for faculty and students to explore all the pedagogical options available to them. While most instructors were initially focused on trying to replicate their planned assessment in an online format, they were also encouraged by teaching and learning professionals and many

administrators to apply compassion and care to both their own rapid learning experience, and that of their students, and to remain empathetic as the impact of the global crisis continued to grow (Slade et al. 2022). While others found that the focus of much of the initial advice was on transitioning summative assessment to online formats, as the pandemic dragged on, many instructors also began to experiment with alternative approaches to assessment, including continuous or formative assessment, reducing volume of assessment, ungrading, offering learner choice in how they were assessed, creating oral assessments, and introducing flexibility in deadlines, pass/fail grades, and other learner-centred practices (e.g., Jankowski 2020; Johnson, Veletsianos, and Seaman 2020; Slade et al. 2022).

Authors in this volume describe similar changes made to assessment and other pedagogical practices at the course and curriculum level, and they recognize that the shift to online learning not only had the potential to enhance equity for many students, but also shone a light on the accepted inequitable access to education that so many students face in traditional higher education. Additional inequities soon surfaced during the initial stages of the pandemic, such as digital inequity (access to internet, equipment, and software), the differential impact on students in rural, remote, and low socioeconomic regions, and the impact on international students who were already isolated in many ways, but now found themselves stuck in a foreign location in lockdown conditions without access to their regular support structures.

Pedagogies of care and compassion emerged as significant responses to the pandemic (e.g., Mehrotra 2021; Elkington 2022). Bozkurt et al. (2020, 4) note that “the emotional ramifications resulting from the trauma caused by this pandemic require intentional designs and practices that embody care, inclusion, compassion, and empathy as core values.” These pedagogies likely contributed to more equitable and accessible practices that enhanced the experience of most learners.

One potentially positive outcome from the pandemic pedagogies that were applied was an opening up of access to learners

who may have traditionally been excluded from higher education through disability, caring responsibilities, cost, home location, and many other life situations. While some marginalized groups undoubtedly remained so, especially early in the pandemic (e.g., Napierala et al. 2022), others, particularly those with disabilities and caring responsibilities, suddenly had access in ways they would not normally have (e.g., Dodd et al. 2021; Rapanta et al. 2021). For many of these learners, it was the combination of newfound flexibility in teaching and assessment approaches and associated policies, coupled with use of technology to facilitate learning at home and on demand, a digital-first approach, and almost ubiquitous access to learning aids like captions that made higher education accessible for so many more learners. These changes began to lower the threshold of what Dolmage (2017) refers to as the steep steps in the climb to the ivory tower—the intentionally exclusionary practices in higher education that have kept many qualified learners with disabilities and exceptionalities out of our programs.

The broad challenge for administrators, instructors, and ultimately students whose participation was contingent on access to curricular adaptations is the sustainability of those adaptations that facilitated accessibility, particularly in more traditional or conservative institutions, once the pandemic moved away from emergency mode when COVID-19 was becoming endemic in the population (Leal Filho et al. 2022). There are resource and workload issues, along with policy implications, that must be addressed systemically if we are to maintain the level of access many became accustomed to, and that many want to maintain in the post-pandemic environment (Veletsianos 2021). Some predict that flexibility and resilience need to be intentionally developed in higher education institutions to prepare them for the uncertain future we all face, and one way to achieve that is through education models that are “responsive to learner and societal needs, available in multiple formats, through multiple delivery modes, in multiple timeframes and locations.” (Veletsianos and Houlden 2020, 849). Institutions are almost inevitably tempted to look to technology for solutions to

enhance efficiency of educational workflows if they are to open up space for the often more labour-intensive humanised educational models, and this invites the potential for further increasing technology-enabled inequality.

The pandemic period saw unprecedented rapid growth in the adoption and development of educational technologies. Gains were made in reliability, scalability, and ubiquity in higher education. It also led to a rise in technocentrism, technological solutionism, and techno-disaster-capitalism that made balancing technology and pedagogy more challenging once the initial emergency had receded (Williamson, Eynon, and Potter 2020; Gleason and Heath 2021; Rapanta et al. 2021). Outside of the institutional bounds, students found access to digital tools and supports such as Chegg and artificial intelligence, as well as communication tools that significantly heightened fears about a loss of academic integrity in online courses. This fear led to a predictable increase in the adoption of techno-surveillance pedagogies and software systems, heightened security in online learning environments, and acceleration of the abdication of some traditional teaching responsibilities to third-party companies such as publishers, all of whom promised to solve the problem of student “cheating” and rebalance power in favour of the instructor. There is a growing need for a thoughtful rebalancing of the technology-pedagogy complex in higher education, including a conversation on intentional and facilitated post-pandemic evolution and transformation, which must inevitably include technology, but which must do so with a keen eye towards equity and ethics (Moore and Tillberg-Webb 2023).

One group of technologies of considerable concern that emerged at a scale previously unseen were remote online proctoring services, which rely on human proctors, artificial intelligence (AI), or a hybrid of the two to identify behaviours that could potentially indicate academic misconduct during assessment (Flaherty 2020). These technologies have the potential to cause harm to already marginalized or vulnerable people as they frequently lead to students who are racialized (particularly Black and Brown learners for whom racist AI

models struggle to recognise faces), who have disabilities, who are gender non-conforming, or who portray a range of other diverse factors being unfairly accused of cheating (Swauger 2020). Beyond this problem, students are forced to reveal sensitive private information to corporate entities (which led to several high-profile privacy breaches) and face unrealistic demands for privacy and preferential internet access in often shared spaces. The anxiety that these systems cause has been well documented and is likely to significantly impact the performance of many students, compounding an already stressful situation (Stewart 2020). Remote online proctoring, like other systems that assume students are trying to “cheat” rather than seeing them as curious, eager learners who intend to uphold agreed-upon standards of integrity, can severely erode trust between students and faculty. While many alternatives exist, pushback against more punitive carceral and surveillance pedagogies led to calls from some faculty and higher education leaders to discard online and flexible education approaches as quickly as possible in favour of a return to on-campus activities.

In the early days of return-to-campus activities, the sheer logistical challenges of safely returning to physical classrooms led to many experimental practices that were equally, if not more, challenging than the rapid transition to online learning had been. Faculty were faced with a teaching environment that still required physical distancing and masking, with very small numbers of students able to attend in-person classes in most situations. Creative uses of class timetables such as hybrid or hyflex approaches, as well as physical distancing in large spaces allowed for some in-person teaching to resume (Nurunnabi and Almusharraf 2020). Some taught behind plexiglass shields, with the constant hum of air purifiers and ramped-up air exchange systems as the soundtrack to classes where group work was impossible and interaction was limited.

Hybrid-flexible or hyflex approaches, which were originally developed in 2005 to meet the needs of a specific cohort of students who needed the flexibility to be in-class or online at any given time in the semester (Beatty 2019), emerged as a potential solution that

many universities gravitated towards during the transition back to campus. Hyflex was seen as an approach that would enable those who wanted to teach and learn on campus to be able to have small, physically-distanced and masked cohorts of students in specially equipped rooms that allowed for broadcasting to (and hopefully, from) a second group of students who were online (Lederman 2020). Cynically, this approach allowed some institutions to advertise that they were offering on-campus teaching, when in fact there was very little capacity to have students in physical classrooms together. The other reality of the situation was that the hyflex pedagogy, especially when implemented as a one-off rather than across a program, is one of the most difficult pedagogical feats to pull off, with instructors having to design activities that intentionally include in-person and online cohorts simultaneously, constantly checking that the two groups are at the same place of understanding, all while managing the inevitable technology glitches that arise. Some institutions, however, genuinely saw this as an opportunity to redesign whole programs in a student-centred and flexible way that they predicted would serve them well in the post-pandemic environment (e.g., Harley and Long 2021). They saw success where instructors were more open to leaving behind traditional classroom structures and focusing on student-centredness, equity, accessibility, student choice, flexibility, and risk tolerance. It remains to be seen whether the majority of institutions who invested heavily in technology and classroom upgrades to enable these types of pedagogies will be able to maintain, or perhaps even expand, the hyflex approach in the future.

This volume explores the lived experiences of instructors as they charted their way through the vast array of pandemic pedagogies that emerged in a rapidly changing learning landscape, navigating difficult questions of equity and accessibility in environments and approaches that most were unfamiliar with.

Methodological Pluralism in Researching Online, Open and Equitable Education

There are many ways that online, open, and equitable education can be pursued and understood. This volume aims to capture how colleagues across the world made efforts to adapt to the COVID-19 pandemic while holding true to principles of open and equitable education through online media. Such a pursuit was conceptually and methodologically varied. As such, the volume does not forward one singular conceptual model associated with addressing equity and open access in online higher education, nor does it advocate for one particular methodology. We see enormous value in the different assumptions and contextual reflections offered and adopted in individual chapters. Authors reflect on what it was like from a teaching and learning vantage point in responding to and addressing matters of online, open, and equitable education during the COVID-19 pandemic. Indeed, at the time of writing many of the chapters, the pandemic had not officially ended, and most were still only planning to be going back to a predominantly face-to-face learning environment in the near future, once restrictions were lifted. In that sense, the considerations offered in this volume are in no way conclusive or exhaustive of the pandemic experience. Rather they offer insight into how individual colleagues responded and were impacted, pedagogically.

Across the contributions we see an emergence of the use of similar approaches to capturing pedagogical strategies. The use of scholarly personal narrative and autoethnographic approaches are dominant in the ensuing pages, complemented by reflective pieces in which authors use survey and interview methods to explore and understand the student experience of their pedagogical innovations. This section unpacks some of those methodological approaches, as we believe it is important to share how online, open, and equitable education are understood.

Autoethnography and scholarly personal narrative are forms of qualitative research that are focused on the personal experiences and perspectives of the researcher, situated in a particular political,

social, or cultural context. These methods are often considered to be non-empirical, as they do not involve the collection of data through the use of scientific methods such as experiments or surveys. Instead, autoethnography and scholarly personal narrative rely on the researcher's own experiences and reflections as the primary data source. The researcher may also incorporate other forms of qualitative data, such as interviews or documents, to provide additional context and depth to the study.

While autoethnography and scholarly personal narrative are not empirical in the traditional sense, they are still rigorous as a research method when they are carefully planned, executed, and analyzed. For example, Ng and Carney (2017) contend that scholarly personal narrative, in particular, relies on scholarly frameworks and leverages reflective practice to understand interpersonal dynamics in learning spaces and wider academic communities.

Scholarly Personal Narrative

The use of scholarly personal narrative in the scholarship of teaching and learning has garnered attention in recent years as a way to provide rich, nuanced accounts of teaching and learning experiences. Scholarly personal narrative can be an effective way to communicate research findings to a wider audience, as it can be engaging and compelling for readers (Bochner and Ellis 2003). Ng and Carney (2017, 134) note that:

For the purposes of [the scholarship of teaching and learning (SoTL)], which values the methodologies of disparate fields, [scholarly personal narratives'] inclusive parameters allow for the blending of personal narrative with the author's disciplinary approaches. [Scholarly personal narrative] creates a broader critical frame than autoethnography; it incorporates socio-cultural aspects yet can emphasize pedagogical study. Offering a viable practice on its own and in concert with other disciplinary tactics, [scholarly personal narrative] can

contribute to the larger movement of cross-disciplinary dialogue to enhance SoTL inquiries.

One benefit of using personal narrative in the scholarship of teaching and learning is that it can provide a detailed understanding of teaching and learning experiences that may not be captured by more traditional forms of research. For example, personal narratives can highlight the complexities of teaching and learning and illustrate the impact of various factors, such as institutional rules or norms, on these processes. Connelly and Clandinin (1990) note that scholarly personal narrative is particularly well suited to educational writing as instructors are often storytellers. Given that scholarly personal narrative focuses on how people experience the world, such research collects stories and explores experiences (Gudmundsdottir 2001). Scholarly personal narratives allow for outsiders to reflect on and analyze teaching and learning experiences, leading to the possibility of new insights and understanding (Bochner and Ellis 2003).

To be clear, scholarly personal narrative in the context of SoTL requires researchers to reflect, consider the scholarly literature, and juxtapose that literature against the personal experience. As a method, it requires researchers to apply conceptual understandings to personal experiences. This process enables what Schön (1983, 42) calls the “swampy lowlands” of teaching and learning spaces to be infused with the informed perspective of the research and the interpersonal aspects of their practice. As Ng and Carney (2017, 143) note, “For SoTL researchers, this methodology may illuminate in fresh ways the ‘messy,’ nuanced arena of teaching and learning while simultaneously highlighting the generalizable value of findings.”

Autoethnography

According to Ellis and Bochner (2000), autoethnography is a form of qualitative research that allows the researcher to bring a unique and personal perspective to the study by using their own experiences as data. In the scholarship of teaching and learning, autoethnography can be a useful tool for exploring and understanding one’s own teaching practices and the impact they have on student learning. For

the purposes of this volume, autoethnographic approaches can help in unpacking some of the more local or contextually specific challenges faced by instructors in the process of engaging and implementing ideas stemming from the literature, whilst reflecting and linking to challenges identified in the literature around efforts to foster online, open, and equitable education environments during the pandemic (Ellis and Bochner 2000; Duarte 2007; Cook-Sather, Abbot, and Felten 2019; Felten 2013; Verwoord and Smith 2020). Through the process of reflecting on their own experiences and emotions, the researcher can provide a rich and detailed understanding of their contextualized teaching and learning experience that may not be possible through other methods (Clandinin and Connelly 2000).

Another opportunity offered by autoethnography is that it can provide a useful framework for educators to reflect on their own practice and identify areas for growth and improvement (Richardson 1997). By closely and critically examining their own experiences and beliefs about teaching and learning, educators can develop a deeper understanding of their own teaching philosophy and how it shapes their classroom practice (Denzin and Lincoln 2011).

The differences between scholarly personal narrative and autoethnography can often be difficult to demarcate. Certainly the boundaries between the two methodological approaches can be fuzzy at best, but the literature seeks to differentiate between these approaches arguing that scholarly personal narrative is more of a reflection on the personal dimensions of the author's experiences, in this case around supporting online, open, and equitable educational environments. In contrast, autoethnography seeks to connect the personal experience within a broader context of social and cultural meanings. In this volume, the autoethnographic accounts connect into scholarly debates existing within the literature around fostering online, open, and equitable teaching and learning environments. In the context of collaborative autoethnographic studies, consent to share, reflect, and critique experiences is required and thus subject to institutional ethics approval (Godbold et al. 2021).

Both approaches are often narrative in style, which can be effective in capturing the nuanced ways that open and equitable online higher education can be pursued. The narrative dimension of scholarly personal narrative and autoethnography enables storytelling and for the authors to be more vulnerable in approaching the subject matter. This vulnerability can be powerful when the goal is to capture the difficulties in pedagogical choices. As many of the chapters in the volume portray, pedagogical decisions were often guided by constraints in individual capacities, in the uniqueness of institutional contexts, and by the types of technologies available. The scholarly personal narrative and autoethnographic approaches adopted here have brought to life the unique and complex conditions available to scholars.

Interviews and Surveying

Interviews and surveys are widely-used methods in SoTL for gathering data about the perspectives, experiences, and perceptions of students and instructors. Berenson (2018) argues that in SoTL work it is important to be transparent about contexts where studies are explored and the methodologies and approaches adopted. In this sense, authors in this volume using interviews and surveys gather data on a wide range of topics, such as students' learning experiences, instructors' teaching practices, and the effectiveness of specific pedagogical strategies. The use of interviews and surveys in the ensuing chapters are useful in identifying areas for improvement and evaluating the impact of interventions or changes in instruction.

SoTL researchers have found that these methods can provide valuable insights into the complexities of the teaching-learning process (Divan et al. 2017). For example, according to Bass (1998), interviews and surveys can help to elicit the tacit knowledge of instructors and students, and to help us understand the perspectives and experiences that shape their practices. Similarly, Shulman (1986) argues that these methods can help to reveal the underlying assumptions, values, and beliefs that guide teaching and learning, and to identify the factors that influence the success or failure of educational interventions. Whilst both example articles aren't specifically focused

on interviews and surveys, the ideas expressed in them come from their examinations of teachers' knowledge and SoTL.

The chapters in this volume move between these methodologies, offering rich and authentic accounts of how colleagues across a varied set of institutions and in different higher education settings adapted, adjusted, and enabled online, open, and equitable education to take place. The methodologies engaged not only serve as a signal to how others might approach such SoTL work but also are well aligned for uncovering how notions of equity and openness are pursued under a condition of online (albeit, emergency remote) teaching.

Volume Contribution

This volume is divided into two sections addressing different foci of change/support initiatives in postsecondary institutions centered on questions of equity, access, and learner success. The first section focuses on student learning, and the second explores faculty development.

Student Learning in Online, Open, and Equitable Education

This first section includes stories, evaluations, and reflections at the level of the course, as individual educators worked to transition course design, instruction, and assessment to the remote context. In these chapters we see the centrality of creating connection and community in an online learning context, made more pressing during the pandemic when learners and instructors were isolated in many ways. The educators in these chapters share their experiences of creating evidence-based learning experiences in an online context at a time when there was a decided dearth of time for thoughtful transition to this different way of teaching and learning.

Akpojivi's chapter explores the challenges of migration to remote teaching in the face of significant existing inequalities amongst South African universities and amongst South African students, the majority of whom do not have access to the internet at home. The author asks how, in this context, one should approach ensuring all students' needs are met. This rich autoethnographic account from

media and communications studies (a discipline argued to require lecturer–student contact) considers emergency and planned transitions to remote teaching. Rather than align with the contention that educators should reduce expectations during the pandemic, Akpojivi eloquently and convincingly argues that careful and contextually relevant course and instructional design should aim to increase engagement and participation among all students, including those typically marginalized.

Miller-Young, Jamieson, and Beck use a cross-sectional multi-method survey of students in a course designed to facilitate social connection through the use of self-determination theory (SDT). Outcomes show the positive impact a SDT designed course has on students' engagement and intrinsic motivation, found to be essential during the pandemic but also of great value for online learning at any time. Miller-Young, Jamieson, and Beck explore optimizing active learning for large classes, employing asynchronous and synchronous approaches to enable student engagement and learning, and describe how tools for connection can be leveraged in post-pandemic online learning. Their findings and recommendations can valuably inform online and blended team-based learning courses in other contexts.

Arce-Trigatti and Gaulden describe their transition of a team-based activity to an online format in an introduction to sociology course at an institution serving primarily underrepresented, non-traditional, first-time-in-college students. This scholarly personal account considers the issues experienced while creating a theoretically grounded inclusive online learning environment for students, incorporating digital inclusion whilst anticipating and acting to mitigate students' lack of access and skills in using digital tools essential for online learning. The authors share the outcomes of their student success-centered strategy to address systemic challenges during the pandemic with a nod to how they may be leveraged to reduce inequities in the future.

Lachapelle, Finnis, DeMill, and Gregory discuss the rapid and responsive development and implementation of *Pandemics: Culture, Science, and Society*, a course open to all students, staff, and alumni

from across one Canadian institution during the early stages of the COVID-19 pandemic. The course highlights the possibilities for online, open, multidisciplinary education, including elegant ways of managing teaching logistics that utilize the strengths of each member of the teaching team. This scholarly personal narrative reflects on how connection, community, and engagement were fostered in a course centered on a topic that crossed disciplines and mattered to learners across and beyond the university community. The innovative approach to course design and delivery was enabled by institutional support, allowing the authors to adapt, engage, and reflect on issues as they arose, a structure and approach that could be used to engage learners with other complex and pressing social problems.

Clobes' personal narrative explores interventions in three courses taught at a Hispanic-serving institution with over half of the student body being first-generation students. They set out to address issues of student disengagement, missed assignment submissions, and overall academically weaker course performance. The interventions included creating accountability groups, doing individual outreach, ensuring timeliness and quality of feedback, scheduling with flexibility, and taking actions to get to know students and connect them to each other in the course. Clobes' interventions resulted in improvement in attendance, assignment submission, and course performance. The author convincingly argues that, while these actions took time to complete, the desire to undertake them was driven by a dedication to students and their learning.

Kwon, Kwak, Smith, Zhang, and Carter-Rogers examine international students' mental and physical health and well-being during the pandemic. Through a survey and focus groups, the authors investigate the academic challenges of online learning, exacerbated by the pandemic, as experienced by international students in Nova Scotia. The findings identify pandemic challenges faced by international students over and above their typical challenges in transitioning and studying in a new context and culture: namely not being able to practice English, create local social networks, and

experience immersion in and exposure to Canadian culture. The authors make recommendations for targeted support to complement evidence-informed course design and broader opportunities for social connection and network creation.

Faculty Development in Online, Open, and Equitable Education

The second section in this volume highlights changes or interventions at the institutional or program level, focusing on initiatives for faculty development and associated structures and policies during the COVID-19 pandemic. From these chapters we can see stories of the innovation and resilience of colleagues that permeated our institutions and consistent themes of what was valuable in faculty development during the pandemic—namely equity-informed practices. As importantly, these chapters identify actions that sought to center equity in the teaching and learning environment and provide inclusive and accessible learning experiences for students.

Bateman and Benner conducted focus groups and interviews with teachers in several disciplines in a Quebec college about challenges faced and factors that facilitated navigation through the pandemic. The authors discuss their findings with a view to capitalize on the imperative for educational change instigated by the pandemic. The authors explore the shift to blended learning as a lever to advance change toward more equitable and learner-centered teaching, supporting teachers' professional growth through blended learning development framed by their advancement of a "blended learning mindset" in the transition back to face-to-face teaching in fall 2021.

Wright, Grain, and Black outline an approach to provide support to faculty as they "kept teaching" during the pandemic at one Canadian higher education institution. The chapter focuses on the results of an evaluation survey completed with participants in an intensive training program called transitioning to online teaching (TOT). The evaluation demonstrated that faculty valued the professional development being technology-rich, task-oriented, experiential, and relational. The authors highlight the importance of building

community with adult learners, particularly in an online context, and the importance of reminding educators they were not alone, countering the isolation and anxiety they experienced during the global pandemic. A strong sense of community fosters an inclusive, supportive, and collaborative atmosphere that helps faculty find ways to enable student success whilst taking into account unique needs and conditions faced by diverse student populations.

Driessens, Charron, Lafrance Horning, and Maher share their experiences in a small postsecondary institution that was in the early stages of establishing a formal teaching and learning center when the pandemic hit. They examine how the team fared in supporting faculty during the pandemic, given this starting point. The authors, as staff, faculty, and leadership central to the implementation of the center, engaged in an innovative dialogue to explore their lived experiences, including challenges, opportunities, and lessons learned. They describe how the unit worked to build skills, change mindsets, and establish and strengthen relationships across roles and titles, setting the stage for the center to thrive and contribute to the institution in the post-pandemic era.

Finally, **Weilandt, Marynowski, Graham, Beaudon, Dixon, Malla, and Pantazi** examine the experiences of instructors, as they transitioned and taught online from May 2020 to May 2021, through an institution-wide survey followed by select in-depth interviews, to discover what can be learned to inform post-pandemic teaching practices. The results they explore are related to the varied roles educators stepped into as online instructors, those of instructional designer, content creator, communicator, community builder, and professional learner, with recommendations on how to support post-pandemic practice in each.

Implications for Online, Open, and Equitable Education in the Post-Pandemic Era

As reflected in the diverse responses of the authors, the pandemic has taught us much about the challenges and possibilities of pursuing online, open, equitable education in our university environments.

The chapters in this volume lay out efforts taken and reflect on experiences in trying to make learning and supporting learning during the pandemic meaningful. They provide a glimpse into how educators (including professional support staff and administrators) across the disciplinary spectrum attempted to make sense of this new context and to reframe much of what they knew previously about teaching and learning to work within an environment of uncertainty and constantly changing restrictions. These lessons and experiences, whilst not exhaustive, give some sense of how institutions can support and enhance the educational experience for students with a much wider array of needs and desires going forward. These stories can help us to facilitate pedagogical innovation that dares to look past historical norms and embraces the complexity of a world where widespread disruption from pandemics, natural disasters, and climate change are common events.

Drawing on the reflections here, it is evident that institutions need to support a new and critical focus on fostering effective online, open, and equitable education environments at scale that is informed by the recent experiences. This is, in part, because the widened audience for higher education has discovered the empowering nature of choice, but also as a response to improving the resilience of our institutions as they prepare to face similar challenges in the future. We consider three broad areas where support and resources can be organized and offered: the first is focusing on pedagogical design needs; the second is investing in and maintaining enabling infrastructure; and the third is building cultures of community and research.

Supporting the Pedagogical

Supporting the pedagogical speaks to ensuring that our institutions develop the skills and strategies necessary to make reaching the potential of good online, open, and equitable education a reality. This often means centering student learning in the training and supports that are offered to faculty, creating institutional policies and processes that allow and encourage pedagogical experimentation, and actively supporting the maintenance of diverse learning

modalities and experiences that are made available to students. During the pandemic, most of our institutions invested in support systems—technological, human, and policy—to ensure university education could carry on despite the public health crisis. Pivoting to emergency remote teaching resulted in significant pedagogical shifts for many of our colleagues that demystified a modality and set of technologies and pedagogies in ways rarely experienced or even possible before. It was recognized that institutional policies needed to rapidly adapt in order to foster equity for students and faculty.

In support of students, many of our institutions created programs for loaning technology and ensuring access to the internet, introduced compassionate grading policies, encouraged authentic and continuous assessment, and attempted many other strategies to foster flexibility and ensure as many people as possible could continue to participate. There was a focus on minimizing negative academic impacts during a stressful time, and new programs were developed to promote well-being and mental health, providing these services to students, many of whom may not have previously considered seeking such support. Faculty were supported through significant investments in training and guidance on how to deliver online courses, new technology was made available and the functionality and reliability of existing systems was enhanced, tenure clocks and teaching evaluations were paused to reflect an understanding that we were in a crisis, and efforts were made to accommodate familial and other personal pressures. Coming out of the pandemic, we have the opportunity to take what we learned and experienced and do better with it, avoiding a rushed return to systems that did not serve many in our communities well before and which are unlikely to serve them well in a post-pandemic era.

Critical in this effort is for our institutions to maintain the investments in pedagogical support for faculty and to center equity in our pedagogical strategies and policies. Much of what was considered appropriate for addressing equity during the pandemic continues to be good practice for student learning post-pandemic. A consistent theme in this book is the notion of providing flexibility and

choice, with a focus on student engagement and participation, that tend to support the development of engaged learning communities. Engaging our students as partners in their learning journey through pedagogical approaches such as active learning strategies, group discussions, and collaborative projects that facilitate peer interaction and participation, we know that students are more likely to be successful. These practices were largely able to transition from an in-person to online modality, but the way we implement such approaches in online learning has not always received the priority or support necessary to make it equivalent to in-person classes. The pandemic taught everyone that it is important to explicitly plan how to engage our students in online spaces, when and how to best utilise technology, and where more experimentation is needed.

For example, asynchronous learning opportunities empower our students to engage in their learning journey in the most flexible of ways, working largely on a timeline of their own choice (within the constraints of a semester timetable), but it still requires significant pedagogical planning and support to be effective. Even in asynchronous delivery modes, students need and benefit from meaningful interaction, building relationships with faculty and amongst their peers, and they are most motivated when their assessments are contextually relevant to their lives. In this sense, we need to build pedagogical experiences that factor all these things in, which requires appropriate pedagogical training and institutional policies that emphasize flexibility, collaboration, empowerment, and ways to adopt active and experiential learning in both online and face-to-face contexts.

Similarly, one of the important pedagogical learnings for many faculty was a better understanding of the power of the internet and digital connectedness to foster deep student learning and support diverse pedagogies. Many discovered new ways of connecting with their students and that students were connecting with each other. For example, where it was once assumed that teamwork or group projects were not advisable or possible in online courses, this was revealed to be a fallacy as students used a variety of communication

media and strategies, many of which are outside the sanctioned institutional tools and invisible to faculty, to work together in online and hybrid teams. The connection to vast amounts of data and information online, and ways to actively incorporate these into pedagogy, was also revelatory to many who had previously considered learning to take place within a bounded space with resources provided by the instructor. This idea also challenged traditional understandings of assessment practice, as those approaches frequently only work in a resource-limited, artificially restricted environment that bears no resemblance to the modern world.

Coming out of the pandemic, support needs to be provided to utilise diverse assessment methods that evaluate different skills and abilities, account for student pressures on their time, and reduce the reliance on high-stakes timed exams and other inauthentic assessment strategies. Online, open, and equitable learning necessitates that we support a wide diversity of opportunities for students to demonstrate their understanding (e.g., presentations, team projects, portfolios), incorporate student choice and agency in assessment practice, and provide meaningful feedback on their work so that they can learn from their mistakes. In online learning this is no short order, but requires commitment, courage, and humility as we test out different pedagogical approaches, and demands the vocal support of institutional leaders that provides permission to experiment, and even, potentially, to fail.

Investing in Enabling Infrastructure and Design

Throughout the pandemic, universities invested in infrastructure that enabled online, open, and more equitable educational environments to emerge. Everything from injecting resources into teaching and learning centers traditionally marginalized within university budgetary priorities, to educational technologies, to incentive structures that foster pedagogical innovation at the course and curriculum levels, and to student bursaries. Such an infusion of financial and human resources has rarely been seen before in the history of our sector, with a result that demonstrated incredible possibilities.

Teaching and learning centers were central to the pandemic response at our universities and showed what could be achieved when this element of the institutional mission was appropriately supported. The capacity of teaching and learning centers to make a tangible difference in enabling faculty to adopt, experiment, and feel supported in accepting appropriate pedagogical strategies and technologies needs to continue to be recognized and appreciated. But it cannot stop there; teaching and learning centers need to embrace a more activist stance when promoting the possibilities in online, open, and equitable education. Passively waiting for faculty to reach out is no longer an option. The imperative of equity requires that more is done to advocate and embed inclusive pedagogical approaches in proactive ways, instead of patching things onto courses. And here both course- and curriculum-level interventions and incentives can be helpful.

Teaching and learning leaders across our institutions need to find mechanisms to integrate culturally responsive teaching methods and content that promote inclusivity and engagement among all students. Creating incentives for faculty and disciplinary units to value these aspects in course and curriculum design can take shape in a number of different ways, from degree-level expectations that require these principles be present in new course and degree proposals, to ensuring sufficient educational development support is available to units so as to lighten the burden of design, to internal grants available to individuals or units interested in pursuing new course or degree ideas. Positive incentives will encourage faculty to adopt a diverse and inclusive curriculum that reflects, encourages, and welcomes a wide range of perspectives and experiences. The pandemic showed us this.

As readers will see across the pages in this volume, it is critical that we maintain our pandemic-driven investments in technology, and the human infrastructure that supports it, to enable online, open, and equitable education. Indeed, online education would not be possible without a core suite of communication, collaboration, assessment, and administrative tools. Learning management systems,

audience response or polling systems, interactive whiteboards, and diverse feedback tools that foster connection with and amongst students are just a few examples of technologies that enable engagement. The use of technology in our learning environments offers great promise for enhancing student engagement, but also surfaces unique risks faced by some learners and marginalized groups. But whilst the promise of technology to even the playing field may be present, such tools can also reinforce inequities if their use is not thought through carefully or if disparities in resource conditions between universities and individuals are not recognized and addressed.

Throughout the pandemic many of our institutions found ways to ensure access to necessary technology and (high-speed) internet for faculty members and many of our students, especially those from marginalized communities. Technology loans ensured all could access devices and get online where needed and possible. Many of our institutions invested in a suite of robust educational technologies that support diverse learning preferences and needs. All of these tools came with significant licencing, onboarding, and ongoing support costs. Going forward, careful consideration is needed around how technology investments can be sustained in support of enabling more online, open, and equitable university education. The pandemic helped demystify many educational tools and practices; we need to keep using them critically and creatively, but with a keen eye to ensuring equitable access for all learners.

Building Cultures of Community and Research

Fostering online, open, and equitable educational spaces in our universities is a never-ending project. Pursuing these priorities requires an ongoing commitment to understanding one's context and how students and faculty respond to different approaches and ideas. In this vein, online, open, and equitable education requires an inherent reflexivity as institutions constantly evaluate and re-evaluate their efforts. To do this, building cultures of community and research around teaching and learning are more important than ever.

Lave and Wenger (1991) contend that all learning is situated in relation to social context, in addition to time and space. They forward the idea that adults learn from and with others and engage with tools and activities in a social context known as a “community of practice.” Community of practice offers a good organizing tool for how to think about the institutional spaces for developing and supporting equity-forward approaches to teaching. Communities of practice enable participants to learn as they become involved with a community or culture of learning, interacting with the community and learning to understand and participate in its history, assumptions, cultural values and rules (Hansman 2001). We contend that such an approach can be particularly helpful to supporting online, open, and equitable education, given that they are often “characterised by mutual engagement of the participants, binding them into a social entity, joint enterprise resulting from the collective process of negotiations, and a shared repertoire of communal resources, including routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts that the community has produced or adopted in the course of its existence” (Osman and Hornsby 2016). Lachapelle et al. (chapter 5) reinforce the value of such communities and how they can foster interdisciplinarity as well. Communities of practice can help advance online, open, and equitable education as participants share or coordinate resources, but also construct knowledge while working towards the shared goal of equity-forward approaches to teaching.

An equity-forward approach to teaching at universities refers to a deliberate and proactive focus on promoting equity, inclusivity, and fairness for all students throughout the educational experience. The goal of this approach is to address systemic barriers, eliminate disparities, and create an environment where every student has an equal opportunity to succeed, regardless of their background, identity, or individual circumstances. By adopting an equity-forward approach, universities can create an inclusive and empowering educational experience that supports the success of all students, fosters a sense of belonging, and prepares students to be active,

informed, and responsible global citizens. It requires a commitment from all stakeholders, including faculty, administrators, students, and the broader community, to work together in dismantling barriers and promoting equitable outcomes for everyone involved in the educational process.

Embracing reflexivity in online, open, and equitable education inherently means engaging in research to understand the impacts of our practices. This means conducting research on ourselves but also engaging with the robust and significant literature on equity in teaching and learning. The scholarship of teaching and learning (SoTL) needs to form a normal part of how we engage with online, open, and equitable education in universities. The SoTL framework proposed by Boyer (1990) was a response to bridging the research-teaching divide that often predominates university education. Boyer (1990) identified four domains or types of scholarship: Discovery, Integration, Application, and Teaching. The major principles underpinning SoTL (the fourth domain) in higher education are that the academic investigates their own practices of teaching and/or the student's practices of learning, and that the outcomes of such researched investigation are open for inspection and validation by colleagues and peers.

Despite the many complexities that may be associated with supporting online, open, and equitable education in a university, a SoTL frame and community of practice ethos provide useful ways of thinking about how to support colleagues as they engage with equity-forward approaches. Also, encouraging a scholarly approach to online, open, and equitable education makes it an attractive option for academics in higher education as they combine two core imperatives of their work.

Institutional support for research-informed teaching practices often works well when policies and internal funding incentives exist and encourage SoTL. Recognizing SoTL research as legitimate disciplinary research activity is important, as understanding our teaching environments and how are disciplines are taught is critical to disciplinary advancement (Hornsby and Grant 2021). Similarly,

making grants available for the scholarship of teaching and learning helps foster a culture of reflexive practice that improves student success (Osman and Hornsby 2016).

Advancing online, open, and equitable university education in the post-pandemic era requires that explicit attention continue to be paid within institutions to our teaching and learning environments. Supporting the pedagogical, investing in enabling infrastructure and design, and building cultures of community and research allow academic leaders and colleagues to think about ways to ensure the investments made and learnings accrued as a result of the innovations and experiences across the COVID-19 pandemic are not lost.

Conclusions

As noted earlier, the richness of this volume is seen in the geographic, institutional, and disciplinary diversity of the authors, and how they each approached pandemic teaching and learning in their context. Each chapter provides unique insights into approaches that enable open and equitable online education, enhancing our understanding of pandemic pedagogy and the potential for persistence of elements of those pedagogies in a post-pandemic world.

With this diversity acknowledged, in addition to the methodological connections between these chapters, we saw clear themes threaded through them, more powerful for their trajectory in connecting experiences across such varied contexts.

The significance of relationships across and between students, faculty, and staff was central in all chapters, positioned as a means to counter pandemic-related isolation and connect individuals to build community. As noted in the opening of this chapter, this is not a new theme in higher education teaching and learning, but one that was necessarily amplified by the global disruption of the pandemic. What is newly demonstrated here is the centrality and level of significance personal connection played so consistently in diverse learning environments around the globe. Intentional and evidence-informed action to build those relationships is an essential component of open, equitable education in all modes of delivery,

particularly online where these relationships are harder to establish through informal means.

Also apparent is how the pandemic provided an opportunity for educators to expand understanding, build skill sets, and see the value of evidence-informed teaching and assessment practices where these may have previously been less central to their academic practice. This speaks to the hope many hold for this experience to catalyze a transition to more learning-centered practices as pandemic restrictions are lifted and we have the opportunity to determine the direction of teaching and learning in a post-pandemic context. Do we return to a “business as usual” approach, ignoring much of what was learned and gained during the pandemic, or do we take an evidence-based approach and retain those gains, tweak elements that were challenging, and continue to move towards an equity-forward approach? The hope of the authors and editors of this volume is the latter, with the documented evidence provided here as a starting point for the larger conversation.

Finally, the spotlight the pandemic shone on equity, mental health, and accessibility of educational programming is one that we hope will be difficult to dim in the years ahead. As Arce-Trigatti and Gaulden remind us in their chapter, our education systems have long replicated societal inequity, and the pandemic served to reveal and deepen, rather than create, the inequities seen in educational experiences. This examination has led to a broader call for open, equitable education in all its forms and certainly sparked the creation of this volume. We hope the chapters here can serve as inspiration and catalysts for further and ongoing action.

And as we conclude this introduction, we wish to note that the process of creating this volume paralleled much of what we heard in the stories contained within it. There were delays, urgent issues that took precedence, and a need for flexibility as the circumstances of authors and editors changed, rapidly and without warning. As in our classrooms and institutions, there was a need for compassion and understanding throughout the process of creating this book. We are grateful to the authors who persevered with us, and to those

who were wise in stepping back when they knew contributing was too big a challenge in an already challenging time.

References

- Bass, Randy. 1998. "The Scholarship of Teaching: What's the Problem?" *Inventio: Creative Thinking about Learning and Teaching* 1 (1). https://www.cctl.uga.edu/_resources/imported/main-Bass_1999_Inventio.pdf.
- Bates, Anthony W. 2019. "Ensuring Quality Teaching in a Digital Age." In *Teaching in a Digital Age*. 2nd ed. Pressbooks. <https://pressbooks.bccampus.ca/teachinginadigitalagev2/part/ensuring-quality-teaching-in-a-digital-age/>.
- Beatty, Brian J. 2019. *Hybrid-Flexible Course Design*. 1st ed. EdTech Books. <https://edtechbooks.org/hyflex>.
- Berenson, Carol. 2018. "Identifying a Tradition of Inquiry: Articulating Research Assumptions." In *SoTL in Action: Illuminating Critical Moments of Practice*, edited by Nancy L. Chick, 42–52. Sterling, VA: Stylus.
- Bochner, Arthur P, and Carolyn Ellis. 2003. "An Introduction to the Arts and Narrative Research: Art as Inquiry." *Qualitative Inquiry* 9 (4): 506–14. <https://doi.org/10.1177/1077800403254394>.
- Bond, Melissa, Svenja Bedenlier, Victoria I. Marín, and Marion Händel. 2021. "Emergency Remote Teaching in Higher Education: Mapping the First Global Online Semester." *International Journal of Educational Technology in Higher Education* 18: Article 50. <https://doi.org/10.1186/s41239-021-00282-x>.
- Boyer, Ernest. 1990. *Scholarship Reconsidered: Priorities of the Professoriate*. San Francisco: Jossey-Bass.
- Bozkurt, Aras, Insung Jung, Xiao Junhong, Viviane Vladimirschi, Robert Schuwer, Gennady Egorov, Sarah R. Lambert, et al. 2020. "A Global Outlook to the Interruption of Education Due to COVID-19 Pandemic: Navigating in a Time of Uncertainty and Crisis." *Asian Journal of Distance Education* 15 (1): 1–126. <https://doi.org/10.5281/zenodo.3878572>.

- Brownlee, Mordecai I. 2022. "The Digital Divide 2.0: Navigating Digital Equity and Health Equity in Education." *EdSurge*, November 10, 2022. <https://www.edsurge.com/news/2022-11-10-the-digital-divide-2-0-navigating-digital-equity-and-health-equity-in-education>.
- Chyi, Natalie. 2020. "The Coronavirus Is Democratizing Knowledge." *New America*, May 27, 2020. <https://www.newamerica.org/future-land-housing/fpr-articles/coronavirus-democratizing-knowledge/>.
- Clandinin, D. Jean, and F. Michael Connelly. 2000. *Narrative Inquiry: Experience and Story in Qualitative Research*. San Francisco, CA: Jossey-Bass.
- Connelly, F. Michael, and D. Jean Clandinin. 1990. "Stories of Experience and Narrative Inquiry." *Educational Researcher* 19 (5): 2–14. <https://doi.org/10.3102/0013189X019005002>.
- Cook-Sather, Alison, Sophia Abbot, and Peter Felten. 2019. "Legitimizing Reflective Writing in SoTL: 'Dysfunctional Illusions of Rigor' Revisited." *Teaching & Learning Inquiry* 7 (2): 14–27. <https://doi.org/10.20343/teachlearninqu.7.2.2>.
- Damm, Darlene. 2020. "How Will the COVID-19 Pandemic Impact the Future of Education?" *WISE*, May 5, 2020. <https://www.wise-qatar.org/how-will-the-covid-19-pandemic-impact-the-future-of-education/>.
- Denzin, Norman K., and Yvonna S. Lincoln, eds. 2011. *The SAGE Handbook of Qualitative Research*. 4th ed. Thousand Oaks, CA: SAGE.
- Devaney, James, Gideon Shimshon, Matthew Rascoff, and Jeff Maggioncalda. 2020. "How Can Universities Adapt During COVID-19?" *Times Higher Education and Coursera*. <https://www.timeshighereducation.com/hub/coursera/p/how-can-universities-adapt-during-covid-19>.
- Divan, Aysha, Lynn O. Ludwig, Kelly E. Matthews, Phillip M. Motley, and Ana M. Tomljenovic-Berube. 2017. "Survey of Research Approaches Utilised in the Scholarship of Teaching

- and Learning Publications.” *Teaching & Learning Inquiry* 5 (2):16–29. <https://doi.org/10.20343/teachlearninqu.5.2.3>.
- Dodd, Emlyn, Sonal Singh, Jim Micsko, Kylie Austin, Carolina Morison, and Stuart Upton. 2021. “Equalizing and Widening Access to Higher Education During a Pandemic: Lessons Learned from a Multi-University Perspective.” *Student Success* 12 (2): 58–72. <https://doi.org/10.5204/ssj.1715>.
- Dolmage, Jay T. 2017. *Academic Ableism: Disability and Higher Education*. Ann Arbor: University of Michigan Press.
- Duarte, Fernanda. 2007. “Using Autoethnography in the Scholarship of Teaching and Learning: Reflective Practice from ‘the Other Side of the Mirror.’” *International Journal for the Scholarship of Teaching and Learning* 1 (2): Article 21. <https://doi.org/10.20429/ijstl.2007.010221>.
- EDUCAUSE. 2021. *Educause Horizon Report. Teaching and Learning Edition*. <https://library.educause.edu/resources/2021/4/2021-educause-horizon-report-teaching-and-learning-edition>.
- Elkington, Sam. 2022. “Shifts in Pedagogy and Flexible Assessment: Integrating Digital Technology with Good Teaching and Learning Practice.” In *The Emerald Handbook of Higher Education in a Post-Covid World: New Approaches and Technologies for Teaching and Learning*, edited by Byron A. Brown and Alastair Irons, 153–71. Bingley: Emerald Publishing Limited. <https://doi.org/10.1108/978-1-80382-193-120221007>.
- Ellis, Carolyn, and Art Bochner. 2000. “Autoethnography, Personal Narrative, Reflexivity: Researcher as Subject.” In *Handbook of Qualitative Research*, edited by Norman K. Denzin and Yvonna S. Lincoln, 733–68. Thousand Oaks, CA: SAGE.
- Felten, Peter. 2013. “Principles of Good Practice in SoTL.” *Teaching & Learning Inquiry* 1 (1): 121–25. <https://doi.org/10.2979/teachlearninqu.1.1.121>.
- Felten, Peter, and Leo M. Lambert. 2020. *Relationship-Rich Education: How Human Connections Drive Success in College*. Baltimore: Johns Hopkins University Press.

- Flaherty, Colleen. 2020. "Big Proctor: Is the Fight Against Cheating During Remote Instruction Worth Enlisting Third-Party Student Surveillance Platforms?" *Inside Higher Ed.*, May 10, 2020. <https://www.insidehighered.com/news/2020/05/11/online-proctoring-surg-ing-during-covid-19>.
- Gleason, Benjamin, and Marie K. Heath. 2021. "Injustice Embedded in Google Classroom and Google Meet: A Techno-Ethical Audit of Remote Educational Technologies." *Italian Journal of Educational Technology* 29 (2): 26–41.
- Godbold, Nattalia, Dawne Irving-Bell, Jill McSweeney-Flaherty, Patrice Torcivia Prusko, Lauren S. Schlesselman, and Heather Smith. 2021. "The Courage to SoTL." *Teaching & Learning Inquiry* 9 (1). <http://dx.doi.org/10.20343/teachlearninqu.9.1.25>.
- Grajek, Susan. 2020. "Top IT Issues, 2021: Emerging from the Pandemic." *EDUCAUSE Review*, November 2, 2020. <https://er.educause.edu/articles/2020/11/top-it-issues-2021-emerging-from-the-pandemic>.
- Gudmundsdottir, Susan. 2001. "Narrative Research on School Practice." In *Fourth Handbook for Research on Teaching*, edited by V. Richardson: 226–40. New York: Macmillan.
- Hansman, Catherine A. 2001. "Context-Based Adult Learning." In *The New Update on Adult Learning Theory. New Directions for Adult and Continuing Education*, edited by S. Merriam, 43–52. San Francisco: Jossey Bass, 43–52.
- Harley, Ben, and Danette Long. 2021. "Evolving HyFlex from Emergency Measure to Sustainable Program: Northern State University." In *Hybrid-Flexible Course Design*, edited by Brian J. Beatty. EdTech Books. <https://edtechbooks.org/hyflex>.
- Hodges, Charles, Stephanie Moore, Barb Lockee, Torrey Trust, and Aaron Bond. 2020. "The Difference Between Emergency Remote Teaching and Online Learning." *EDUCAUSE Review*, March 27, 2020. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>.

- Hornsby David J., and J. Andrew Grant. 2021. "Teaching as a Form of Disrupting International Relations." In *Teaching International Relations in a Time of Disruption*, edited by Heather A. Smith and David J. Hornsby, 9–23. Political Pedagogies Series. Palgrave MacMillan Publishers.
- Jankowski, Natasha L. 2020. "Assessment During a Crisis: Responding to a Global Pandemic." Champaign, IL: National Institute for Learning Outcomes Assessment. <https://eric.ed.gov/?id=ED608798>.
- Johnson, Nicole, George Veletsianos, and Jeff Seaman. 2020. "U.S. Faculty and Administrators' Experiences and Approaches in the Early Weeks of the COVID-19 Pandemic." *Online Learning* 24 (2): 6–21. <https://doi.org/10.24059/olj.v24i2.2285>.
- Lave, Jean, and Etienne Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.
- Leal Filho, Walter, Amanda Lange Salvia, Ismaila R. Abubakar, Mark Mifsud, Hossein Azadi, Ayyoob Sharifi, Todd LeVasseur, et al. 2022. "Impacts of the COVID-19 Pandemic on Routines of Higher Education Institutions: A Global Perspective." *Sustainability* 14 (21): 14105. <https://doi.org/10.3390/su142114105>.
- Lederman, Doug. 2020. "The HyFlex Option for Instruction if Campuses Open This Fall." *Inside Higher Ed*, May 12, 2020. <https://www.insidehighered.com/digital-learning/article/2020/05/13/one-option-delivering-instruction-if-campuses-open-fall-hyflex>.
- Martin-Barbero, Samuel. 2020. "COVID-19 Has Accelerated the Digital Transformation of Higher Education." *World Economic Forum*, July 21, 2020. <https://www.weforum.org/agenda/2020/07/covid-19-digital-transformation-higher-education/>.
- Mehrotra, Gita R. 2021. "Centering a Pedagogy of Care in the Pandemic." *Qualitative Social Work* 20 (1–2): 537–43. <https://doi.org/10.1177/1473325020981079>.
- Miller, Anne Neville, Deanna D. Sellnow, and Michael G. Strawser. 2021. "Pandemic Pedagogy Challenges and Opportunities: Instruction Communication in Remote, HyFlex, and BlendFlex

- Courses.” *Communication Education* 70 (2): 202–04. <https://doi.org/10.1080/03634523.2020.1857418>.
- Mollenkopf, Dawn, Martonia Gaskill, Rebecca M. Nelson, Chandra C. Diaz. 2020. “Navigating a ‘New Normal’ During the COVID-19 Pandemic: College Student Perspectives of the Shift to Remote Learning.” *Revue Internationale des Technologies en Pédagogie Universitaire* 17 (2): 6779. <https://doi.org/10.18162/ritpu-2020-v17n2-08>.
- Moore, Stephanie L., and Heather K. Tillberg-Webb. 2023. *Ethics and Educational Technology: Reflection, Interrogation, and Design as a Framework for Practice*. New York: Routledge.
- Napierala, Jeffrey, Natalie Pilla, Jackie Pichette, and Julia Colyar. 2022. “Ontario Learning During the COVID-19 Pademic: Experiences of Ontario First-Year Postsecondary Students in 2020–21.” Toronto: Higher Education Quality Council of Ontario Press. <https://heqco.ca/pub/ontario-learning-during-the-covid-19-pandemic-experiences-of-ontario-first-year-postsecondary-students-in-2020-21/>.
- Ng, Laura, and Mary A. Carney. 2017. “Scholarly Personal Narrative in the SoTL Tent.” *Teaching & Learning Inquiry* 5 (1): 133–45. <https://doi.org/10.20343/teachlearninqu.5.1.10>.
- Nurunnabi, Mohammad, and Norah Almusharraf. 2020. “Social Distancing and Reopening Universities After the Covid-19 Pandemic: Policy Complexity in G20 Countries.” *Journal of Public Health Research* 9 (1) Suppl. 1: 1957. <https://doi.org/10.4081/jphr.2020.1957>.
- OECD. 2023. “Measuring Innovation in Education 2023: Tools and Methods for Data-Driven Action and Improvement.” <https://www.oecd.org/publications/measuring-innovation-in-education-2023-a7167546-en.htm>.
- Osman, Ruksana, and David J. Hornsby. 2016. “Communities and Scholarship in Supporting Early-Career Academics at the University of the Witwatersrand.” *Studies in Higher Education* 41 (10): 1835–53. <https://doi.org/10.1080/03075079.2016.1221659>.

- Pulsipher, Scott. 2020. "COVID-19 Accelerates 3 Disruptive Trends Facing Higher Education." *Forbes*, July 8, 2020. <https://www.forbes.com/sites/scottpulsipher/2020/07/08/covid-19-accelerates-3-disruptive-trends-facing-higher-education>.
- Rapanta, Chrysi, Luca Botturi, Peter Goodyear, Lourdes Guàrdia, and Marguerite Koole. 2021. "Balancing Technology, Pedagogy and the New Normal: Post-Pandemic Challenges for Higher Education." *Postdigital Science & Education* 3 (3): 715–42. <https://doi.org/10.1007/s42438-021-00249-1>.
- Richardson, Laurel. 1997. *Fields of Play: Constructing an Autoethnography*. Rutgers University Press.
- Schön, Donald A. 1983. *The Reflective Practitioner: How Professionals Think in Action*. London: Temple Smith.
- Shulman, Lee S. 1986. "Those Who Understand: Knowledge Growth in Teaching." *Educational Researcher* 15 (2): 4–14. <https://doi.org/10.3102/0013189X015002004>.
- Slade, Christine, Gwendolyn Lawrie, Nantana Taptamat, Eleanor Browne, Karen Sheppard, and Kelly E. Matthews. 2022. "Insights into How Academics Reframed Their Assessment During a Pandemic: Disciplinary Variation and Assessment as Afterthought." *Assessment & Evaluation in Higher Education* 47 (4): 588–605. <https://doi.org/10.1080/02602938.2021.1933379>.
- Stewart, Bonnie. 2020. "Online Exam Monitoring Can Invade Privacy and Erode Trust at Universities." *The Conversation*, December 3, 2020. <https://theconversation.com/online-exam-monitoring-can-invade-privacy-and-erode-trust-at-universities-149335>.
- Strielkowski, Wadim. 2020. "COVID-19 Pandemic and the Digital Revolution in Academia and Higher Education." *Preprints*. <https://doi.org/10.20944/preprints202004.0290.v1>.
- Swauger, Shea. 2020. "Software That Monitors Students During Tests Perpetuates Inequality and Violates Their Privacy." *MIT's Technology Review*, August 7, 2020. <https://www.technologyreview.com/2020/08/07/1006132/software-algorithms-proctoring-online-tests-ai-ethics/>.

- Terosky, Aimee La Pointe, and Katie Conway. 2020. "Learning to Change and Changing to Learn." In *Higher Education: Handbook of Theory and Research*, 403–52. https://doi.org/10.1007/978-3-030-31365-4_11.
- UNESCO. 2021a. "Reaching Out to All Learners: A Resource Pack for Supporting Inclusion and Equity in Education." <https://www.ibe.unesco.org/en/node/103>.
- UNESCO. 2021b. "Futures of Education: A New Social Contract." <https://en.unesco.org/futuresofeducation/>.
- Veletsianos, George. 2021. "A 'Return to Normal' on Campus? 5 Ways University Students and Faculty Hope for Better." *The Conversation*, August 12, 2021. <https://theconversation.com/a-return-to-normal-on-campus-5-ways-university-students-and-faculty-hope-for-better-157547>.
- Veletsianos, George, and Shandell Houlden. 2020. "Radical Flexibility and Relationality as Responses to Education in Times of Crisis." *Postdigital Science & Education* 2 (3): 849–62. <https://doi.org/10.1007/s42438-020-00196-3>.
- Verwoord, Roselynn, and Heather Smith. 2020. "The P.O.W.E.R. Framework: Power Dimensions Shaping Students as Partners Processes." In *The Power of Partnership: Students, Staff, and Faculty Revolutionizing Higher Education*, edited by Lucy Mercer-Mapstone and Sophia Abbot, 29–42. Elon University Center for Engaged Learning. <https://doi.org/10.36284/celelon.0a2.1>.
- Williamson, Ben, Rebecca Eynon, and John Potter. 2020. "Pandemic Politics, Pedagogies and Practices: Digital Technologies and Distance Education During the Coronavirus Emergency." *Learning, Media & Technology* 45 (2): 107–14. <https://doi.org/10.1080/17439884.2020.1761641>.

SECTION 1

Student Learning

CHAPTER 2

Remote Teaching during the COVID-19 Pandemic

A Personal Reflection

Ufuoma Akpojivi, *Advocates for International Development, UK*

The South African higher education sector has faced challenges of inclusivity, accessibility, transformation, and funding over the years. These challenges can be attributed to the historical antecedence of apartheid and have resulted in nationwide students' protests in 2015 and 2016 under the auspices of the #FeesMustFall movement. The movement calls for a free and decolonised education (Mbembe 2016; Chawana and Akpojivi 2022) that is accessible to all and responsive to the needs of society. These challenges confronting the higher education sector was further exacerbated by the COVID-19 global pandemic, which made it impossible for universities worldwide to continue with face-to-face teaching, thus migrating to online teaching and learning (Pokhrel and Chhetri 2021). In South Africa, the first case of COVID-19 infection was reported on March 5, 2020. The subsequent rapid increase in cases led to the presidential announcement of a nationwide strict lockdown and "stay at home" strategy, which commenced on March 26 in order to mitigate the spread of the virus (SA News 2020; BBC 2020). Consequently, universities across South Africa resorted to remote teaching and learning as a strategy for completing the 2020 academic year due to the uncertainty brought about by the COVID-19 pandemic (see OECD 2020).

On one hand, the migration to online teaching and learning can be considered innovative, transformative, and a responsive way of saving the academic year, and it presents opportunities to effectively

harness digital technologies for teaching and learning. On the other hand, especially in a country like South Africa, where there are gross inequalities, access issues due to infrastructural challenges (technology and electricity), and issues of stable and sustainable education funding (Wangenge-Ouma 2021) this migration poses serious challenges to promoting learner-centred teaching that meets the needs of every student. The swift move to emergency remote teaching by universities (Lapitan et al. 2021) compounded these challenges, by not allowing staff members time to carefully design and redesign their courses to reflect a pedagogical approach that would help ensure a smooth transition. This extra time is needed because the pedagogical approach of remote online teaching is significantly different from the contact or face-to-face pedagogical approach (Scull et al. 2020). Within the South African context, accessibility and participation are key challenges confronting students, as according to the In On Africa position paper (IOA 2017), only 9.6% of the population have access to the internet at home, and the high cost of data plans for cell phones in South Africa compared to other African countries means that students are at a disadvantage.

These circumstances imply that the sudden migration to emergency remote teaching and learning due to the strict lockdown restriction requires the adoption of an appropriate pedagogical approach that will ensure all students' needs of access and participation are adequately catered for and that the approach is responsive to learners' and societal needs. In this chapter, I draw from my emergency remote teaching experience of two courses, following the autoethnography methodological approach (Ellis 2004). The first course, taught to a large second-year class (145 students), commenced on February 6, 2020, before the COVID-19 pandemic, but had to be migrated to remote teaching halfway through the course on April 20 due to the lockdown restrictions. The second course was taught to a smaller third-year class (21 students) and was purposively designed for remote teaching during lockdown commenced on April 21, 2020. Drawing from my reflections, I seek to compare the teaching and learning practices employed for both

courses, highlight the challenges of migration from face-to-face to remote education, and consider how the opportunities highlighted by these challenges can be exploited for the post-COVID era.

Context

The University of the Witwatersrand (Wits University), located in Johannesburg, South Africa, is in the top 200 universities in the world (Times Higher Education 2021). As a traditional university offering theoretical oriented degrees, with a student number of around 40,000 (Wits University Quick Statistics 2020), Wits University's strategic mission for 2020 was to be research-intensive and have a postgraduate focus (University of Witwatersrand 2020). Consequently, it has adopted a comprehensive, proactive approach that focuses on solving societal problems by increasing access (see figure 2.1) and producing future “thinkers, leaders, and professionals to advance, transform, and improve the world” (Wits University Quick Statistics 2020). To this end, Wits University prides itself on its transformative agenda as reflected in its students' demography, where black students have been granted more access (see figure 2.1).

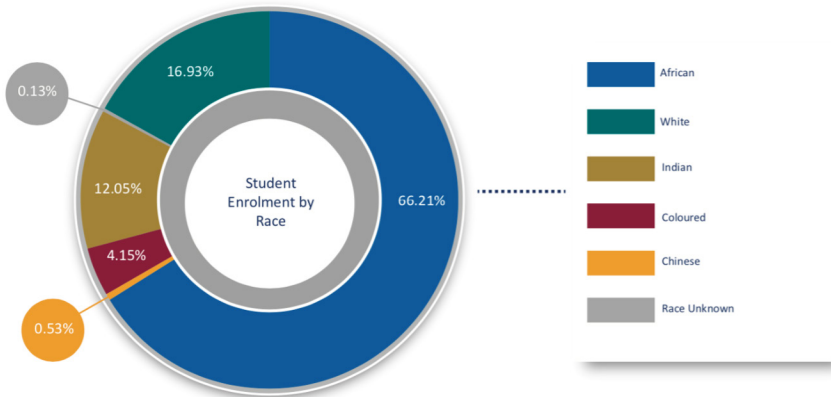


Figure 2.1. Wits student numbers by race (*source*)

Consequently, my department, media studies, designs curricula to foster critical and theoretical debates from the Global South. We

examine the power relations underlining the media landscape, critically analyse media and cultural texts, behaviours, institutions and production processes, regulation, content, and audiences [<https://www.wits.ac.za/mediastudies/>]. To be responsive to the needs of society, media studies teaching and learning practices seek to promote and facilitate inclusivity by equipping our students with essential life skills in writing, research, and critical thinking, which are germane in addressing contemporary societal problems. Teaching culture and assessments are applied to the diverse needs of our students. Likewise, students' experiences are considered invaluable components of knowledge production, which is reflected in our annual curriculum development workshop. Therefore, the power dynamic between the lecturer and the students is dismantled to encourage student participation, enabling their voices in the knowledge production and distribution processes.

To encourage participation and accessibility in teaching and learning, the department has long embraced a blended learning approach that combines synchronous and asynchronous strategies (Lapitan et al. 2021; Bonk and Graham 2012). Departmental courses are hosted on the learning management system; we previously used Sakai but have recently moved to Canvas (Ulwazi) in 2021. Course notes (slides, annotated notes, etc.), readings, links to external sites (e.g., YouTube videos, etc.) are all available to students to use in their own time. Bonk and Graham (2012) see blended learning as “an essential methodological scaffolding needed to effectively combine face to face instruction, online instruction and arrays of content object and assets of all form factors” that enhances student participation and enables students to study at their own pace and time, thus empowering them to be critical thinkers and problem solvers (quoted in Lapitan et al. 2021). This strong practice of blended learning should have enabled a smooth transition into the emergency remote teaching and learning that occurred following the COVID-19 outbreak in South Africa, since our students were already exposed to the use of technology in teaching and learning.

However, the historical context of the university, that is, a historically white institution that gave birth to the #FeesMustFall movement in South Africa (see Chawana 2020; Chawana and Akpojivi 2022), and the abrupt lockdown and move to emergency remote teaching and learning following the declaration of the National State of Disaster (Government Gazette No. 43096) calls for a critical evaluation and reflection of this remote teaching and learning for two reasons. Firstly, as earlier stated, South Africa is one of the more unequal countries in the world due to the historical antecedence of apartheid. Moreover, policy initiatives to transform the educational sector by creating “equal opportunity in relation to educational access and outcome” since 1994 when South Africa became an independent nation (Southall 2016, 99) haven’t been successful. This failure has been mainly attributed to limited financial opportunities that hinder the state from funding the education sector adequately, thus giving way to institutions seeking alternative sources of revenue via tuition fees, which became tools for excluding students from poorer backgrounds (Chawana 2020). Consequently, the #FeesMustFall protests of 2015 and 2016 sought to address inclusivity and access, as students demanded transformed teaching and learning spaces, decolonised curricula, and free education. While there have been initiatives to encourage reforms at the University of the Witwatersrand, the COVID-19 outbreak during the reform process presented challenges (Pokhrel and Chhetri 2021).

Secondly, following the completion of the 2020 academic year, universities in South Africa, especially the University of the Witwatersrand, considered the academic year to be successful based on the completion of the academic year that was initially thought lost. Furthermore, the improved student pass rate, which goes contrary to the anticipation of failures from the university due to the migration to online teaching and its impact on students, has been used to justify the success of the academic year. This narrative from the universities has been challenged by academics who cite the lost lecturer–student interaction and the impact on the learning process (Pikoli 2020). The United Nations Children’s Fund (UNICEF), in

their 2021 report on education and COVID-19, while noting the impact of the lost contact on the learning process, held that physical interactions are central to students' social, emotional, mental, and educational outcomes. Therefore, there is a need to interrogate lecturers' teaching and learning practice if, indeed, the academic year was successful and if students could develop the critical thinking skills required, especially for disciplines like media and communication studies. Likewise, there is a need to examine how lecturers could maintain or build, in a virtual setting, the student-lecturer interaction needed for a holistic educational process.

This examination is imperative because the central issue from both points highlighted above is access and inclusivity. The COVID-19 pandemic not only highlighted this issue but exacerbated it. According to Oyedemi (2012, 2014), there is limited and skewed access to the internet in South Africa, and students access the internet predominately from their universities and not from home. The university management's positive assessment of the 2020 academic year, alluded to earlier, ignores this problem, as their assessment took into account access from the perspective of providing laptops and monthly data (30 gigabytes each) to students, but failed to consider other factors such as students' ability to connect and access the learning management system amid unequal infrastructural issues and the conduciveness of their learning/study environments at home. As Oyedemi (2012) describes, there is a low penetration rate of the internet, since most often students in rural areas are unable to connect. The demography of black students at a historically white institution like the University of Witwatersrand shows that most reside in rural areas or delinquent infrastructural areas (semi-urban) with a lack of basic amenities where constant service delivery is an issue.

The following discussion is therefore a reflection on my teaching and learning practices during the pandemic. It highlights the challenges as well as the opportunities presented in migrating courses in a discipline that requires contact (between lecturer and student) to foster critical thinking, such as media and communications studies.

Methods

Following the closure of educational institutions on March 17, 2020, the university's management announced emergency remote teaching and learning to complete the academic year. This meant that staff members had four weeks to redesign their courses and be ready to commence term two scheduled for April 20, as term one ended on March 17, 2020, a week before the scheduled study break. These four weeks were intense as staff members attended different online courses, such as Rapid Online Teaching Toolkit organised by the Faculty of Commerce Management and Law (CLM) and the Centre for Learning, Teaching, and Development (CLTD). The training and resources from the Faculty of the Humanities Teaching and Learning Committee provided insights on approaching emergency remote teaching. To this end, the Faculty of Humanities and the university called for the adoption of an asynchronous learning approach due to the realities of South Africa, as such an approach would not only allow students to access the course material and study at their own pace and time without being present in the classroom but also offered interactivity with "faculty members and collaboration with other students" (Jaffee 1997, 263). This asynchronous approach also helped to address the access and connectivity issues highlighted by Oyedemi (2012). However, Jaffee (1997, 262) cautions that while technology has enhanced teaching practices, when lecturers teach asynchronously, pedagogical principles for asynchronous learning should guide their course development and teaching. Harasim et al. (1995) argue that asynchronous learning presents a good opportunity for problem-solving-oriented disciplines and promotes in-depth teaching, learning, and engagement with course material (cited in Jaffee 1997). However, this is only possible when the course has been carefully designed to facilitate constant interaction and feedback from the lecturer to the student (Jaffee 1997).

The media studies curriculum at the University of Witwatersrand fits these criteria as our courses promote critical thinking, problem-solving, and deep approaches to learning, rather than

surface approaches to learning or pure memorisation. Just like other disciplines in the humanities, media studies is not heavily reliant on procedures, or practical and creative application, but focuses on unpacking the power relations underlining the media landscape and critically analysing media and cultural texts, behaviours, institutions and production processes, regulation, content, and audiences (<https://www.wits.ac.za/mediastudies/>). My pedagogical approach during the emergency remote teaching and learning in 2020 was informed by this positioning, and the present chapter considers this from an auto-ethnographic perspective of two courses that I taught during the pandemic. The use of auto-ethnography is beneficial, as Custer (2014) argues that the method is engaging, allowing the researcher to reflect on past events and experiences, interrogate ideas, and challenge known assumptions. However, auto-ethnography can raise subjectivity and ethical concerns over the use of personal data and other participants in a study (Wall 2016). Nevertheless, within the context of this study, I adopted what Wall (2016) called ethical and self-focused auto-ethnography, where the data is based on unique personal experiences to provide a nuanced discussion.

Findings

Course 1: Pre-pandemic to migration to online teaching during the pandemic

My second-year course titled Texts, Processes, of Reception and Audience (SLLS2003) is a semester-long course that began before the pandemic, on February 6, 2020. The course was administered as a weekly lecture lasting for 105 minutes. The course seeks to examine the power relationship between the media and the audience, the media producers, media texts, and audiences themselves. Therefore, a vital aspect of the course is the theoretical and public debate of the media and audiences, and the intended learning outcomes include the ability of students to perform an in-depth analysis of media audiences and link those to existing theoretical debates and paradigms, show a critical understanding of the approaches and debates about the relationship between the media and audiences,

and conduct a small-scale research project on the audience. Because media text is central to the course, during contact lectures, the use of media text and in-class exercises and discussion was germane in order to unpack the different theories underpinning media sociology and facilitate deep approaches to learning by scaffolding the concepts and theories within the course. The modes of assessment were a quiz, written essay assignment, group tutorial project, attendance, and an exam, which were meant to test the students' ability to critically use or apply media theories to expound on media text and interrogate the power dynamics between the audience and the media.

My teaching practice when migrating course 1 to remote learning

Before the commencement of emergency remote teaching and learning on April 20, 2020, I contacted my students via the Sakai platform, the learning management system, requesting that they provide me with information on issues that might hinder their ability to study from home and suggest ways in which I could assist them.

Dear all,

There is no doubt that these are stressful and unprecedented times. The outbreak of Coronavirus has impacted our lives greatly as our routines have been disrupted.

As you are aware, the second block teaching term commences on Monday, April 20. The university has planned to migrate to online teaching as a way of completing the academic year. To do this effectively, please, could you kindly answer the following questions?

- Do you have internet access at home?
- Do you have an appropriate computing device on which to effectively study at home?
- What are some of the challenges you foresee that will impact on your study at home via online teaching?

- In what way(s) can the school and department assist you in addressing these challenges?
- Lastly, would you want the study material to be couriered/posted to you at home?

Kindly email me your answers. I will be grateful if you answer the questions urgently. Please, note that as your lecturer I am here to support you, and kindly contact me should you require any assistance or need to talk.

Kind regards,

Dr. Akpojivi

While most students confirmed that they had laptops and were happy to continue the course remotely, some students highlighted a lack of study devices (laptop/desktop) and convenient study space at home. On the other hand, others highlighted the deep access and connectivity issues confronting the South African state (see Oyedemi 2012) as salient factors that might hinder them from participating and continuing with the course.

Re: Second Block Teaching

I am a second year student, enthusiastic about acquiring education.

However, due to the global issue it seems my dream will be placed on hold.

I am from the villages in Limpopo, no internet access, both telcom, Vodacom, and MTN network tends to be out of coverage. Further, I don't have a smart phone or computer. I used my neighbour's phone to do the survey and also check my emails, which I rented for an hour. I believe that the school shouldn't exclude me, though I am from the disadvantage context. . . . We all deserve equal education irrespective of our situation. Thus I believe that if the university can kindly assist me with a smart

device to internet, I can compromise by going to my neighborhood town for internet coverage.

Thank you

Considering the unequal access and connectivity issues in South Africa and the diverse students and their needs within the course, I decided to use low-cost technology for teaching and learning to enable access to all. This approach was to accommodate the limited mobile data (30 gigabytes per month, 10GB for daytime use and 20GB at night) the University of Witwatersrand provided students. Therefore, I recorded audio into the lecture PowerPoint, which was uploaded into Sakai twelve hours before the scheduled lecture time, instead of doing a live synchronous lecture. The rationale behind this is that I wanted the students to use the scheduled lecture times for the actual download of material and study and ensure that the pattern of studying before the pandemic during contact lectures was maintained. The student could further revise at their own convenience. Also, I made use of annotated notes to explain deep and complex ideas and theories. These annotated notes made references to issues discussed within the PowerPoint slides for ease of reference. In addition, all the readings were uploaded one week ahead of the scheduled lecture to enable students to read and understand the material before accessing the lecture notes. Prior to the pandemic, the course had weekly contact tutorial sessions with tutors for an hour. The purpose of the tutorials is to expound on the concepts and topics treated in class for the week. Students were encouraged to engage in written exercises before the tutorial session, as the tutorial was meant to be a discussion session to share ideas with colleagues. With the migration to emergency remote teaching, I created a forum section in Sakai for each tutorial group, assigned a tutor to each group, and uploaded the tutorial questions for discussion a week ahead of the scheduled tutorial.

To facilitate access and participation during tutorial times, I requested that the tutors probe the students' ideas further by engaging with their written answers. In some cases, I interrogated the

comments of the students and tutors on the forum section. The rationale was to ensure that students understood the topic in-depth, as such probes facilitate deep approaches to learning. According to Biggs and Tang (1999), deep approaches to learning enables the lecturer to correct any misconceptions students might have and address them via engaging in active learning. Thus, engaging the students in the forum section facilitates interaction between the lecturer and students (Jaffee 1997). Furthermore, students' ideas, theories, and knowledge are critically expounded, thereby allowing students to attain the intended learning outcomes. In addition, I maintained an open consultation policy, where I was available to address student queries any day of the week with extended working hours (8am-10pm) via Microsoft Teams, email, and telephone. This availability allowed students more time where they could be free to study and ask any questions they had. While offering this extended consultation time was complex and difficult, the decision to do it was influenced by the answers from the pre-survey conducted before the commencement of online teaching where some of my students complained of not having a study space as all family members live within a room or two, coupled with connectivity issues.

The extended working hours also mean that, should students be studying and have queries, I would be available at these times to immediately respond to their queries, thus helping to address any misconceptions they may have early in the learning process. Jaffee (1997) argues that learning is a social process that requires intensive interaction, and my availability and interaction via the different platforms ensured that genuine concerns from the students were addressed in a timely manner, thereby closing the gaps of independent learning that are often associated with asynchronous modes of teaching and learning (see Jaffee 1997).

I did not alter the assessments during the move to remote teaching because the different modes of assessments had been carefully designed to critically test the intended learning outcomes and students' ability to apply the knowledge in a real-life situation. At the end of the semester, the pass rate of the course was 89% of 145

students that registered for the course (see table 2.1 below). While the pass rate shows a decline of 1% from the previous year in 2019 (contact teaching), which was 90% based on 184 students, there was no statistical difference in the pass rate between 2019 (full contact teaching) and 2020 (beginning of emergency remote teaching and learning). Nevertheless, it should be noted that this pass rate was affected by challenges students encountered from online teaching and learning, which resulted in some dropping out of the course and others not completing assessments due to access and connectivity issues. These issues are discussed in the subsequent section.

Course – SLLS2003	2019	2020
Number of Students	184	145
Pass rate	90%	89%

Table 2.1. Pass rate for SLLS2003 in 2019 and 2020 academic years

Course 2: In-pandemic online teaching

My third-year course titled Media Policy and Regulation in South Africa (SLLS3010) began on April 21, 2020, in the second block of teaching during the pandemic and whilst the nation was still in lockdown. Lectures for this course occurred twice a week with lecture time of 105 minutes each. The course provides a critical look at the evolving debates and issues surrounding media and communication policy and regulation from the national, regional, and global perspectives. Also, the course explores the conflicting interests and tension between the various actors in the media arena and examines the impact of political, economic, and cultural institutions in media policy formulation and implementation. To this end, the intended learning outcomes of the course were to (1) demonstrate an understanding of the media systems and key media policy debates in South Africa, (2) critically discuss the impact of political, economic, and socio-cultural factors that impinge on media policy formulation, regulation, and implementation, (3) be familiar with the South African media policy history, and (4) demonstrate

knowledge of the different media systems and policies around the world, especially from neighbouring Southern African countries.

The course draws heavily from conceptual policy and regulatory issues. Hence, the use of relevant case studies and policy debates and their wider implications during contact lectures was significant in unpacking the different theoretical frameworks underpinning the relationship between the media and society and to broaden the students' understanding of the historical and cultural specifics of media institutions, media policy, and regulation. From the above, it can be argued that the course is not practical but designed to generate policy and theoretical debates of media freedom and regulation, thus requiring active participation and engagement with the course resources (reading material, assessments, announcements, etc).

My teaching practice when designing and delivering course 2 via remote learning during the pandemic

Although this course commenced during the pandemic, I conducted a survey with the registered students just like in course 1 above, requesting them to inform me of challenges they might encounter with remote teaching and learning and ways the department and I could assist. Most students had access to at least one device (laptops and mobile phones) that could be used for study. Only a few students raised the issue of connectivity due to their geographical location, where they had limited internet access, as well as issues regarding access to comfortable study space. Considering the unequal access and connectivity issues identified, again I decided to use low-cost technology for teaching and learning to enable access to all. This included audio recording into the lecture notes (in PowerPoint) and uploading these notes into the course page on Sakai twelve hours before the scheduled lecture time.

Like when course 1 was migrated to remote teaching, I uploaded all course readings one week ahead of the scheduled lecture. The course was also structured to facilitate student engagement with study material and peers. This is evident in the problem-centred format of assessments: written essay, group project, and take-home exam. For this course, I likewise maintained an open consultation

policy, by being available to address students’ queries any day of the week with extended working hours (8am–10pm) via Microsoft Teams, email, WhatsApp, and mobile telephone.

According to Armagan, Sagir, and Celik (2009), problem-solving is essential to students’ development as it enables students to be more efficient and transfer the skills learnt in solving real-life problems. Therefore, in this course, case studies were further used to facilitate deep approaches to learning, as the asynchronous teaching mode has been criticised for students’ inability to grasp concepts (see Jaffee 1997). The pass rate for the course in 2020 was 94% of 21 students registered for the course (see table 2.2). While this pass rate shows an increase of 7% from the previous year (87% of 33 students in 2019 with contact teaching), the quality of assessment submissions from students was weaker compared to the previous year. This observation was confirmed by the course external examiners. This was albeit a significant increase in pass rate to the previous year, and it should be noted that the course was purposively designed for remote teaching and delivery.

Course – SLLS3010	2019	2020
Number of Students	33	21
Pass rate	87%	94%

Table 2.2. Pass rate for SLLS3010

From the reflection on my experiences above, it can be argued that both courses were successful based on pass rates and the ability of students to engage with the course material, which resulted in the completion of the academic year. However, there are some challenges which call into question some of my pedagogical approaches. One of the fundamental challenges is students’ engagement with course material (see figure 2.2a and 2.2b).

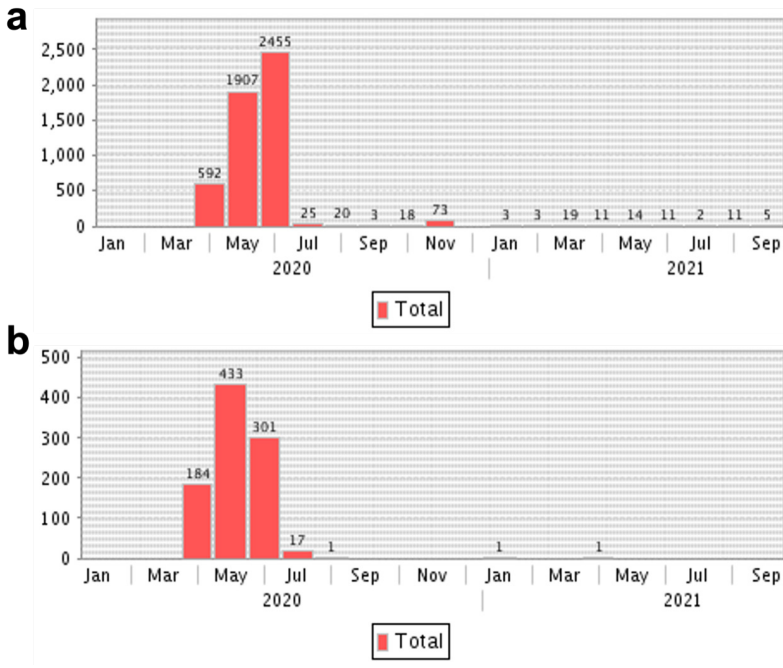


Figure 2.2. Student engagement with resources (lecture notes, readings, forum, etc.)

a) During the study block of April-June on course 1- SLLS2003

b) During the study block of April-June on course 2- SLLS3010

Note: Y-axis represents the number of students and X-axis represents the month.

I observed that students' engagement in the forum discussion was passive as they provided brief comments and single-word answers on required tutorial exercises. When the tutors and I probed their written responses further, they provided similar short comments. It can be argued that because forum discussion was used to validate students' participation, students saw it as an opportunity to register their participation mainly to fulfil due performance (DP), an essential requirement for media studies courses and assessments.

Furthermore, while the available statistics from Sakai indicate a weekly engagement of 75% and 87% of students in the second and third years respectively, some students were unable to engage with the course material due to technical and health challenges. This

could be attributed to the impact of COVID-19 that has further exacerbated the access issues within South African universities. I approached the Faculty of Humanities Students at Risk Officer to assist these students by offering the necessary support, but the deep inherent apartheid antecedence, such as unequal financial access and unequal infrastructural distribution (Southall 2016; Oyedemi 2012), had an impact on this process. Consequently, some students dropped out of the courses (about 6 students), and some failed to hand in assessments despite the flexibility I offered with assessment deadlines. Pokhrel and Chhetri (2021, 135), while addressing the impact of these inequalities on students' ability to study, argue that "many students at home/living spaces have undergone psychological and emotional distress and have been unable to engage productively," as they have uncondusive learning spaces within their homes. Although students suggested and highlighted the need to courier weekly lectures and activities (in printed handouts or on pen drives), the strict lockdown restrictions made it difficult for such logistical arrangements to be made, especially in a timely manner.

Additionally, some students were unable to grasp and display in-depth knowledge of the course content, especially in my third-year course, despite increased engagement as shown in the statistical data and increased interactivity via the open consultation policy, which encourages regular interaction between the lecturer and student. One could argue that students were involved in surface approaches to learning, focusing on memorising concepts to pass an assessment with uncritical ideas (Biggs and Tang 1999). Therefore, we must ask whether student engagement translates into actual material engagement and deep approaches to learning. The third-year students, who had greater weekly engagement compared to the large second-year class, produced average quality submissions lacking in-depth conceptual and theoretical understanding of policy and regulatory issues. The second-year class had excellent submissions, as attested to by the course external examiners.

Furthermore, I observed an increase in plagiarism cases from students compared to the previous years. The basis for such increased

cases cannot be explained as students have previously been exposed to lectures on plagiarism and how to reference during their first year of study. The course outline uploaded on the learning management system also outlined in detail referencing processes and provided the university's plagiarism policy. However, it can be argued that the impact of the pandemic and the migration to emergency remote teaching and learning may have a role in the increased plagiarism cases. It is likely that students were more concerned about submitting assessments and completing the academic year, whilst paying less attention to adhering to the principles governing academic assessments.

This is connected to another issue I experienced: the sense of entitlement exhibited by students during the pandemic. Students registered on both courses generally assumed that the migration to remote teaching and learning due to COVID-19 meant that established standards to ensure quality control of courses would be overlooked. For instance, students requested that they be awarded marks for assessments not submitted or that I adjust rubrics to reflect the challenging learning environment. When such requests were declined, I was accused of not adhering to the university's call to support students to graduate during the challenging period. While the university called for flexibility and for staff members to provide the needed support students required during the pandemic to ensure that they complete their programmes and graduate, students misinterpreted this to mean "all registered students must be passed," irrespective of their performance. Such an assumption is problematic and highlights the impact of the COVID-19 pandemic on the wider education system.

Recommendations and Implications

The global COVID-19 pandemic has disrupted teaching and learning and greatly impacted students' mental, social, and cultural development (UNICEF 2021), as the migration to emergency remote teaching and learning brought numerous challenges and opportunities. Within the South African context, while the

pandemic presented an opportunity for universities to actively embrace technology for teaching and learning, which resulted in the completion of the academic year despite earlier concerns, the inherent social inequalities, infrastructural issues, and lingering problems of funding, equity, and access confronting higher education institutions affected the remote teaching and learning experience. In addition, access and connectivity issues posed serious challenges, hindering marginalised students from actively engaging and participating in remote teaching and learning due to inequitable access to the internet and compounded by factors such as geographic location, as well as a lack of a safe and comfortable study environment. All these problems are not new to the South African state but are due to the historical antecedence of apartheid (see Southall 2016).

Experiences from my two courses suggest that we need to rethink students' engagement and participation within remote teaching and learning environments, especially within a largely unequal country. That is, how should we approach engagement and participation within a virtual learning classroom? Does downloading course lecture notes and reading material translate to deep learning and understanding of concepts by students? As Scull et al. (2020, 504) observed, participation within an online learning situation is context-based and "cannot be reduced to simply measuring the extent to which students engage with each other and their teachers in an online environment." My experience from both courses highlight the importance of this statement as, despite the increased access (open consultation policy) and metrics (material download and page views) from the learning management system (see figure 2.2), such engagements did not translate to quality submissions and showed that surface approaches to learning rather than deep approaches to learning occurred. Scull et al. (2020) called for educators to reduce expectations to address engagement and participation. On the other hand, I propose that online courses should be carefully structured so that engagement and participation are nuanced and reflect the unique context of society and the challenges confronting education.

Educators and universities should think creatively beyond just appropriating technology for teaching and learning and consider ways of (re)balancing technology pedagogy that is learner-centred, enabling students to engage in thoughtful and deep learning in an inclusive way. This calls for educators and universities to ask deeper questions about how technology can be harnessed effectively so that it goes beyond a mode of delivery or “isolated” platform in the teaching and learning process to becoming an “inclusive platform” that is part of the broader teaching pedagogy. My experiences during the emergency remote teaching and learning highlight the growing need for a thoughtful rebalancing of the technology-pedagogy complexity in higher education, especially within a post-pandemic era.

References

- Armagan, Fulya, Safak Sagir, and Yalcin Celik. 2009. “The Effects of Students’ Problem Solving Skills on Their Understanding of Chemical Rate and Their Achievement on this Issue.” *Procedia Social and Behavioural Sciences* 1: 2678–84.
- BBC. 2020. “Coronavirus in South Africa: Restrictions Ease as Covid-19 Cases Rise Rapidly.” June 18, 2020. <https://www.bbc.co.uk/news/world-africa-53093832>.
- Biggs, John, and Catherine Tang. 1999. *Teaching for Quality Learning at University*. New York: SHRE and Open University Press.
- Bonk, Curtis, and Charles Graham. 2012. *The Handbook of Blended Learning Global Perspectives, Local Design*. Wiley.
- Chawana, Fiona. 2020. *An Analysis of the Ideological Interventions During #FeesMustFall: A Case Study of the University of the Witwatersrand*. M.A. Dissertation, University of the Witwatersrand, South Africa.
- Chawana, Fiona, and Ufuoma Akpojivi. 2022. “Violence for Social Change: An Analysis of the #FeesMustFall Movement in South Africa.” In *Discourse, Media, and Conflict*, edited by Innocent Chiluba, 213–31. Cambridge: Cambridge University Press.
- Custer, Dwayne. 2014. “Autoethnography as a Transformative Research Method.” *The Qualitative Report* 19 (37): 1–13.

- Ellis, Carolyn. 2004. *The Ethnographic I: A Methodological Novel About Autoethnography*. Walnut Creek: Altamira Press.
- IOA (In on Africa). 2017. *The Digital Divide in South Africa's Higher Education Sector: Why Public Internet Access Is Important in the Context of Tertiary Education*. <https://www.inonafrica.com/2017/08/07/digital-divide-south-africas-higher-education-sector-public-internet-access-important-context-tertiary-education/>.
- Jaffee, David. 1997. "Asynchronous Learning: Technology and Pedagogical Strategy in a Distance Learning Course." *Teaching Sociology* 25 (4): 262–77.
- Lapitan, Lorico, Cristina Tiangco, Divine Sumalinog, Noel Sabarillo, and Joey Diaz. 2021. "An Effective Blended Online Teaching and Learning Strategy During the Covid-19 Pandemic." *Education for Chemical Engineers* 35: 116–31.
- Mbembe, Achille. 2016. "Decolonizing the University: New directions." *Arts and Humanities in Higher Education* 15 (1): 29–45. <https://doi.org/10.1177/1474022215618513>.
- OECD. 2020. *Supporting the Continuation of Teaching and Learning During the COVID-19 Pandemic: Annotated Resources for Online Learning*. <https://globaled.gse.harvard.edu/files/geii/files/supporting-the-continuation-of-teaching-and-learning-during-the-covid-19-pandemic.pdf>.
- Oyedemi, Toks. 2012. "Digital Inequalities and Implications for Social Inequalities: A Study of Internet Penetration Amongst University Students in South Africa." *Telematics and Informatics* 29: 302–13.
- Oyedemi, Toks. 2014. "Internet Access as Citizen's Right? Citizenship in the Digital Age." *Citizenship Studies* 19 (3–4): 450–64.
- Pikoli, Zukiswa. 2020. "Academics Reject Claim that 2020 Has Been a Success for Universities." *Daily Maverick*, December 14, 2020. <https://www.dailymaverick.co.za/article/2020-12-14-academics-reject-claims-that-2020-has-been-a-success-for-universities/>.

- Pokhrel, Sumitra, and Roshan Chhetri. 2021. "A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning." *Higher Education for the Future* 8 (1): 133–41.
- SA News. 2020. "President Ramaphosa Announces a Nationwide Lockdown." South African Government News Agency, March 23, 2020. <https://www.sanews.gov.za/south-africa/president-ramaphosa-announces-nationwide-lockdown>.
- Scull, Janet, Michael Phillips, Umesh Sharma, and Kathryn Garnier. 2020. "Innovations in Teacher Education at the Time of COVID19: An Australian Perspective." *Journal of Education for Teaching* 46 (4): 497–506.
- Southall, Roger. 2016. *The New Black Middle Class in South Africa*. Johannesburg: Jacana.
- Times Higher Education. 2021. "World University Rankings 2021." <https://www.timeshighereducation.com/world-university-rankings/2021/world-ranking>.
- UNICEF. 2021. "First Day of School 'Indefinitely Postponed' for 140 Million First-Time Students Around the World." UNICEF press release, August 24, 2021. <https://www.unicef.org/press-releases/first-day-school-indefinitely-postponed-140-million-first-time-students-around-world>.
- University of the Witwatersrand. 2020. "Five Year Review of Teaching and Learning 2015–2019." <https://www.wits.ac.za/media/wits-university/learning-and-teaching/documents/ReviewTeachingLearning2015-2019.pdf>.
- Wall, Sarah. 2016. "Toward a Moderated Autoethnography." *International Journal of Qualitative Methods* 15 (1): 1–9.
- Wangenge-Ouma, Gerald. 2021. "South Africa's Higher Education Funding System Can Be More Realistic Without Betraying Ideas." *The Conversation*, April 6, 2021. <https://theconversation.com/south-africas-higher-education-funding-system-can-be-more-realistic-without-betraying-ideals-157478>.
- Wits University Quick Statistics. 2020. <https://www.wits.ac.za/media/wits-university/about-wits/documents/WITS%20>

[Facts%20%20Figures%202020%20Hi-Res.pdf](#). Accessed June 29, 2021.

CHAPTER 3

The Importance of Teamwork for First-Year Students’ Motivation and Belonging During COVID Online Delivery

A Canadian Engineering Case Study

Janice Miller-Young, Marnie V. Jamieson, and Seth Beck

University of Alberta, Canada

How do you design, facilitate, and evaluate a large, first-year, credit/no credit, multi-section, team-based engineering design course during a pandemic? These are the questions we asked ourselves as we prepared to offer Engineering (ENGG) 160, Introduction to Engineering Design, Communication, and Profession, for the second time in the winter 2021 semester. Some of the regular challenges of this course include offering an engaging foundational design experience to a large number of students (typically three sections of approximately 400 students each) in a blended format with only one face-to-face hour per week, incorporating guest lectures from instructors representing each of our program’s sub-disciplines, and introducing and assessing a wide variety of learning outcomes related to learning the design process, teamwork skills, and information about the profession (Jamieson et al. 2022).

First-year engineering design is rarely taught online, and offering this course remotely during a pandemic presented additional technical, delivery, and teaching challenges. How could we effectively facilitate teamwork when everything was online and there was only one synchronous hour scheduled per week? Would students be motivated to engage in the course with credit/no credit competency-based grading? Further, since design experiences have been

shown to be crucial for students' sense of belonging and identity in engineering (Godwin and Potvin 2017; Rohde et al. 2019), we wondered if we would be able to cultivate a sense of belonging and community while students were isolated at home.

This chapter briefly describes the relevant literature on online learning and intrinsic motivation that guided our course redesign, our research methodology and key findings from our post-course cross-sectional survey, and the implications of our findings for future iterations of the course as well as for online and blended team-based learning in other contexts.

Literature Review

An ability to design solutions for complex, open-ended engineering problems and an ability to work effectively as a team member and leader are important attributes of engineering graduates (Kaupp et al. 2012). Therefore, design courses typically have a team project and are taught as an integrative component that crosses all engineering sub-disciplines and years. While design experiences have been shown to increase students' identification and sense of belonging with engineering, poor team experiences can have negative impacts on students' engineering identity, self-efficacy, and sense of belonging (Ong, Jaunt-Pascual, and Ko 2020). Because the team experience is so critical, the literature on online learning informed our work in redesigning and evaluating the team aspect of the course.

Some of the challenges of online learning include students feeling isolated, disoriented or unmotivated (Mazza and Dimitrova 2004) and instructors lacking visual cues to interpret and evaluate students' learning and engagement (Dringus and Ellis 2005). Facilitating connections is critical; students' lack of connection to each other and lack of online learning opportunities in a course have been shown to lead to feelings of isolation and disengagement with a course (Rose 2017; Burke and Lamar 2021). Considering our students were in their first year during COVID remote learning and therefore may not have had a chance to develop a strong community before taking our course, we knew that attention to their affective

and socio-emotional processes would be particularly important (Kılınç 2021). Therefore, we used the lens of Self-Determination Theory to help us understand their experiences in ENGG 160.

According to Self-Determination Theory, social and cultural factors can facilitate or undermine people's intrinsic motivation, well-being, and the quality of their performance. The three basic psychosocial needs which must be met for motivation and well-being are autonomy, competence, and relatedness (Deci and Ryan 1985; Ryan and Deci 2000). In education contexts, autonomy is defined as the need to regulate one's own behavior and have a degree of choice and control over one's learning strategies (Deci and Ryan 1987; Niemiec and Ryan 2009). Competence is the need to feel capable and effective with the taught subject matter, and self-efficacy is the belief in one's own competence (Bandura 1982; Niemiec and Ryan 2009). Relatedness is the need to feel a sense of belonging and connection (Ryan and Deci 2000) which, in the learning environment, can be moderated by both instructor and peer interactions (Meeuwse, Severiens, and Born 2010; Strayhorn 2012). The gamified redesign of ENGG 160 was intended to encourage intrinsic motivation and competence development by leveraging autonomy, relatedness, and self-efficacy. The learning activities were individual and team based to create an engaged online community balanced with individual autonomy and interest.

A number of self-report instruments have been developed to study self-determination and its related constructs. The Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al. 1991) has been used extensively in higher education, including in online and engineering contexts (e.g., Duncan and McKeachie 2005; Ramírez et al. 2016). Instruments for sense of belonging and self-efficacy have also been developed and validated specifically for STEM contexts (e.g., Hurtado and Carter 1997; Baldwin, Ebert-May, and Burns 1999; Mamaril et al. 2016). Finally, in reviewing instruments developed for online and blended learning environments, we found some of the questions about engagement from Owston, York, and Murtha (2013) to be useful for our context.

However, no instrument we reviewed, or even a set of items for a specific construct, consisted entirely of questions relevant to our context. To build a questionnaire that was aligned with both our course and research questions, we chose a mix of relevant scale, domain-specific (engineering), and task-specific items from existing instruments in a collaborative and iterative process. A full literature review and a description of our questionnaire and development process is provided in Miller-Young, Beck, and Jamieson (2021); we discuss the validity of our questionnaire in the methods section, below.

Context

The study took place at a large, research-intensive university in Canada. The course was first offered in winter 2020, in a blended format with one face-to-face hour per week, consisting of live guest lectures and a team design project for which students were randomly assigned into teams and expected to work together mostly outside of scheduled class time. Teams reported struggling to find time to connect, and many students appeared to follow the minimum path to obtain credit for the course, although it is difficult to say how much of this was due to course design, and how much was due to the course being interrupted by the lockdown during COVID-19 (Jamieson et al. 2022). Therefore, for the winter 2021 iteration, we shifted more weight to the project deliverables, focused formative progression assessments on feedback and used competency-based grading with the opportunity to rework the assignments, increased the minimum activity completion requirements, and added gamification elements to improve student autonomy and engagement (Jabbar and Felicia 2015; Bodnar et al. 2016). Game elements included flexibility in deadlines for much of the individual work, badges for completion of various aspects of the course, and a dashboard indicating progress. However, knowing that this second iteration would have to be delivered fully remotely, we remained especially concerned about how to facilitate a positive team experience.

In order to facilitate online team interactions during the course, and therefore hopefully increase students' sense of belonging and intrinsic motivation, the team design project group size was reduced from eight to six students and they were allowed to pick their own teams. The main team conceptual design project was broken down into weekly progress assignments connected to the relevant weekly individual work, which included asynchronous weekly readings, recordings, and quizzes. Finally, the synchronous class time was used for team activities, which were facilitated by the instructor and eleven teaching assistants (TAs) who assisted with project management, team concerns, technical advice, and mentorship. Each team had their own Zoom breakout room to facilitate TA/student interactions during class, and teams had their own Discord text and voice channels which helped facilitate continued informal communication during the rest of the week and gave the TAs an additional way to monitor the groups. TAs also kept regular remote office hours on Zoom or Discord to answer student questions during the week. The instructor and the TAs answered questions during class as well as on the course LMS page and Discord during the week.

Finally, although we employed a survey design and attempted to be as objective as possible in our research, we recognize our own positionality in this study. Our research question and methodological choices were influenced by three key aspects: a) our mutual concern for students' online experience during COVID-19, b) Seth's recent experience as an engineering undergraduate student and design teaching assistant, and c) our literature review of studies which have used Self-Determination Theory and belonging in higher education (Miller-Young, Beck, and Jamieson 2021). Our choice to use a cross-sectional, multi-method survey allowed us to gain insights from as many students as possible, however it may also have limited us from exploring other important aspects of students' experiences. Therefore, we also conducted eight follow-up interviews which are reported elsewhere (Miller-Young, Jamieson, and Beck 2023).

Methods

The purpose of our study was to explore students' experiences during remote delivery of our team-based, competency-based, first-year course, using the lens of Self-Determination Theory. Our research questions were:

- How did students feel the course satisfied their basic psychosocial needs, i.e., autonomy, self-efficacy, and sense of belonging?
- How and why did students perceive that the various course elements influenced their autonomy, self-efficacy, and sense of belonging?

This study employed a multi-method survey design, using a questionnaire with both quantitative and qualitative items. Quantitative data was analyzed using descriptive statistics; qualitative data was analyzed using conventional content analysis (i.e., inductively, looking for themes that helped explain the quantitative findings [Hsieh and Shannon 2005; Neuendorf 2017]). Finally, we used extreme case sampling to choose quotes from students who responded with either high or low scores to Likert-scale items asking about autonomy support, self-efficacy, and belonging/relatedness.

Data collection

The questionnaire was developed by selecting appropriate items from several validated instruments in order to answer our research questions. Questions were selected and/or modified from the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al. 1991); Hurtado and Carter's (1997) sense of belonging questionnaire; Biology Self-Efficacy Scale (Baldwin, Ebert-May, and Burns 1999); Owston, York, and Murtha's (2013) blended learning questionnaire; and Mamaril et al.'s (2016) engineering self-efficacy instrument. A detailed literature review and description of the development process as well as the full questionnaire which had six demographic, forty-seven Likert-scale, and seven short-answer items is provided elsewhere (Miller-Young, Beck, and Jamieson 2021). Because the purpose of the questionnaire was for course feedback as well as research, we organized the questions in the order we thought would be most useful for students when

replying; therefore, validated construct measurement questions were mixed with course-specific feedback questions, and not all questions related to each construct from the original sources were included. For the purposes of this study, we analyzed responses to four Likert-scale questions related to autonomy (questions 9, 14, 47, 49), ten Likert-scale questions related to self-efficacy (questions 16–25), nine Likert-scale questions about belonging and relatedness (questions 29–31, 33–36, 39, and 40), and four Likert-style questions about the effectiveness of various aspects of the course using a 5-point scale (questions 48, 50, 53, and 60), as well as the qualitative responses to the five short-answer question at the end of each section, “Is there anything else you’d like to tell us about ___?”

The questionnaire was deployed online using Google Forms in the last week of classes. Announcements and the link were posted on the class website and emailed to all 903 students enrolled in the course. All participant information was managed and kept confidential by Seth, who is not an instructor. Additionally, the two research team members who were not affiliated with the teaching of the course that semester (Janice and Seth) introduced the research project during the final (synchronous) class time. All students were asked to complete the questionnaire for feedback purposes, and they had the option to indicate if they were willing to have their responses used for research purposes. Reminder emails were sent to those who had not yet responded up to four times over the following five-week period. The study was approved by the University’s human research ethics board.

Sample

Of the total 903 eligible students who were invited to participate, 223 responded to the survey and 186 indicated they consented to their data being used for research purposes, resulting in a 20.6% response rate for the research. All participants responded to all quantitative questions. After examining the data set, we removed six participants from the data set because their responses to reverse score questions did not align with their other responses, resulting in a final sample of 180 participants and a completion rate of 97%.

Of these participants the majority identified as male, were 19 years of age or below, identified as Caucasian, South Asian or Chinese, and self-reported a GPA in the B or C range (figures 3.1 and 3.2). These participant demographics are representative of students in our program as well as within engineering programs across Canada (although the university registration system does not collect race- or identity-based data, the faculty collects an annual “Diversity in Engineering” survey which includes demographic data).

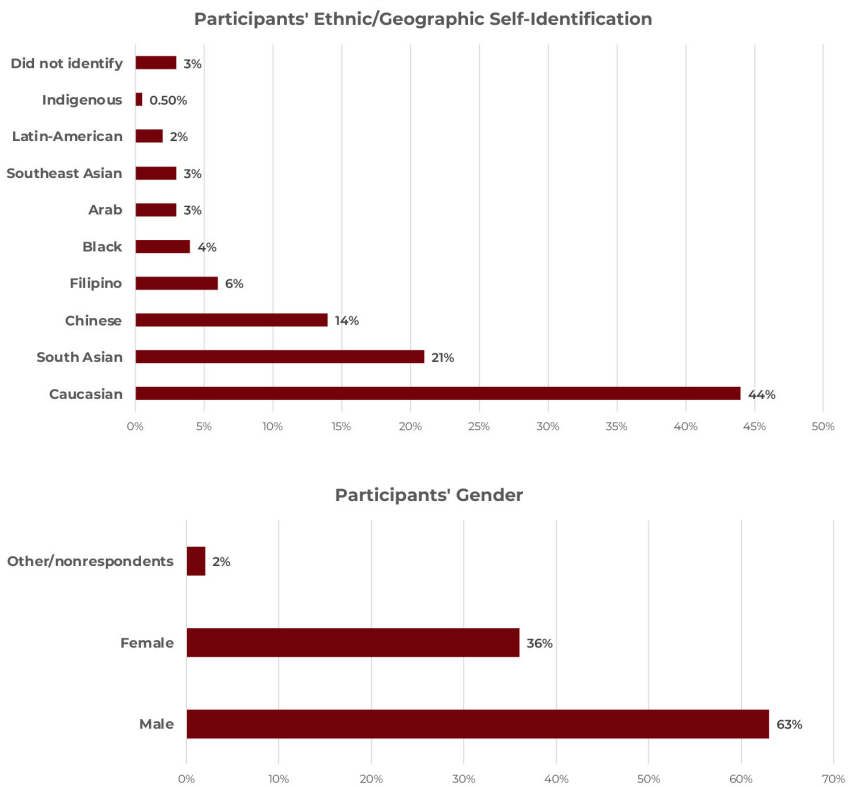


Figure 3.1. The participants' gender and ethnic/geographic self-identification. Note: The respondents had the choice to select more than one box for ethnic/geographic identification with four students identifying as more than one category listed.

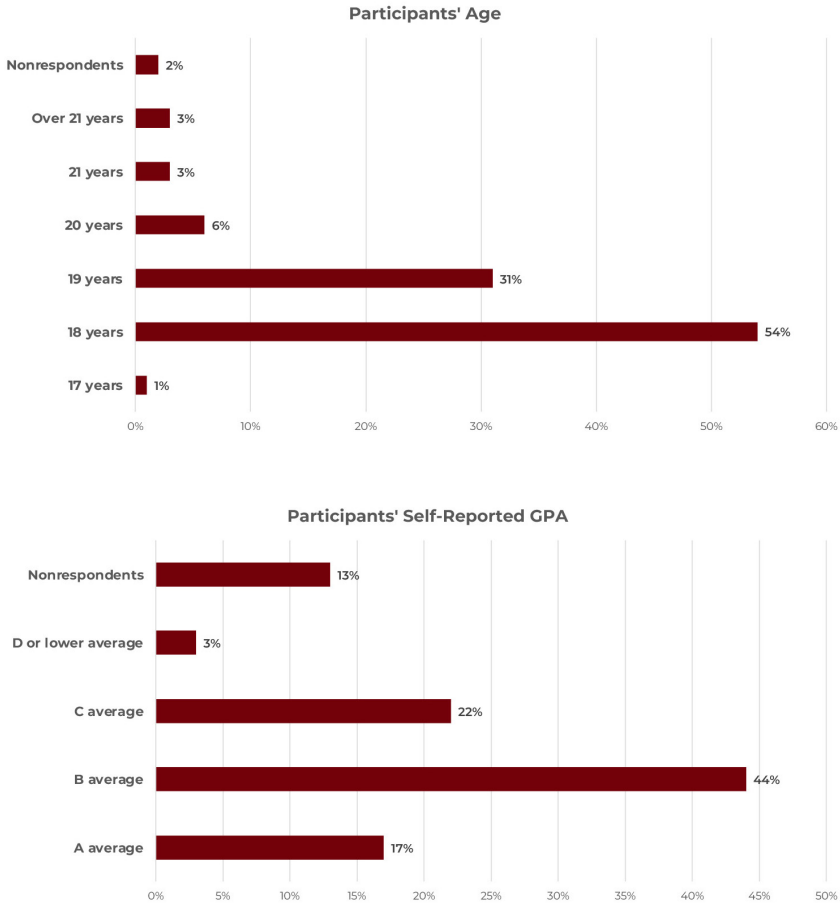


Figure 3.2. The participants' self-reported GPA and age

Data analysis

As a first step, we examined our data and realized that it was not normally distributed; Likert-scale responses for almost all questions were skewed towards higher responses (using Matlab, the skewness was calculated to be negative for responses to all questions except Q7 “I was likely to ask questions in this course” which was normally distributed, and Q39 “The game elements improved my motivation to do work in this course” for which skewness = 0.01). This is a positive result from a teaching perspective, however it has implications for statistical analysis. Although in quantitative research

it is common to conduct a factor analysis to test the validity of an instrument, we took a different approach to this case study for several reasons: the items had been validated previously in other studies and similar contexts, the responses for our study were highly skewed, we were interested in understanding student experience rather than correlating variables using inferential statistics, and students' qualitative responses aligned well with and helped explain their quantitative scores. Instead, we decided to re-score our quantitative data into three categories: 4,5=agree, 3=neutral, and 1,2=disagree, and report frequencies of these responses. Descriptive statistics (mean and standard deviation) for relevant questions were also calculated.

In addition to gaining useful feedback about various aspects of the course, we were surprised at the overwhelmingly positive responses related to teamwork. Also, we noticed that most students who reported higher scores on questions related to one construct reported higher scores on all constructs, and vice versa; further, students in the high and low groups gave different reasons for their responses. Therefore, we divided respondents into these two groups and conducted descriptive statistics and a content analysis of their qualitative survey responses. A total of 134 students (~74%) elaborated (explained beyond a simple one word reply, e.g., "no") on their Likert-scale survey responses in at least one of the short-answer questions. Of these 134 responses, 62% identified as male, 37% identified as female, and 1% preferred not to answer or identified differently. Furthermore, 54% identified with an ethnic/geographic origin of Caucasian, 18% identified as South Asian, 11% identified as Chinese. For comparison, individuals were separated into two groups based on their average Likert-scale response to the set of questions identified as being relevant to that survey section, e.g., Q16–25 for the self-efficacy section. The high group corresponded to individuals who averaged responses greater than three for that section, whereas the low group corresponded to individuals who averaged responses less than or equal to three for that section. The high and low groups' average and standard deviation were calculated.

The content analysis involved looking for comments that described students' perspectives on how and why any aspects of the course influenced their autonomy, self-efficacy, and sense of belonging (either positively or negatively). These were initially identified by one author who was not the instructor, and discussed and agreed upon by the whole team. Finally, from all the students who had qualitatively responded to questions related to autonomy support, overall self-efficacy, belonging and relatedness, and overall team experience, we chose an exemplar quote from the students who reported highest and lowest Likert scores on each of these constructs, and gave pseudonyms to each student.

Findings

Autonomy Support

The majority of students agreed that the course supported their learning autonomy. Specifically, students felt they had choice in how to learn the material and that both the individual and team activities allowed them some control over their learning process (figure 3.3). The average responses to Q9, Q14, Q47, and Q49 were 3.60 (SD = 1.05), 3.54 (SD = 1.22), 3.83 (SD = 1.04), 3.65 (SD = 1.02), respectively.

Self-Efficacy

The majority of respondents also agreed that they understood the ideas taught in the course and were capable of applying those concepts to new engineering problems (figure 3.4). Some example questions to assess the student's perceived competence (self-efficacy) include, "I'm certain I understand the ideas taught in this course" and "I'm confident I could critique a design report written by another team" (Miller-Young, Beck, and Jamieson 2021). The average response to the overall perceived competence construct was 3.70 (SD = 1.00).

Relatedness and Belonging

The majority of students felt their interactions with the other students as well as the teaching team were positive; additionally, most

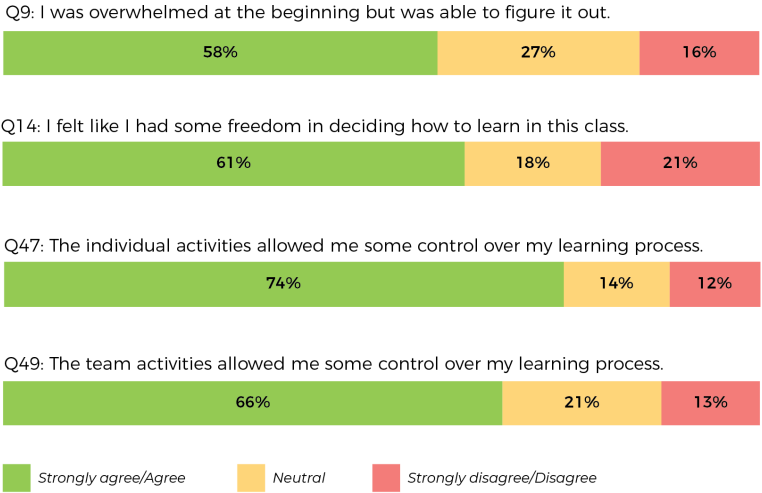


Figure 3.3. Overall responses to four Likert-scale questions related to autonomy support, n=180. Note: Charts are rounded.

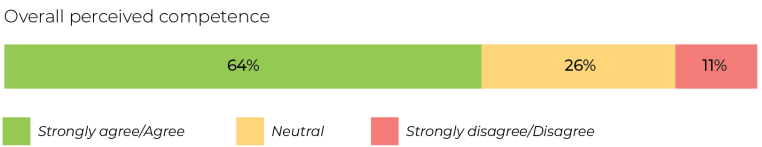


Figure 3.4. Students’ overall perceived competence, calculated as their average response to Q16–25, n=180

students felt a sense of belonging in the engineering community as a whole (figure 3.5). The average response to the overall belonging construct was 3.66 (SD = 1.11). The average response to the quality and amount of interactions with other students, the instructor, and teaching assistant constructs were 4.05 (SD = 0.98), 3.50 (SD = 1.08), 3.64 (SD = 1.14), respectively.

Course Elements

Overall, more students felt the team aspects of the course improved their motivation in the course than did the game elements (figure

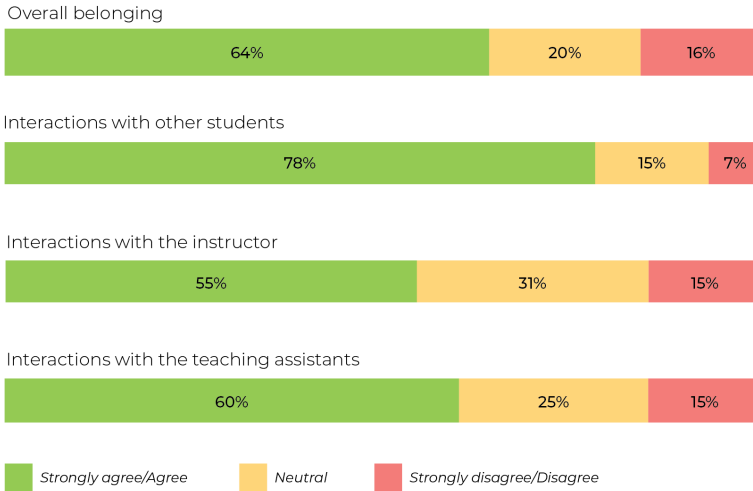


Figure 3.5. Students' responses to questions regarding relatedness and belonging. Note: Overall belonging is the average of Q31, Q39, and Q40; interactions responses are the average of two questions each about quality and quantity, $n=180$.

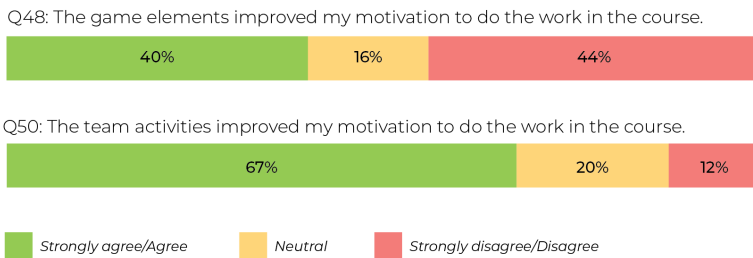


Figure 3.6. Students' perceptions of whether the game elements and team elements improved their motivation to do work in the course, $n=180$.

3.6). The average response to Q48 about game elements was 2.82 (SD = 1.41), and the average response to Q50 about team activities was 3.76 (SD = 1.02).

Although over three quarters of the students were satisfied with their online team experience, 94% indicated they would still prefer

a face-to-face component in the course (figure 3.7). The average response to Q60 was 4.07 (SD = 1.00).

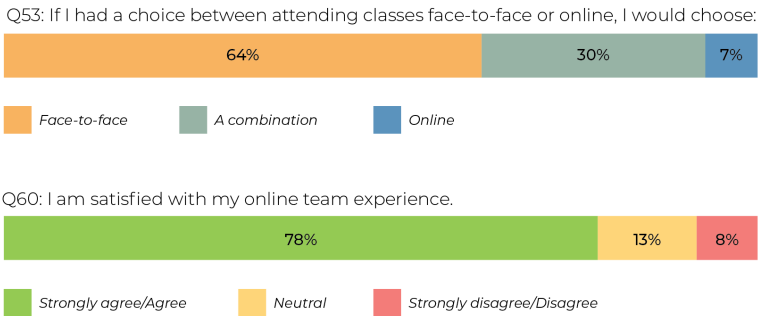


Figure 3.7. Students' preferred course format as well as their satisfaction with the online team experience, n=180.

Differences between High and Low Responders

After examining the qualitative data, we realized that although overall quantitative responses were skewed towards the positive, there were a handful of outliers who overall reported a fairly negative experience in both the quantitative and qualitative data. Comments from students who scored the course high on the various constructs indicated that their teams played an important role in their autonomy, self-efficacy, and belonging. For example, Shang, Mary, and Emily reported the value of their teams for helping each other, while Samantha felt that she learned more about what being an engineer is like, which was motivating for her (table 3.1). On the other hand, among those who scored the course low, three reasons were given: Amir's comment displayed a less mature approach to learning by indicating a lack of understanding of the course's competency-based pass requirements, Jennifer and Sarah reported that being online for the year was overall not a positive experience, and Fatima had a team where not everyone put in equal effort.

	n	Avg.	STD	Exemplar Quote
Autonomy support				
High group (>3)	114	4.17	0.47	<i>"I like the way that the course separated students into different groups, let students work by themselves, and if they have questions, they can ask someone. This really helped us cultivate the skill of self learning and self investigating."</i> —Shang
Low group (<=3)	66	2.54	0.60	<i>"Learning the course was fine, but the structure was not good because you HAD to PASS everything which is not how a class should work."</i> —Amir
Overall Self-Efficacy				
High group (>3)	148	3.95	0.46	<i>"I learned that engineering is all about teamwork, and I was really motivated to be an engineer after working with my amazing team."</i> —Samantha
Low group (<=3)	32	2.56	0.56	<i>"I have retained so close to nothing in the online year it's horrific. I really really regret enrolling and not taking a year off and find this to be a very common sentiment amongst other university students."</i> —Jennifer
Belonging and Relatedness				
High group (>3)	147	3.99	0.52	<i>"My team and I helped each other with understanding concepts."</i> —Mary
Low group (<=3)	33	2.45	0.58	<i>"Being online is very isolating and does not contribute to the engineering community vibes."</i> —Sarah
Overall Team Experience				
High group (>3)	164	4.37	0.50	<i>"I thought teams were an awesome way to get people more involved with fellow students, especially in a year like this. My teammates helped keep me motivated to finish all of my work, more efficiently and better than I would have done on my own."</i> —Emily
Low group (<=3)	15	2.65	0.54	<i>"I'd say only half my team really put in effort this term. This was difficult for me to accept because at the end of the day everyone has exams and assignments and things to do, but dishing off your work to someone else only makes their lives more difficult."</i> —Fatima

Table 3.1. Quotes relating to teamwork from students who reported high and low scores for autonomy support, self-efficacy, belonging/relatedness, and overall team experience.

Discussion and Implications

Our primary goals in reimagining our first-year design course for remote delivery were to engage students on design teams, encourage engineering and professional identity development, form a supportive learning community, and motivate students to develop competency in the course learning outcomes. Nearly 80% of the students responding to the survey were satisfied with their online team experience, which appears to support our decision to dedicate the available synchronous class time to progressive team design project learning activities supported by the teaching team. About two-thirds of the students responding indicated they agreed the course increased their feelings of relatedness, belonging, and competence while between 11% and 16% disagreed. A similar response split was observed for the item “*The team activities improved my motivation to do the work in the course*” suggesting the synchronous team component was essential for belonging, motivation, and a positive online experience.

For a similar teaching context, Mazur (2021) reports teaching a large, first-year physics course to non-majors which has a strong team-based component. Having taught the course for multiple years, Mazur uses Self-Determination Theory to evaluate his course on a longitudinal basis; for the winter 2021 remote delivery, he found that students’ self-efficacy, reported autonomy, and sense of community all went up compared to previous years (Mazur 2021). He speculated that perhaps because the teams met in Zoom rooms, it didn’t feel like such a large class to them. Since teamwork requires students to develop empathy and social responsibility towards each other, the more “intimate” environment may have improved the sense of community for most students. This observation is consistent with what Marnie, as instructor, experienced as she moved between Zoom breakout rooms to interact with student teams. In general, the students who were participating were developing connections, interacting with the material, asking questions, and working together. Also, the asynchronous aspects of the course gave students more flexibility and therefore autonomy. Being online and

connected with a Discord server may have facilitated even more course-specific interactions among students and between students and the teaching team than usual. In summary, Mazur's (2021) findings are very much in line with our own, with the addition of longitudinal survey data to demonstrate an increase in all three constructs from traditional to online delivery, which strengthens our assertion that team projects are important for positive student experiences in large, first-year classes if they are to be taught online.

Our new gamified course design with competency-based assessments was intended to improve student engagement with the asynchronous course materials. As two-thirds of the course delivery time is asynchronous and online, intrinsic motivation is a key contributor to student success in the course. For this first iteration of the gamified course, a software issue contributed to some students being able to reach the maximum levels in the early stages of the course. While we were able to mitigate the issue, we hypothesize that this was discouraging and potentially demotivating for some students as only 40% of the students found the game aspects motivating. We are hopeful the software fixes will be in place for the next iteration of the course, and in the meantime we have refined the badge progression and structure to encourage cooperation and individual work.

One pre-pandemic study found that students are strategic when choosing online courses and are more likely to prefer online courses if they've taken one before (O'Neill et al. 2021). Our students did not have a choice—their only option was the online course. Despite this constraint, two-thirds of our students agreed the course supported their learning autonomy. Students felt they had freedom in deciding how to learn the material and they had some control over their learning process. According to O'Neill et al. (2021), the more important a course was for a student and the more inclined they were to seek help when they were struggling, the less likely they were to prefer the online version. Our qualitative data provides additional insights into students' perceptions, particularly those whose perceptions were negative. These negative experiences, at least for students who responded, seemed to be more caused by isolation due to COVID

rather than other online factors, and only one student cited team issues as a reason for their lower scores. The next iteration of our course will be a hybrid mode to accommodate both in-person and remote students at the same time (offered in winter 2022). It will be interesting to see if their increasing experience with online delivery will affect students' perceptions and experiences going forward.

While more studies are needed from different contexts in order to make strong generalizations, these combined results suggest semi-structured, synchronous, online team and student instructor interactions contributed to student autonomy, belonging, community, and motivation for most first-year students. Further, the study provides strong evidence of the need to attend, through course design, to factors related to self-determination and intrinsic motivation during exceptional circumstances such as a pandemic, also raising questions for online and hybrid courses of the future. How can we optimize active learning in large classes? What is best done synchronously versus asynchronously? Will the tools we used for connecting students during the pandemic continue to be a useful part of course design? And how can we adjust our courses over time as both instructors and students gain more experience with online learning?

References

- Baldwin, Julie A., Diane Ebert-May, and Dennis J. Burns. 1999. "The Development of a College Biology Self-Efficacy Instrument for Nonmajors." *Science Education* 83 (4): 397–408.
- Bandura, Albert. 1982. "Self-Efficacy Mechanism in Human Agency." *American Psychologist* 37 (2): 122. <https://doi.org/10.1037/0003-066X.37.2.122>.
- Bodnar, Cheryl A., Daniel Anastasio, Joshua A. Enszer, and Daniel D. Burkey. 2016. "Engineers at Play: Games as Teaching Tools for Undergraduate Engineering Students." *Journal of Engineering Education* 105 (1): 147–200. <https://doi.org/10.1002/jee.20106>.
- Burke, Katie, and Stephen Larmar. 2021. "Acknowledging Another Face in the Virtual Crowd: Reimagining the Online Experience

- in Higher Education through an Online Pedagogy of Care.” *Journal of Further and Higher Education* 45 (5): 601–15. <https://doi.org/10.1080/0309877X.2020.1804536>.
- Deci, Edward L., and Richard M. Ryan. 1985. *Intrinsic Motivation and Self-Determination in Human Behavior*. New York, NY: Plenum.
- Deci, Edward L., and Richard M. Ryan. 1987. “The Support of Autonomy and the Control of Behavior.” *Journal of Personality and Social Psychology* 53 (6): 1024. <https://doi.org/10.1037/0022-3514.53.6.1024>.
- Dringus, Laurie P., and Timothy Ellis. 2005. “Using Data Mining as a Strategy for Assessing Asynchronous Discussion Forums.” *Computers & Education* 45 (1): 141–60. <https://doi.org/10.1016/j.compedu.2004.05.003>.
- Duncan, Teresa Garcia, and Wilbert J. McKeachie. 2005. “The Making of the Motivated Strategies for Learning Questionnaire.” *Educational Psychologist* 40 (2): 117–28. https://doi.org/10.1207/s15326985ep4002_6.
- Godwin, Allison, and Geoff Potvin. 2017. “Pushing and Pulling Sara: A Case Study of the Contrasting Influences of High School and University Experiences on Engineering Agency, Identity, and Participation.” *Journal of Research in Science Teaching* 54 (4): 439–62. <https://doi.org/10.1002/tea.21372>.
- Hsieh, Hsiu-Fang, and Sarah E. Shannon. 2005. “Three Approaches to Qualitative Content Analysis.” *Qualitative Health Research* 15 (9): 1277–88. <https://doi.org/10.1177/1049732305276687>.
- Hurtado, Sylvia, and Deborah Faye Carter. 1997. “Effects of College Transition and Perceptions of the Campus Racial Climate on Latino College Students’ Sense of Belonging.” *Sociology of Education* 70 (4): 324–45. <https://www.jstor.org/stable/2673270>.
- Jabbar, Azita Iliya Abdul, and Patrick Felicia. 2015. “Gameplay Engagement and Learning in Game-Based Learning: A Systematic Review.” *Review of Educational Research* 85 (4): 740–79. <https://doi.org/10.3102/0034654315577210>.
- Jamieson, Marnie V., Ahmed S. Ead, Aidan Rowe, Janice Miller-Young, and Jason P. Carey. 2022. “Design at Scale in a First-Year

- Transdisciplinary Engineering Design Course.” *International Journal of Engineering Education* 38 (1): 14–24. <https://www.ijee.ie/contents/c380122.html>.
- Kaupp, James, Brain Frank, Robert Brennan, Susan McCahan, Lata Narayanan, Peter Ostafichuck, Nariman Sepehri, and K. Christopher Watts. 2012. “A Comparison of Institutional Approaches to CEAB Graduate Attribute Requirements.” In *Proceedings of the Canadian Engineering Education Association (CEEA)*: 1–7. <https://doi.org/10.24908/pceea.v0i0.4642>.
- Kilinc, Hakan. 2021. “Opinions of Field Experts on Practices That Will Increase the Motivation Levels of Learners During the COVID-19 Pandemic Process.” In *Handbook of Research on Emerging Pedagogies for the Future of Education: Trauma-Informed, Care, and Pandemic Pedagogy*, 191–208. Ankara: IGI Global. <https://doi.org/10.4018/978-1-7998-7275-7.ch010>.
- Mamaril, Natasha A., Ellen L. Usher, Caihong R. Li, D. Ross Economy, and Marian S. Kennedy. 2016. “Measuring Undergraduate Students’ Engineering Self-Efficacy: A Validation Study.” *Journal of Engineering Education* 105 (2): 366–95. <https://doi.org/10.1002/jee.20121>.
- Mazur, Eric 2021. “The Road Ahead for Active Learning.” Interview by Beth McMurtrie. *Chronicle of Higher Education*, May 18, 2021. https://connect.chronicle.com/CHE-CI-WBN-2021-05-18-ActiveLearning_Landing-Page.html.
- Mazza, Riccardo, and Vania Dimitrova. 2004. “Visualising Student Tracking Data to Support Instructors in Web-Based Distance Education.” In *Proceedings of the 13th International World Wide Web Conference on Alternate Track Papers & Posters*, (May): 154–61. <https://doi.org/10.1145/1013367.1013393>.
- Meeuwisse, Marieke, Sabine E. Severiens, and Marise Ph Born. 2010. “Learning Environment, Interaction, Sense of Belonging and Study Success in Ethnically Diverse Student Groups.” *Research in Higher Education* 51 (6): 528–45. <https://doi.org/10.1007/s11162-010-9168-1>.

- Miller-Young, Janice, Seth Beck, and Marnie Jamieson. 2021. "Gamifying and Evaluating First-Year Design: Development of a Questionnaire to Assess Student Experience and Motivation in a Large, Online Course." *Proceedings of the annual meeting of the Canadian Engineering Education Association (CEEA)*, Charlottetown, PEI. <https://doi.org/10.24908/pceea.vi0.14828>.
- Miller-Young, Janice, Marnie Jamieson, and Seth Beck. 2023. "Diverse Experiences and Belonging in an Online, First-Year, Team-Based Engineering Design Course." *Teaching in Higher Education*, 1–17. <https://doi.org/10.1080/13562517.2022.2162816>.
- Neuendorf, Kimberly A. 2017. *The Content Analysis Guidebook*, 2nd ed. Thousand Oaks, CA: SAGE Publications.
- Niemiec, Christopher P., and Richard M. Ryan. 2009. "Autonomy, Competence, and Relatedness in the Classroom: Applying Self-Determination Theory to Educational Practice." *Theory and Research in Education* 7 (2): 133–44. <https://doi.org/10.1177/1477878509104318>.
- O'Neill, Kevin, Natália Lopes, John Nesbit, Suzanne Reinhardt, and Kanthi Jayasundera. 2021. "Modeling Undergraduates' Selection of Course Modality: A Large Sample, Multi-Discipline Study." *The Internet and Higher Education* 48: 100776. <https://doi.org/10.1016/j.iheduc.2020.100776>.
- Ong, Maria, Nuria Jaumot-Pascual, and Lily T. Ko. 2020. "Research Literature on Women of Color in Undergraduate Engineering Education: A Systematic Thematic Synthesis." *Journal of Engineering Education* 109 (3): 581–615. <https://doi.org/10.1002/jee.20345>.
- Owston, Ron, Dennis York, and Susan Murtha. 2013. "Student Perceptions and Achievement in a University Blended Learning Strategic Initiative." *The Internet and Higher Education* 18: 38–46. <https://doi.org/10.1016/j.iheduc.2012.12.003>.
- Pintrich, Paul R., David A. F. Smith, Teresa Garcia, and Wilbert J. McKeachie. 1991. "A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ)." *National Center*

- for Research to Improve Postsecondary Teaching and Learning. <https://eric.ed.gov/?id=ED338122>.
- Ramírez Echeverry, Jhon Jairo, Àgueda García Carrillo, and Fredy Andres Olarte Dussan. 2016. "Adaptation and Validation of the Motivated Strategies for Learning Questionnaire-MSLQ-in Engineering Students in Colombia." *International Journal of Engineering Education* 32 (4): 1774–87. <http://hdl.handle.net/2117/107554>.
- Rohde, Jacqueline, Lisa Musselman, Brianna Benedict, Dina Verdín, Allison Godwin, Adam Kirn, Lisa Benson, and Geoff Potvin. 2019. "Design Experiences, Engineering Identity, and Belongingness in Early Career Electrical and Computer Engineering Students." *IEEE Transactions on Education* 62 (3): 165–72. <https://doi.org/10.1109/TE.2019.2913356>.
- Rose, Ellen. 2017. "Beyond Social Presence: Facelessness and the Ethics of Asynchronous Online Education." *McGill Journal of Education/Revue des sciences de l'éducation de McGill* 52 (1): 17–32. <https://doi.org/10.7202/1040802ar>.
- Ryan, Richard M., and Edward L. Deci. 2000. "Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being." *American Psychologist* 55 (1): 68. <https://doi.org/10.1037//0003-066X.55.1.68>.
- Strayhorn, Terrell L. 2012. *College Students' Sense of Belonging: A Key to Educational Success for all Students*, 1st ed. New York: Taylor & Francis.

CHAPTER 4

Cue Logs and Equity

A Poverty Activity Redesign in the Age of COVID-19

Andrea Arce-Trigatti, *Tallahassee State College, US*

Shawn Gaulden, *Knowli Data Science, US*

Postsecondary instructors confronted unique challenges in curricula development at the onset, and while still experiencing, the COVID-19 pandemic. In reflecting on this unprecedented experience in teaching, Chick and colleagues (2020) perhaps said it best when they offered the following:

There's a sense of grief about the sudden ending of regular campus/class interactions with and among students. At the same time, we take our teaching and our students very seriously, so we're mobilizing in an initial phase of pedagogical triage. We're ready for the challenge. As a community of professionals, we draw on a large body of research. Good teaching is good teaching. (1)

After one year of training in the pandemic, faculty are undoubtedly better prepared for instruction within a completely virtual learning environment. However, there is still evidence of grappling with the task of providing engaging, online learning spaces, while supporting initiatives associated with equitable educational approaches (Chick et al. 2020; Silber-Furman and Arce-Trigatti 2021).

This case study features the curricular redesign experiences of faculty working to transition and transform an established team-based activity focusing on poverty to an online format. Designed

originally for face-to-face implementation, this activity was featured as part of an undergraduate Introduction to Sociology course at a two-year institution that serves primarily underrepresented, non-traditional, first-time-in-college students. Anchored in a theatrical theme and using both the Renaissance Foundry Model—herein the Foundry (Arce et al. 2015)—and the Five Principles of Equity by Design (Bensimon et al. 2016), the redesign of this activity held several equity-minded implications in terms of digital inclusion for this student population. Grounded in theory from design to implementation, we feature faculty experiences and insights that highlight key curricular aspects underscoring the role of intentional design that aligns students' digital learning opportunities and digital access.

Through this contribution, we offer course-level reflections that place student learning within digital divides at the center of pandemic transitions into the digital learning. These reflections address issues experienced while creating a theoretically grounded, inclusive, online learning environment for students, and focus on aspects of digital inclusion for students in addition to highlighting obstacles associated with re-envisioning this type of activity as an online experience. Implications from this contribution include lessons regarding time management for online activities (e.g., cue logging), the integration of anticipated student engagement challenges, and continual improvement practices based on unforeseen student interpretations post-implementation.

Literature Review

It is no secret that school systems and learning environments are reflective of the larger social structures in which they exist (Kelley et al. 2021). To this point, scholarship in education has made it clear that learning environments often exacerbate social, cultural, economic, and historical divides by replicating systems that do not fully support the holistic development of all students (Ladson-Billings 2021; Sun and Chen 2016). On the side of instruction, instructors must be responsible for engaging in lifelong learning concerning these inequities, developing relevant material to address

these inequities, and producing engaging learning experiences, despite the availability of strong pedagogical infrastructure and resource support (Martin et al. 2019; Woodman et al. 2018). When the pandemic hit in early 2020, the pedagogical triage noted above revealed the extent to which these systems of inequity and lack of support were embedded in education systems. Czerniewicz and colleagues (2020) describe the situation as follows:

The current crisis has made it impossible not to recognise the historical, geospatial, economic inequalities of the country and the world students live in. In a certain sense, the pandemic, and the pivoting to online made visible, the invisible, or ignored manifestations and mechanisms of inequality. (949)

In this respect, pre-pandemic, face-to-face teaching was not a panacea that addressed issues of inherent inequity that surfaced rapidly when the mechanism to pivot to online teaching became mandatory. The digital learning experiences of the pandemic, in effect, revealed the prevalence of these divisions and inequitable opportunities regarding student access to learning.

This type of inequity, frequently referenced in scholarship as the digital divide, centers on issues of access and training in regard to digital technology (van Dijk 2017). According to van Dijk (2017), the issue of equity in terms of the digital divide is multifaceted. Although initial descriptions of the divide encompassed primarily sociological and economic factors related to the social capital and wealth needed to guarantee access to technology, required updates, and continual upgrades, more recently scholars have argued that the divide goes beyond access especially with respect to learning (Martin et al. 2019; Sun and Chen 2016; van Dijk 2017). Relevant skills are needed for students to know how to use technology for the purpose of learning, continual training is needed to adequately embed technology for use in daily activities, and different structures of wealth and social capital are becoming ever more present in the

type of access granted by the digital tools we use for education (Jam van Deursen and van Dijk 2019; Seemiller 2017; van Dijk 2017).

This second-level divide, or “deepening divide,” is reflective of how students understand the use of technology for the purpose of learning (van Dijk 2017, 2). As indicated in the scholarship, this type of divide requires insight into the kinds of training needed for virtual learning, the knowledge needed to anticipate changes in this type of learning, and the resources required to maintain this level of training throughout the learning experience (Jam van Deursen and van Dijk 2019; van Dijk 2017). The case study featured in this contribution illustrates the deepening of this divide via the transition of a face-to-face activity to a virtual platform and faculty responses to help address issues related to virtual learning inequities via an activity redesign.

Context: Walking the Line of Poverty

The Original Activity and Context

The original iteration of this activity was featured as part of an undergraduate Introduction to Sociology course at a two-year institution that serves primarily underrepresented, non-traditional, first-time-in-college students. Inspired by Schwabe’s (2016) work on *Budgeting for Poverty*, this poverty activity as implemented in the pre-pandemic context was designed for a face-to-face setting. As part of the course content on poverty, this activity offered an experiential learning opportunity to further students’ understanding of living at the poverty line, particularly within their local county or community. The two-year institution which provides the context for this case study is located in the zip code with the lowest income of the state. Thus, poverty as a social concept is an inherent part of the fabric of the institution in which the students are learning and anchors the lens by which students engage in this activity.

With respect to logistics, the original activity began by Setting the stage, where students were first presented material on competing definitions of poverty, the US federal poverty guidelines, and the state minimum wage. Students were then grouped into small teams

of approximately four to five and asked to develop a budget for a family of four living at the poverty line (i.e., Creating a budget). Given specific parameters—such as family composition, geographic location, yearly household income, and budgetary needs—students were tasked with researching and developing a workable budget for a family of four at a poverty wage. After students collaborated and created a budget as a team, a classroom discussion was started which centered on each team’s budget, and challenges to meeting their hypothetical family’s needs. The activity concluded by comparing each team’s budget to national average costs, and finally, the living wage for the area of the institution.

Inherent Challenges in Transitioning to Digital Learning

The COVID-19 pandemic became the catalyst for the redesign of the poverty activity as *Walking the Line of Poverty*, where we were charged with pivoting to an online learning environment, as did many classrooms worldwide. As students were also not fully prepared for this quick transition, several did not have easy access to a computer or the digital resources for a synchronous online course; as a result, students opted to attend class on their cell phones. Students also frequently indicated that their internet connection was slow, evident in the video and audio quality; delayed or spotty audio hampered active dialogue, slowing down the conversation and frustrating students. An unreliable internet connection also meant that students could be unexpectedly dropped out of the meeting, needing to be readmitted into the class and breakout room they were previously assigned to, which was a frequent occurrence. As instructors, we linked this type of challenge as indicative of the first conceptualization of digital divide, wherein access to technology becomes the first barrier (Jam van Deursen and van Dijk 2019; van Dijk 2017).

Poor internet connection or lack of working equipment also meant that students often resorted to using the software’s chat feature or outside resources because their audio quality left others unable to

hear them, slowing down students' responses and inhibiting their ability to fully engage in conversations. Students reported technical issues trying to navigate new platforms to join class, requiring us to bring late students up to speed, and manually adding them to breakout rooms. As instructors, this type of challenge, wherein students needed to learn how to navigate the technology for the enhancement of their own learning experience, was more reflective of the second level of the digital divide, which concerns skills and training related to virtual learning experiences (Jam van Deursen and van Dijk 2019; van Dijk 2017).

Adapting this activity to an online modality thus presented technological and pedagogical challenges centered in issues inherently regarding digital equity. The above constraints represented significant barriers in student digital collaboration central to the activity, which led to several pedagogical considerations centered on the following questions: How will students in small groups quickly and effectively both research information on housing costs in their area or requirements for government assistance and be actively present in the video conference? How can small student groups be replicated on a digital platform new to students while keeping them on task in a timely manner? What type of assistance, training, resources, or support are needed to help students as part of this transition? Transforming the activity to online meant utilizing the tools and features of the digital platforms and software available in a way that attempted to replicate the same team-based experience, while anticipating its inevitable challenges. At the same time, redesigning the activity for online learning also afforded the activity new possibilities for learning and growth, both for students and faculty.

Methods: Walking the Line of Poverty Reimagined

To redesign the virtual version of *Walking the Line of Poverty*, we took inspiration from theatre and re-envisioned our students' experiences in the virtual setting as new scenes within their classroom experiences. These scenes switch back and forth between a larger, virtual main room and smaller, virtual breakout rooms—this

reflects the cognitive processes (main room as knowledge acquisition and breakout rooms as knowledge transfer) of the redesign of the activity. In theatre, a cue log or sheet is a list of cues corresponding to a specific time or event triggering an action, such as a change in lighting. In terms of equity, we leveraged a modified cue log to help anticipate students’ transitions in these spaces as well as a way to provide guidance to address challenges related to the digital divide.

Using these theoretical anchors, the virtual *Walking the Line of Poverty* activity was reimaged into six scenes—two anchors from the original activity and four new scenes—each of which interacted with specific digital elements and resources. Figure 4.1 provides a brief description of each scene and features how the elements of our adopted theoretical anchors helped to reconceptualize the distinct parts of this activity, integrating student-centered learning and principles of equity into each component. In the following, we outline the theoretical anchors for these scenes and cues, including the conceptualization of the redesign.

Scene 1 - Setting the Stage (Original)	<p>Description: As a class, students engage in an online, large group discussion, outlining major sociological concepts related to poverty.</p> <p>Digital Tools: Zoom®, Chat, LMS</p> <p>Foundry Elements*: Learning Cycle (Knowledge Acquisition)</p> <p>Equity Guiding Questions**: How will students get the initial information? Where can students find this initial information?</p>
Scene 2 - Creating a Family Budget (Original)	<p>Description: As a group of approximately four, students create a monthly budget for a family that falls under their yearly income.</p> <p>Digital Tools: Zoom ® breakout rooms, Google® Docs, Chat, LMS Collaborate functions</p> <p>Foundry Elements: Linear Engineering Sequence (Knowledge Transfer)</p> <p>Equity Guiding Questions: Will students have access to the same budget document? What about students transitioning from work? Will students have people to talk to in their breakout rooms?</p>
Scene 3 - Deciding What to Leave Out (New)	<p>Description: As different groups, students look up information on a budget category and become “experts” in that area.</p> <p>Digital Tools: Zoom ® breakout rooms, Search engines, SMS, phones, local websites, any personal computer device, chat functions</p> <p>Foundry Elements: Learning Cycle (Knowledge Acquisition)</p> <p>Equity Guiding Questions: Can students access local knowledge? Can we open discussion up to outside mentors? Can students access or know how to access local websites for information? Should we provide a brief introduction/list of resources beforehand?</p>
Scene 4 - Making the Hard Decisions (New)	<p>Description: As a class, come together as groups of experts and discuss how to configure another iteration of the budget.</p> <p>Digital Tools: Zoom® main room, annotate feature, Google® Docs, Chat, LMS</p> <p>Foundry Elements: Linear Engineering Sequence (Knowledge Transfer)</p> <p>Equity Guiding Questions: Will students have the opportunity to speak/share their ideas in this large group discussion? What digital challenges will students face in getting the information to the larger class?</p>
Scene 5 - Reflections (New)	<p>Description: Provide students an opportunity to reflect on experience and decide what iteration(s) is the best option (Think-Pair-Share).</p> <p>Digital Tools: Zoom®, Google® Forms, LMS discussion boards</p> <p>Foundry Elements: Prototype of Innovative Technology</p> <p>Equity Guiding Questions: Will students have access to the discussion board and Google® form? Should we post it to the chat prior as well as send an email and follow-up? Should we extend the time to a week for completion?</p>
Scene 6 - Debriefing (New)	<p>Description: Ask students to reflect on what they have learned in terms of the decisions that can be made and make connections to sociology.</p> <p>Digital Tools: Zoom®, Chat, LMS</p> <p>Foundry Elements: Prototype of Innovative Technology</p> <p>Equity Guiding Questions: Can we give students time in class to finalize their reflection prior to the group discussion? Can we post the Google® form again in the chat? Will students on mobile phones have access? Can we pull from the discussion boards and act as facilitators?</p>

*Arce et al. 2015. **Guided by the Five Principles of Equity in Design (Bensimon et al. 2016)

Figure 4.1. Organizational graphic of *Walking the Line of Poverty* redesign and major guiding elements

Theoretical Anchors

Centering on the challenges faced when trying to convert the original *Walking the Line of Poverty* activity to a virtual environment, two major theoretical frameworks provided guidance. For thinking through the pedagogical implications related to this transformation and the impact it would have on the type of student engagement that was desired, Arce and colleagues' (2015) Renaissance Foundry Model was adopted. To understand the equity issues inherent in the original activity, Bensimon and colleagues' (2016) Five Principles of Equity by Design was adopted. Both are described in more depth in the following.

The Renaissance Foundry Model

The Foundry is described as an innovation-driven learning framework and is based on the cognitive principles of knowledge acquisition and knowledge transfer, which form the pillars of this model (Arce et al. 2015). This platform features collaborative learning spaces, centered around group work or team-based projects that asks students to work iteratively to navigate through six major elements: a Challenge, Organizational Tools, Learning Cycles, Resources, Linear Engineering Sequence, and the development of a Prototype of Innovative Technology (Arce et al. 2015). Knowledge acquisition refers to a cognitive process wherein new information is obtained and integrated into the current understanding of a problem, concept, or challenge. Knowledge transfer refers to another cognitive process, typically collaborative, wherein insights, understanding, and new interpretations are shared to understand a problem, concept, or challenge from different perspectives. In the Foundry, students are asked to engage in both processes through intentional learning experiences to better understand a problem, concept, or challenge (acquisition) and develop a prototype of innovative technology (transfer) (Arce et al. 2015, 2020). The prototype of innovative technology, a unique reflection of student exchanges and combinations of their own ideas and learning through the acquisition and transfer, offers insight and potential solutions to

the problem, concept, or challenge they were initially trying to better understand.

Effectively, the Foundry is a pedagogical platform that allows instructors to design learning environments with student interaction in mind (Arce et al. 2015, 2020). This is important as literature indicates how student interaction may be substituted for individual interaction with the content (e.g., individual polls, lecture-based question and answer activities) or hindered by several technological or skill-based challenges when transferred to a virtual setting (Seemiller 2017; Sun and Chen 2016). Understandably, as educators address the pedagogical triage related to massive shifts to virtual learning, ensuring student interaction may be overshadowed by more direct forms of instructor-centered content exposure (Czerniewicz et al. 2020). However, as the Foundry asks for students to continually interact with one another in the knowledge acquisition and transfer processes to make unique connections from the information acquired from class, it requires engagement to be inherently embedded as part of the lesson design (Arce-Trigatti et al. 2019). Further, the interactions between students are intentional, cognitively beneficial, scaffolded, and geared towards the development of new knowledge construction (Arce et al. 2015; Womack et al. 2021). In this way, the Foundry offers a framework by which to incorporate elements that help maintain a similar level of engagement from students in a virtual setting that is found in the face-to-face version.

Five Principles of Equity by Design

Bensimon and colleagues' (2016) Five Principles of Equity by Design was created to help enhance students' learning experiences through intentional changes in pedagogy and communication. In using tenets of evaluative design, the five principles of equity proposed by this framework task educators to evaluate the way in which they communicate, act, accommodate, question assumptions, and link to larger, institutional goals. The five principles of this framework include:

- Principle 1: Clarity in language, goals, and measures is vital to effective, equitable practices.
- Principle 2: “Equity-mindedness” should be the guiding paradigm for language and action.
- Principle 3: Equitable practice and policies are designed to accommodate differences in the contexts of students’ learning—not to treat all students the same.
- Principle 4: Enacting equity requires a continual process of learning, disaggregating data, and questioning assumptions about relevance and effectiveness.
- Principle 5: Equity must be enacted as a pervasive institution- and system-wide principle.

With these principles, the aim is to “catalyze a process of sustained change” that embeds equity as a criterion for assessment, making it a necessary component of the effectiveness of an environment for all students (Bensimon et al. 2016, 1).

In Principle 1, the authors posit that equity is based on the clear outcomes that are distinguishable from other goals, like equality. In reflecting on assumptions made behind presumed, straightforward language about the goals and expectations of learning, instructors can begin to dismantle how knowledge is culturally acquired and what that means for students (Bensimon et al. 2016). Principle 2 builds on the foundation of communication from Principle 1 and indicates the necessity of focusing on the socio-historical power asymmetries that impact learning. Instructors are thus tasked with assuming responsibility for the elimination of inequality in their classroom however that may be reflected (Bensimon et al. 2016). Principle 3 further builds on this foundation by adding that the practices and policies implemented in learning spaces require accommodation of differences, not equal access. This takes instruction with equity in mind to reflect not only on language and communication but also on practices and policies—the actions supporting the language. Principles 4 and 5 speak to more institution-wide needs that reflect equity as a pervasive and continual conversation regarding sustained transformation. These two principles are important

notions for learning spaces as they task instructors with using data to question assumptions and being strategic with the way in which equity is addressed.

Findings: The Redesign

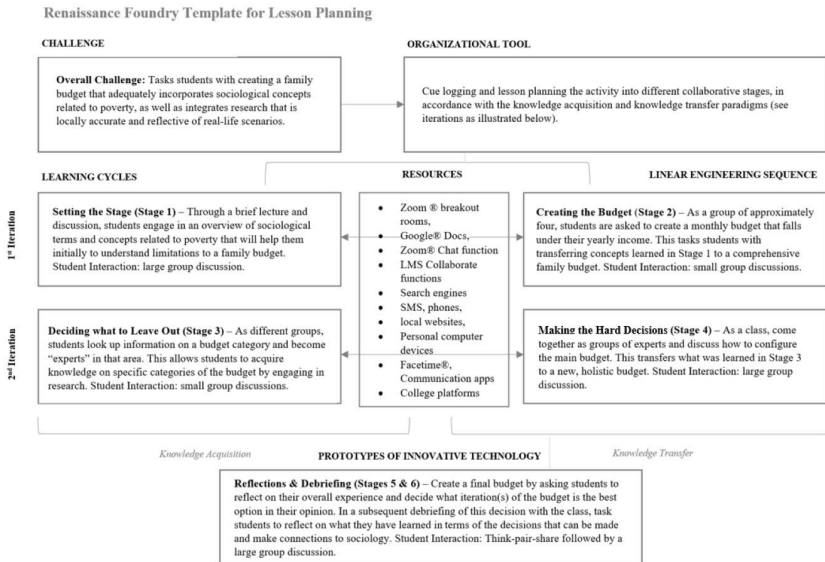
Foundry Elements Incorporated

With respect to the Foundry, it was clear that the iterative nature of the knowledge acquisition and knowledge transfer paradigms needed to be integrated into students' learning experience to gain insight into differing perspectives associated with poverty and budget construction. Figure 4.2 offers an overview of the major elements of the Foundry and how they relate to the scenes of the *Walking the Line of Poverty* activity. As illustrated in figure 4.2, prior to engaging students in the six scenes of the activity, we set the overall learning challenge for students: the creation of a family budget using the sociological concepts related to poverty and lessons learning from their peers as part of the *Walking the Line of Poverty* activity. For the organizational tools, we used cue logging (table 4.1) and elements of the Foundry model to help us design the activity and better anticipate student collaboration and technical challenges. Adopting the creation of a comprehensive family budget as the overall challenge (figure 4.2), we anchored students' initial understanding of this challenge in scene 1, *Setting the stage*. This introduction was used to introduce sociological concepts related to poverty for students' use in scene 2, as well as students' initial knowledge acquisition of the challenge. For facilitation purposes, this scene was set in the main, virtual room as a larger group discussion and lecture.

Scene 2, *Creating a family budget*, was designed to help students engage in knowledge transfer as they worked together to frame an initial prototype of the budget; this scene was set in smaller virtual breakout rooms for students to work together in groups. Once completed, students navigated back to the main virtual room. Scene 3, *Deciding what to leave out*, was intended to guide students into another round of knowledge acquisition—this time investigating

specific aspects of the budget as expert (i.e., understanding the challenge from a different angle). This scene was also set in virtual breakout rooms; however, students were placed in different teams based on area interests. Scene 4, *Making the hard decisions*, again brought students back to engage in the knowledge transfer process wherein they created a second iteration of their prototype of the budget as a class of experts. Set in the main virtual room, students engaged in a larger group discussion and team-based activity for this scene. The final prototype of innovative technology (figure 4.2) was a product of scenes 5 and 6. In scene 5, *Reflections*, we asked students to decide on their final version of the budget as a homework activity, outside of the virtual space, in a think-pair-share format, effectively creating their prototype of innovative technology. As part of a Foundry-guided activity, the budget, as a prototype of innovative technology, becomes a unique reflection of student exploration, testing, and validation of key concepts that showcase insights and

Figure 2. Foundry Elements that Guided the Collaborative Aspects of the Virtual Learning Experience for *Walking the Line of Poverty*



Designed by the RFRG @ TNTECH
www.Foundrymodel.com
 Arce et al. 2020

Figure 4.2. Foundry elements that guided the collaborative aspects of the virtual learning experience for *Walking the Line of Poverty*

connections between student exchanges and builds on the different perspectives shared throughout all phases of the activity. In the final scene, *Debriefing*, students came back to a main virtual room and calibrated the alignment of their final budget with the initial challenge—creating a budget on limited income—while making connections to the elements learned in the knowledge acquisition and knowledge transfers stages of the entire activity.

Five Principles of Equity by Design Incorporated

In terms of equity, the Five Principles of Equity by Design helped to guide the decisions made regarding the type of digital resources and tools offered to students at each scene. A cue-logging document (table 4.1) helped us to anticipate potential digital challenges and integrate these five principles that afforded much needed flexibility for students. In thinking about Principle 1, for example, we wanted to ensure clarity in language, goals, and measures for each scene by offering direct instructions as part of the virtual platform discussions prior to going into breakout rooms, copying those instructions in the chat, and having a copy for students to reference in the learning management system (LMS), which they could access in both mobile and computer formats.

Table 4.1. Cue log for *Walking the Line of Poverty* activity redesign

Time	Description
9:05	Start class. Let students settle in. Address any content or technical questions.
9:10	<i>Setting the stage</i> —Scene 1. Begin explaining the activity. Make sure everyone has access and knows how to navigate to the activity surveys. Answer technical questions and offer varied forms of engagement.
9:15	Present slides 2 and 3. Check the chat and answer content-based questions.

Time	Description
9:20	<i>Creating the budget</i> —Scene 2. Explain to the class. Make sure everyone navigates to survey 1. Explain the role of group response submitter and assign role. Place students into groups of approximately four into breakout rooms. Allow two minutes for transfer and connection.
9:25	Check in on groups. Navigate the chat, identify questions in the discussion board.
9:28	Return students to the classroom. Allow two minutes for transfer and connection.
9:30	<i>Deciding what to leave out</i> —Scene 3. Explain to the class. Make sure everyone navigates to survey 2. Explain the role of group response submitter and assign role. Place students into groups of approximately four into breakout rooms. Check the chat, answer technical questions and offer varied forms of engagement. Allow two minutes for transfer and connection.
9:35	While students are in groups, note which students are in which “expert” group and create new groups that mix students from each “expert” group. Check in on groups (send message to all groups).
9:38	Return students to the classroom. Allow two minutes for transfer and connection.
9:40	<i>Making the Hard Decisions</i> —Scene 4. Make sure everyone navigates to survey 3. Explain the role of group response submitter and assign role. Place students into groups of approximately four into breakout rooms. Check the chat, answer technical questions and offer varied forms of engagement. Allow two minutes for transfer and connection.
9:48	Return students to the classroom. Allow two minutes for transfer and connection.

Time	Description
9:50	Debrief with students and present lecture slides on official poverty. <i>Assign reflections</i> —Scene 5: introduce discussion board platform, answer content and technical questions. Explain that next class will initiate with <i>Debriefing</i> —Scene 6.
10:00	End class. Stay on the line to answer any questions. Collect questions from the chat/discussion board.

For principle 2 and 3, we aimed for equity-mindedness to guide our language and action, offering accommodations for students in different contexts and with varying digital accessibility by ensuring that there were a variety of digital tools and platforms available for students to use. The intention was not to limit any learning tools to the ones designated by the instructors, opening the space for students to use unconventional tools (e.g., social media platforms, smart watches, different applications on their mobile device [Face-time, Google Chat], or new applications on our LMS they might not have explored before [Group Space, Group Documents]). There was also flexibility within the teams to divide the responsibilities based on access to tools, the internet, and platforms at the time the scene(s) were implemented. For example, some students logged onto the virtual conference platform as a call from their phone first as they transitioned from work to school, limiting their access; however, they could still participate in the scenes of the activity by using other tools (e.g., the online chat feature, LMS discussion board; shared online document with peers; calls, messaging, or video using their mobile device) at their disposal until they had full access.

Moreover, in cue logging, we anticipated potential transfer delays and communication hurdles if the internet dropped, leading us to add buffers in between scenes and varying our team sizes to accommodate dropped calls or failed internet connections. If students could not gain full access to the features (e.g., students only using a mobile device), they could still participate through LMS features available on the mobile function. This related to principles

4 and 5, as we leveraged knowledge gained in the implementation of this activity to better the experiences of our students in the next iteration of the activity, and engaged our students in discussions of what worked and what could be improved in terms of the digital aspects of this type of collaborative effort. We intended this as a system-wide culture of larger, digital understanding and interaction and were able to request the availability of different features on our LMS to accommodate students who might face digital challenges in terms of transfer, internet connection, and feature activity in the future. These included, for example, investment in more advanced video and recording technology for instructors, requesting more training resources for instructors, using the school-based messaging system to forward student texts to our phones, enabling discussion boards not connected with a specific module, requesting annotation features on our video conferencing platform to take pictures of online student content, and connecting shared documents from outside platforms to the LMS.

Faculty Experiences with Implementation: Focus on Digital Inclusion

Considering the aspects of equity and the pedagogical guidelines provided by the Foundry (Arce et al. 2015) and the Five Principles of Equity by Design (Bensimon et al. 2016), the implementation of this activity was based on a comprehensive analysis of the type of digital inclusion needed for this specific student population. We structured the activity into six scenes and created a cue log to both manage the activity's time and incorporate digital inclusion. Table 4.1 presents the cues created to achieve both goals. Each cue was set at a designated time to initiate an action or transition, e.g., placing students in breakout rooms, providing new instructions, or moving to the next part of the activity, similar to a theatrical cue sheet. Cues were created to directly address digital inclusion. For example, cues were intentionally integrated to foster a space of transition and inclusion, where time was dedicated to making sure all students had proper access to, and know where to find and use, the online surveys used in the activity. To ensure that all students

could fully participate in their group discussions regardless of the device used to access the course, flexibility was incorporated into the activity in how students submitted responses, such as having coordinating note-takers for those that could not record or submit responses with their device.

In this respect, the redesign helped us to anticipate factors associated with the two forms of digital divide previously described: issues related to access and challenges associated with skills needed to navigate digital tools (van Dijk 2017). Knowing our students' access to digital tools would vary on two levels—i.e., in terms of device (from a laptop, desktop, phone, tablet, or other digital device) and in terms of internet—offering equal amount of variability in how they were able to participate alleviated stress associated with this learning factor. This was observed in the various ways students asked about their own participation (e.g., “Is it ok that we have our video off?”, “I’m only able to join via cell—I can’t access the LMS site”) and the ways we were able to offer viable opportunities in response (e.g., “Of course, access to the conversation can be offered by audio, video, or chat”; “That’s ok, you and your team decide who is responsible for that part in terms of access and interest”). Although planning for the implementation of this activity did have heightened stress as we could not fathomably anticipate all of the technical challenges our students would encounter, we felt prepared to navigate the most common issues and have time to address the more challenging ones during the transitions or breakout sessions if needed.

Further, as each scene was dependent on the completion of the others, the cue log acted similar to a detailed teaching plan. This type of organization, particularly in a virtual space, provided a foundation by which to guide students in the various learning objectives we had per scene, as well as decompartmentalize the acquisition and transfer processes into parts that integrated back to a more holistic learning experience. In debriefing after the first implementation of the activity, it was clear that more time was needed for knowledge transfer, which emphasized collaboration, as students needed that space to first understand how to collaborate within and between

different mediums, and second to contribute to the collaborative processes. For example, there were certain directions related to navigating the platform that needed to be repeated continuously, which was both new for the students as well as for us. This affected the speed of the transitions and the level of interaction between students, as some lingered in the main room waiting for instructions that they missed or were lost in the breakout rooms after a transition back to the main room. In debriefing, we connected this to the fact that digital learning implicitly requires a higher level of interaction and engagement when student-centered activities are implemented. This means that students have to hit that join button, actively enter a breakout room, and pay attention to transitions; they cannot passively wait for groups to form around them as they would in an in-person classroom setting.

Recommendations and Implications

Overall, the reconceptualization of *Walking the Line of Poverty* activity as scenes, and the implementation of the cue log in the redesign, offered a way to better accommodate students' technological barriers by anticipating and time-blocking for varying student needs. By being flexible in how students engaged in technology to submit group responses, students, regardless of device access, were able to engage in each scene of the activity in various ways. Using time-blocking for instructions and anticipating how to guide students on how to access the different platforms allowed them to understand the scenes without added confusion. The cue logging also considered technical issues and the guidance students would need to navigate these issues by blocking in time to reiterate instructions and readmit students into breakout groups for those that lost connection due to internet problems. This permitted students to jump back into group deliberations without excessive delay in the activity. We saw students more actively engage in group collaboration regardless of the technical barriers they faced, and they were also more participatory in group discussions, engaged in collaborative research,

and efficient in their time when upcoming cues were provided, compared to the previous iteration of the activity.

Using the theoretical frameworks allowed us to frame cognitive processes as scenes and use cue logging to address equity issues during our redesign process and helped us consider different vantage points of virtual learning. The frameworks integrated the discussion of the digital divide as part of the conversation and helped to keep the pedagogical components of the redesign at the center of the ideation. At the same time, while we were able to anticipate issues of digital inclusion and incorporate them into the cue log, other challenges arose that future work may seek to address. Home distractions left some students falling behind and needing assistance catching up. More time than expected was dedicated to bringing students up to speed when they lost focus or were pulled out of their virtual classroom space by roommates or family.

Future work and reflections on equity could incorporate strategies to counter home distractions by further incentivizing students' participation and deepening engagement. Investigating the ways in which student interactions were influenced by attenuating conditions, like the pandemic, which exacerbated the level of mental and emotional stress experienced by students, would be of interest. In particular, models like the Foundry and the Five Principles of Equity by Design could potentially mitigate feelings of isolation within the virtual classroom, as they intentionally center issues of student engagement, access, and equity as part of the learning environment. Leveraging these or similar pedagogical models and frameworks, in turn, offers a purposeful way to address issues of student success and performance as they relate to student engagement, equity, and virtual learning.

Conclusion

Ultimately, it is impossible to cover the vast number of changes, shifts, and adjustments postsecondary faculty needed to make as part of the pedagogical triage enacted to survive the first weeks (and ultimately first year) of teaching in the pandemic. We were no

different. When the pandemic hit, we had to reconceptualize what our student learning experiences would look like in a new space; this meant reimagining effective face-to-face activities within digital parameters. In doing this research, we connected our experience to emerging scholarship examining this period in our history which illustrates that such revisions were intended, in large part, to address already underlying equity issues in undergraduate education centered on issues of engagement and the digital divide (Czerniewicz et al. 2020; Ladson-Billings 2021; Zha and He 2021). For example, as part of these adjustments, faculty have become responsible for not only delivering the relevant content on the syllabus in engaging ways, but also addressing student anxiety associated with new forms of learning (Silber-Furman and Arce-Trigatti 2021), anticipating differences in digital literacy and adjusting content accordingly (van Dijk 2017), and becoming design specialists in learning and technological experiences (Martin et al. 2019; Seemiller 2017).

In this contribution we shared the context of one of our pedagogical adjustments as featured in the *Walking the Line of Poverty* activity, anchoring our strategy in the theoretical and logistical frameworks that guided our reconceptualization of this activity. Using the Foundry (Arce et al. 2015) in tandem with the Five Principles of Equity by Design (Bensimon et al. 2016) helped us to be intentional in not only ensuring the collaboration appreciated by students in the original *Walking the Line of Poverty* was maintained, but that new challenges related to equity were recognized and addressed. Implications from this contribution highlight insight regarding time management for online activities (e.g., cue logging), the integration of anticipated student engagement challenges, and continual improvement practices based on unforeseen student interpretations post-implementation. In our reflections, we acknowledge that these efforts always centered on our students' overall success. As student engagement is a vital component of active-learning strategies, and has ties to student learning outcomes, the development of critical, industry-valued skills, and overall student success, addressing

components impacting student engagement during the pandemic was central to pedagogical strategies adopted (Chick et al. 2020).

Ultimately, through cue logging and intentional design, this case study highlights two major findings. First, the intentional use of cue logging as a digital design framework offers a way to better accommodate students' technological barriers by anticipating digital access challenges and time-blocking for varying student needs. Second, cue logging offers a way to systematically incorporate best practices from innovative-driven pedagogical frameworks, like the Foundry (Arce et al. 2015), and design-guided best practices, like Bensimon and colleagues' (2016) Five Principles of Equity by Design, to enhance student learning. As recommendations, we look at the use of cue logging and encourage the practice as a way to incorporate flexibility in digital lesson planning, add intentional time-blocks for digital access issues, and integrate ways for students to work with frequent technological hiccups without having them escalate into digital hindrances. Using frameworks, like the Foundry and the Five Principles of Equity by Design, are also useful tools in demonstrating to students that the digital space in which they are learning has incorporated parameters that are reflective of high-impact and active-learning practices seen in traditional classrooms. As noted, these recommendations hold implications for student engagement online, as not addressing potential digital divisions risks isolating students in a digital space through technological barriers that can be addressed with intention design. Through these lessons, as we rethink what opportunities exist for post-pandemic learning, we anchor ourselves in continuing to address the systemic challenges offered by the digital divide in our students' learning and lean into the idea of reimagining what a new normal might entail (Ladson-Billings 2021).

References

Arce, Pedro E., Andrea Arce-Trigatti, J. Robby Sanders, and Stephanie Jorgensen. 2020. "The Renaissance Foundry Model as an Effective Tool for Online Learning for Grades 6-12." *Digital*

- Science Teaching Training Conference*. July 14–16, 2020. Conducted virtually due to COVID-19.
- Arce, Pedro E., J. Robby Sanders, Andrea Arce-Trigatti, Lacy Loggins, Jennifer Pascal, Melissa Geist, and Ken Wiant. 2015. “The Renaissance Foundry: A Powerful Learning and Thinking System to Develop the 21st Century Engineer.” *Critical Conversations in Higher Education* 1 (2): 176–202.
- Arce-Trigatti, Andrea, Stephanie Jorgensen, J. Robby Sanders, and Pedro E. Arce. 2019. “The Promotion of a Revised TPACK Model (TSPACK): Lessons Learned from the Foundry Inspired Steelcase Active Learning Space Project.” *Proceedings from the American Society for Engineering Education Southeastern Conference*. March 10–12, 2019. Raleigh, North Carolina, United States.
- Bensimon, Elisa, Alicia C. Dowd, and Keith Witham. 2016. “Five Principles for Enacting Equity by Design.” *Diversity and Democracy: Association of American Colleges & Universities* 19 (1): 11–20.
- Chick, Nancy, Jennifer Friberg, and Lee Skallerup Bessette. 2020. “What the Research Tells Us about Higher Education’s Temporary Shift to Remote Teaching: What the Public Needs to Know, from the SOTL Community.” *The International Society for the Scholarship of Teaching and Learning*. March 20, 2020. https://docs.google.com/document/d/1CWTjYYU7zWJKWsNfUvwjMBKGkUf_6oed6L3Zy1ANIZU/edit.
- Czerniewicz, Laura, Najma Agherdien, Joan Badenhorst, Dina Belluigi, Tracey Chambers, Muntuwenkosi Chili, Magriet de Villiers, et al. 2020. “A Wake-Up Call: Equity, Inequality and Covid-19 Emergency Remote Teaching and Learning.” *Post-digital Science and Education* 2 (1): 946–67.
- Jam van Deursen, Alexander, and Jan A. G. M. van Dijk. 2019. “The First-Level Digital Divide Shifts from Inequalities in Physical Access to Inequalities in Material Access.” *New Media and Society* 21 (2): 354–75.
- Kelley, Jacob, Andrea Arce-Trigatti, and Ada Haynes. 2021. “Beyond the Individual: Deploying the Sociological Imagination

- to Teach Social Problems in the Neoliberal University.” In *The Handbook of Critical Theoretical Research Methods in Education*, edited by C. Matias, 284–302. New York: Taylor Francis.
- Ladson-Billings, Gloria. 2021. “I’m Here for the Hard Re-Set: Post Pandemic Pedagogy to Preserve Our Culture.” *Equity & Excellence in Education* 54 (1): 68–78. <https://doi.org/10.1080/10665684.2020.1863883>.
- Martin, Florence, Kiran Budhrani, Swapna Kumar, and Albert Ritzhaupt. 2019. “Award-Winning Faculty Online Teaching Practices: Roles and Competencies.” *Online Learning* 23 (1): 184–205. <https://doi.org/10.24059/olj.v23i1.1329>.
- Schwabe, Annette. 2016. “Poverty.” Activity implemented in SYG2010: Social Problems. Florida State University, Department of Sociology, College of Social Science and Public Policy.
- Seemiller, Corey. 2017. “Curbing Digital Distractions in the Classroom.” *Contemporary Educational Technology* 8 (3): 214–31.
- Silber-Furman, Dorota, and Andrea Arce-Trigatti. 2021. “Empathy and Flexibility in Teaching in the Era of COVID-19.” *Kappa Delta Pi, Teacher Advocate, The Quarterly Magazine for Professional Teachers*. <http://digital.watkinsprinting.com/publication/?i=706621&p=10>.
- Sun, Anna, and Xiufang Chen. 2016. “Online Education and Its Effective Practice: A Research Review.” *Journal of Information Technology Education: Research* 15 (1): 157–190. <https://doi.org/10.28945/3502>.
- van Dijk, Jan G. M. 2017. “Digital Divide: Impact of Access.” In *The International Encyclopedia of Media Effects*, edited by Patrick Rossler, Cynthia A. Hoffner, and Liesbet van Zoonen, 1–11. Hoboken, NJ: John Wiley & Sons.
- Womack, Payton, Andrea Arce-Trigatti, Pedro E. Arce, Stephanie Jorgensen, and J. Robby Sanders. 2021. “Exploring the Role of Collaboration in the Development of Community Leaders: Student Experiences from a Learning Community in the STEM Foundry Heritage Fellows Program.” *Proceedings from the American Society for Engineering Education Southeastern Conference*.

March 8–10, 2021. James Madison University, Virginia, United States.

Woodman, Mark, Maya Milankovic-Atkinson, Chris Sadler, and Alan Murphy. 2018. “From Conventional to Distance Education: Adopting a Pedagogy and Managing the Transformation.” In *Teaching & Learning Online: New Pedagogies for New Technologies*, edited by John Stephenson, 120–128. London, UK: Routledge.

Zha, Shenghua, and Wu He. 2021. “Pandemic Pedagogy in Online Hands-on Learning for IT/IS Courses.” *Communications of the Association for Information Systems* 44 (1): 125–31.

CHAPTER 5

Teaching the Pandemic

Building an Online Community and Knowledge
through Multidisciplinary,
Compassion, and Conversation

Sofie Lachapelle, *Wilfrid Laurier University, Canada*

Elizabeth Finnis, *University of Guelph, Canada*

Colin DeMill, *University of Guelph, Canada*

T. Ryan Gregory, *University of Guelph, Canada*

In summer 2020, as the COVID-19 pandemic was forcing faculty across Canada and the world to rethink their courses and content in the context of teaching remotely, we saw the opportunity to engage with students about the reality that we were all experiencing. We wanted to create and deliver a course that spoke to the many facets and multiple complexities of the moment we were all living through. What approaches could we use to engage with our academic community in a remote, online format, and how could we address the many questions that were continuing to emerge around COVID-19? We wanted to offer a course that would feel relevant, timely, unique, one that would take advantage of the possibilities and opportunities of an online format. In this chapter, we discuss the development and implementation of UNIV*2020, a multidisciplinary course designed to teach complex, big-issue topics through engagement with diverse expertise. Although our course was developed in, and as a response to, a time of specific crisis, we discuss how the model we developed can be adapted to any broad topic of relevance across disciplines (e.g., climate change; social justice; One Health, a transdisciplinary approach to optimal health outcomes) to create a community of academics, students, alumni,

and others committed to exploring it from multiple perspectives. And as we reflect on our experiences, we share a set of learnings that emerged for us while teaching this course during the pandemic and argue that this model offers significant potential to bring the university to the community and vice versa and opens possibilities for online, open, multidisciplinary education more broadly.

Our chapter adds to the emerging body of discussions and reflections on pedagogical approaches that facilitate a sense of connection, community, and engagement among students outside of typical face-to-face, classroom-based teaching in the context of the COVID-19 uncertainty and crisis (e.g., Auerbach and Longwe 2021; Baldock et al. 2021; Cheuk 2021; Huish 2021; Jacobs et al. 2021; Robertson et al. 2021). Our specific focus is rapidly creating an entirely new course, rather than adapting existing course materials or assignments. We first set the context for how we came to work together on this project. We then move to a discussion on the process of course development and follow with a discussion of the ways that community and compassion can be built in the online classroom. We finish with a list of key points to consider when developing a massive, multidisciplinary, online course aimed at diverse audiences and on a topic that can touch participants on a personal level.

Context

Creating a Space for Multidisciplinary Conversations About Pandemics

The idea of putting together a fully online, multidisciplinary, pandemics-focused course emerged from casual (online) conversations that some of us were having in early summer 2020. When the pandemic started, three of us were department chairs from different disciplinary backgrounds (Finnis: anthropology; Gregory: biology; Lachapelle: history) who, through shared administrative work, values, and interests, had found common ground and become friends. In spring and summer 2020, while faced with ongoing uncertainty around what COVID-19 would mean in terms of

teaching and other operational issues, we increasingly leaned on and supported each other.

It was through initial conversations in which we discussed day-to-day questions around teaching process, access to university spaces, how to ensure that faculty and students could continue to pursue research programs, and other logistical issues that we began to wonder about the possibility of creating a course that leveraged experts from across all areas of campus who could answer questions about COVID-19 and contextualize pandemics more broadly. What began as preliminary discussions resulted in the development of a learning community grounded in conversation, compassion, and care. In the process, it became one of the most rewarding teaching experiences of our careers and an amazing learning experience for all of us.

Methods

Summer and Fall 2020: Developing and Implementing UNIV*2020

Universities are bureaucratic in nature. Like everything else, new course development goes through multiple steps and various levels of approvals, which can take several months at times. This was time we did not have, and, given that there was no existing multidisciplinary course code that we could use to host our class, we had to create one. Through close collaboration with the office responsible for curriculum, we were able to rapidly move forward with the course proposal through the standard process so that UNIV*2020 Pandemics: Culture, Science, and Society was able to run for the first time in fall 2020.

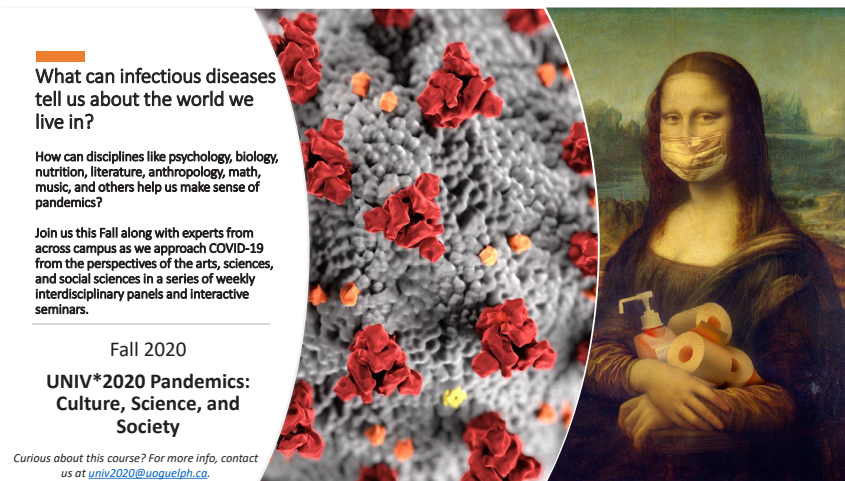
Open to students from all degree programs and majors beyond first year, the course was a collaboration between four colleges (Biological Sciences, Engineering and Physical Sciences, Arts, and Social and Applied Human Sciences) (see box 5.1, for fall 2020 course description). With just days between course approval and the opening of registration, we relied on and benefited from the efforts of program coordinators and advisors in helping to promote

the course to students across programs (see figure 5.1, promotional image). We mention curricular approval and course promotion here to highlight the importance of institutional support at numerous levels when attempting to rapidly create innovative curriculum that adapts to, engages with, and reflects on issues in real time.

Box 5.1. Pandemics: Culture, Science, and Society Course Description

We deliberately wrote the course title and description to be broad and flexible.

This course introduces students to interdisciplinary perspectives on the implications of pandemics, past and present. Drawing on expertise from across the university, the course is structured around a series of webinar panels and seminar discussions. Topics to be explored include pandemics in history, COVID-19 and ethics, COVID-19 and technology, knowledge, misinformation and discourse around pandemics, and the implications of COVID-19 on institutions, work, food, community, resilience.



What can infectious diseases tell us about the world we live in?

How can disciplines like psychology, biology, nutrition, literature, anthropology, math, music, and others help us make sense of pandemics?

Join us this Fall along with experts from across campus as we approach COVID-19 from the perspectives of the arts, sciences, and social sciences in a series of weekly interdisciplinary panels and interactive seminars.

Fall 2020

**UNIV*2020 Pandemics:
Culture, Science, and
Society**

Curious about this course? For more info, contact us at univ2020@uoguelph.ca.

Figure 5.1. Promotional image for fall 2020 offering

Each weekly class was organized around a two-hour panel discussion, typically featuring two to four faculty members or other invited experts. The exception to this model was week 1, where we hosted Dr. Amy Greer, who at the time was a Canada Research Chair in Population Disease Modelling at the University of Guelph. Dr. Greer's expertise set the stage for the rest of the course, grounding the students in biological and disease modelling aspects of COVID-19 and ensuring everyone had some baseline knowledge before proceeding. Panels were synchronous and live, and to maximize accessibility and flexibility for students, the panels were also recorded. However, weekly attendance was high, in large part, we believe, because of the engagement in the chat.

Organizing a course such as this one requires a good knowledge of the research expertise of the colleagues across the university or the ability to collaborate and be supported by someone or an office which has such information. In our case, developing the list of panelists and weekly themes for the fall 2020 offering was facilitated by our existing networks, particularly with other department chairs. Using these networks, we gathered information about potential faculty panelists, collecting a few key terms or sentences describing research expertise to help us create panel themes. Pulling together diverse expertise in multidisciplinary panels was a particularly creative part of the course development, and we agreed early on that the course should not be organized around disciplines and disciplinary approaches. Instead, our goal was to create panels where the weekly theme could be addressed from diverse perspectives. What could we learn, for example, when a computer scientist, a geographer, and a philosopher came together to discuss the intersections of COVID-19 and technologies? Or when two psychologists, a political scientist, and a historian discussed stigma, xenophobia, and infectious disease? And when two biologists and an anthropologist considered the intersections among infectious disease and animals, environments, and societies? Given that the pandemic was evolving as we were teaching it, we decided to leave the last two scheduled classes open so we could use them to respond to new or emerging

questions or topics of interest. We also invited everyone in the course to make suggestions for topics they would like explored in those final panels. This flexible approach to developing the panels proved successful, and we recommend this approach for these types of courses.

One of the many pleasant surprises we had while planning the course was the extraordinarily positive response among panelists. In both semesters, we approached potential panelists well in advance, outlining the goals of the course and proposing the theme of the panel in which they were being asked to participate. Nearly every prospective panelist accepted our invitation, typically quickly and enthusiastically, and ultimately, the course was made possible due to the generous participation of the many panelists who agreed to share their time and expertise. This enthusiasm carried over to the panels themselves, and we believe this was also critical to course success and for setting the tone of the community. Rather than solely exploring the more negative aspects of pandemics, panels provided insights into creativity and research. This energized, inspired, and encouraged us to continue offering the course in more than one semester (see below).

Given how readily both students and faculty members had signed on to the course, we decided to approach our university's office of alumni affairs and development with a proposal for alumni participation in the weekly panel sessions. The course was already conveniently scheduled in the evening, every Tuesday, from 7pm to 9pm. We decided to offer one hundred alumni spaces (to complement the two hundred spaces for students). In late August, a few weeks before the start of the semester, an invitation went out to alumni and the spaces filled within a few hours. Alumni joined us from all over Canada and around the world and they included graduates from all disciplines, from the late 1960s to 2019. Some were also present-day employees of the university. Alumni brought a perspective and an energy to the course that we had not anticipated, and this contributed to the success of the course and the feeling of one broad, remote, learning community coming together.

For students, the course was structured to allow for maximum flexibility and participation. The teaching team included two hosts (Gregory and Lachapelle), one course coordinator (Dr. Colin DeMill), and one teaching assistant (TA) per fifty students. The course coordinator managed the learning management system, student communication, and weekly meetings with TAs to ensure consistent grading. He also coordinated teaching in the TA-run seminars. The weekly seminars, consisting of a maximum of twenty-five students, provided students with the opportunity to discuss course content, share personal stories, and connect on a human level during a stressful time. Assessment in the course consisted of participation in seminar discussion (15%), weekly short written assignments (best 6 of 10, 10% each), and a final essay dealing with one or more of the issues explored in the panels and drawing on a multidisciplinary perspective (25%). The short written weekly assignments emerged from the weekly panels and focused on reflection. Students were given a choice of reflection questions, and one of the choices was often a creative assignment. See box 5.2 for question examples. These assignments allowed students to build their writing and critical analysis skills, while also engaging with creative and reflexive processes. In addition, this model made it easy to grant accommodations in response to students who were experiencing challenges.

Box 5.2. Sample Weekly Reflection Questions

- So far in this course we have heard from scientists, social scientists, and humanities experts on ways they are responding to and studying COVID-19. What are some of the differences that you notice in how experts from diverse disciplines think and talk about the pandemic? What are some of the common themes you are already beginning to see carry across panels and disciplines in this course?
- Submit a creative piece inspired by one or many of the themes in tonight's panel (One Health, sewage testing, the food web,

etc.). This can be a photo, a drawing, a public health poster, an infographic . . . and should be accompanied by a written response explaining the creative piece and how it engages with one or some of the specific themes of tonight's panel. (Note that the response accompanying the visual piece should be at least 300 words).

- Based on tonight's discussion, as well as the panels this semester and your own experience during the pandemic, provide a brief synopsis of a science fiction story (film, novel) that you would like to write about a post-COVID-19 world.

Approximately halfway through the fall 2020 semester, it became clear that there was considerable demand for the course to continue beyond a single semester, both because the format was proving to be such a success and because many topics remained to be explored as the pandemic continued to unfold. By this time, many COVID-19 research projects had been developed and initiated at the University of Guelph. We decided that for winter 2021, we would focus specifically on the COVID-19 scholarship that was being done across campus, under the theme "Creativity, Research, and Scholarship in a Time of Crisis." To develop this series of panels, we worked closely with the Vice President Research, Dr. Malcolm Campbell (an alumnus who has registered in each offering of the course), and drew from the list of projects that had been facilitated through the University of Guelph's COVID-19 Research Development and Catalyst Fund, which funded fifty-one research projects across all colleges, and the Creating in a Time of Coronavirus fund, which supported nine new creative projects.

The winter 2021 offering also included panels that explored individual and societal experiences of the pandemic, including perspectives from the Art Gallery of Guelph, the Guelph Civic Museum, and the Guelph Black Heritage Society. We continued with our multidisciplinary approach. For example, we brought together a sociologist, an economist, and a disabilities studies expert to explore how people were coping with COVID-19. We asked how people

were staying connected through the lens of research projects in music, history, and geography. We learned how researchers at the Art Gallery of Guelph, in landscape architecture, and in computer science were modelling and visualizing the COVID-19 pandemic and experience and making art more accessible using remote technology. Faculty in engineering, food science, and integrative biology shared their innovations in approaches to detecting COVID-19. We also included a more diverse set of voices in the second semester, inviting staff, post-doctoral fellows, and graduate students as panelists. We left the final week open to input from the class on the theme, and, as a result, we closed the course with a panel titled “COVID-19 and Accessibility—A Year at the University of Guelph” featuring staff, students, and alumni as panelists, each sharing their own experiences with accessibility in the course during the pandemic.

Given the clear interest from students and alumni in Fall 2020, we increased winter 2021 enrollment spaces to 400 students and 200 alumni. Again, spaces filled quickly, and although students were not able to take the course again, some alumni from fall 2020 joined us again for winter 2021. We kept the course as an evening offering to facilitate alumni engagement and accommodate panelists’ schedules. (The course also ran in fall 2021, this time under the theme “After the Pandemic?” with new panels and 400 students and 200 alumni. Although the lecture continued to be offered virtually, students were given the option to attend either online or in-person seminar sessions.)

Findings

Working to Create Community through Format and Approach

One of our goals for the course was to create an accessible, inclusive, and engaging environment in which to explore the experience of the pandemic in real time. To this end, the panel discussions had a conversational format and were built around a structured informality approach. The online classroom was a formal space with rules of conduct and expectations for how the chat was used but, at the same

time, the course hosts worked to create an open, personal tone by sharing their own curiosity and excitement about the material and the course approach. Working from home also helped to dissolve some traditional barriers between faculty and students, in that it offered insights into everyday life and spaces. In both fall 2020 and winter 2021, Sofie's vocal but adorable dog Cocoléo became the unofficial course mascot, with class participants asking (via chat) where he was if he did not appear in the first few minutes of each class. Sometimes panelists, hosts, and some students/alumni would stay for informal chats at the end of class, a kind of "after party" that typically reflected excitement about that night's discussion.

Weekly panels opened with a brief introduction from the two hosts, and then each panelist was asked to speak about the topic from their perspective for ten to fifteen minutes. With such a large audience, we decided not to allow class audio participation during the panel. Instead, both students and alumni were encouraged to use the chat function to ask questions. The hosts monitored the chat for questions during the panel presentations and used these questions as the basis for discussion. The chat was a fantastic tool that led to a greater degree of participation and engagement in the course than would have been possible in an in-person setting. Here again, while the comments were numerous and the course large, the hosts and panelists worked to create a personal tone by frequently speaking directly to specific comments in the chat.

Most of the scheduled class time was spent in wide-ranging and open discussion between the panelists and the hosts. Offering the chat alongside panels and discussions served not just as a way for students and alumni to ask questions, but also to relay their own experiences related to the weekly themes and to learn from each other (Cheuk 2021). For example, in a week about food security and food disruptions, we learned about the pressures that grocery store workers were experiencing, and the chat provided a way for the class to share their own experiences in grocery stores, as both employees and shoppers. And since the remote course meant people could join from long distances, chat comments offered insights into

how COVID-19 was being experienced in different parts of Canada and in different countries, contributing to the understanding of COVID-19 as a shared, global disruption (Huish 2021). In a face-to-face classroom, this long-distance engagement would not have been possible. Mandache, Browning, and Bletzer (2021, 57) have discussed how starting virtual classes with informal conversations create a “collective space for sharing personal experiences.” In our case, the classroom chat was this collective space, as were the small, TA-led class seminars.

Part of developing a welcoming, compassionate community was ensuring flexibility in how we responded to students and their needs. The course created a space where students sometimes shared the specifics of their personal struggles, related to COVID-19 and otherwise. This emerged in the panels through chat or in discussion, as panelists themselves were often open about some of their own pandemic struggles, and in the weekly small-group seminars. However, the sharing of struggles occurred with greater intensity in the weekly reflection assignments. Time and again, it was made clear that COVID-19 was affecting all of us in different and complicated ways. What could be a fun and light topic for some could carry a very different meaning to others. In some cases, topics highlighted mental health challenges that prompted us to reach out to students to ensure they had the right supports in place and to help them navigate the university’s mental wellness support system. And we learned from students about where we needed to exercise more sensitivity. While we took care to remind ourselves of the multiple experiences of the pandemic, we did not always succeed. For example, it was pointed out to us that the wording of a reflection question on how our relationships with food had changed during the pandemic was potentially triggering for students who struggled with eating disorders. That students felt comfortable sharing with us, and that we were able to receive this input and adapt to it, was another important benefit of our approach to the course, which made it clear that we were also learners. This encouraged collaboration and helped strengthen our community of learning.

Recommendations

How to Create a Multidisciplinary, Online, Flexible, and Engaging Course

The COVID-19 pandemic has offered educators the opportunity to reevaluate and take risks when it comes to pedagogical approaches, and to consider how the forced move to remote learning has led to approaches that can remain post-pandemic (Christian, McCarty, and Brown 2021; Huish 2021; Mandache, Browning, and Bletzer 2021; Robertson et al. 2021). When we first created the course, we were in a moment in time which will eventually pass, but the lessons we have learned from it can continue. And while we are still grappling with the pandemic, we see the potential for the ways the structure and approach of the course could be used to tackle other complex and pressing societal problems, while engaging with students, alumni, and the broader community. We therefore take lessons, at course and institutional levels, from our experiences.

At the course level, we are particularly struck by the power that online delivery can have in creating a caring learning community, and how bringing together alumni, students, and faculty under a common theme contributes to the successful development of such a community. Below are our recommendations to instructors who want to create large, multidisciplinary, engaging courses on “big picture” topics:

- Pick a topic that can be approached from many perspectives and allows for inclusivity and diversity.
 - Organize each panel around a theme that easily and interestingly crosses disciplines.
 - Draw from a wide range of expertise from across the institution and ensure panelists feel valued.
 - Make the course accessible to students from all years and programs and invite alumni participation.
 - Create a simple course format and structure that asks as little as possible from panelists. Focus on short initial presentations and a longer unrehearsed discussion with all panelists. When the panelists enjoy themselves and

learn from each other, it helps shape the course experience for everyone.

- Actively incorporate flexibility and compassion.
 - Build the course as an open, collaborative, respectful, and inclusive space for students and alumni to share their experiences and ask questions.
 - Be adaptable. A course exploring a real-time issue we are living through, and drawing on new and emerging knowledge, is an opportunity to stretch and challenge ourselves as educators (Mandache, Browning, and Bletzer 2021).
 - Build in flexibility for student assessments. Design assessments that engage students in different ways, including in terms of creative response options.
 - Foster a compassionate approach to the course and be responsive to feedback. Listen and follow through. If you feel you could have responded better, explore and learn from the experience.
 - Use a remote format, with an accessible time slot, and encourage the use of the chat function for discussion and community-building.
 - Design a course that is flexible in response to personnel or other changes. We were conscious of creating a course format that was not based on personalities or specific expertise. This proved useful when one of us (Lachapelle) had to be replaced as co-host for a fall 2021 offering.
- Create a tone that fosters enthusiasm and engagement.
 - Enjoy the course! It is critical for course designers to have genuine enthusiasm for the project and the topics. For us, this was not just extra work. It was energizing and exciting to develop and attend, and it showed.
 - Bring energy through a co-hosting approach. Co-hosts should represent more than one discipline so more

diverse questions get asked during panels. Dialogue and discussion are less static than presentation.

- Recognize (and welcome!) that in a course such as this we are all learners. Be curious and enthusiastic, engage speakers, and ask questions to keep the conversation going. Hosts should not be afraid to show their lack of familiarity with a specific topic.
- Appreciate that rapport between the co-hosts helps create and set the tone for the classroom and classroom participants. In our case, the online venue, and our homes (and pets!) brought about an informality that contributed to creating a welcoming and open community. Many students, alumni, and guest panelists shared some of their own personal experiences with the pandemic, and so did the co-hosts, bringing together academic knowledge and personal experience in ways that made the material more relatable to all.

Beyond the mechanics itself, a course such as this stands a far better chance of succeeding initially, and persisting in the longer term, if it is designed in a way that requires limited administrative support. Nevertheless, courses cannot run without at least some resourcing, particularly in terms of teaching assistant and instructional support. Being multidisciplinary and existing outside departmental structures can complicate this. As such, for these kinds of courses to succeed, funding, promotional, and other support from central administration is essential. At the University of Guelph, teaching assistant funds flow through institutional structures that prioritize disciplinary programs, and faculty teaching is typically allocated through programs and departments. We were fortunate to receive TA funds from deans who recognized the importance and creativity of our course, and this was facilitated through personal relationships and networks we had built as department chairs. However, these requests for resources had to be made for each semester, which affected our ability to plan for the longer term. We recommend that if institutions wish to support and maintain the

creation of innovative, real-time, multidisciplinary course structures that build community within and outside of the institution, it is important to (1) have transparent, straightforward, and easy mechanisms to allow faculty who may not have networks and connections to access supports quickly and effectively, and (2) provide longer-term resource support commitments.

Real-time, multidisciplinary grassroots initiatives such as this one must be supported at all levels of an institution. Our ability to rapidly develop and implement an entirely new course, as a response to crisis, has demonstrated potential for flexibility in institutional curricula design processes. However, the rapidity at which we were able to put this course together was facilitated by the fact that three of us were department chairs and had previous familiarity with the university's processes and structures. We knew who to ask and how to present our idea. This is not always the case. Enabling grassroots creativity must be a point of reflection and action at all levels of an institution, now perhaps more than ever.

Concluding Thoughts

Our experience with UNIV*2020 Pandemics: Culture, Science, and Society taught us so much about the possibilities that multidisciplinary and collaborative, online teaching can bring about to support equitable, accessible postsecondary education, something that was reflected in both the structure and the content of the course. For example, we strived to create flexibility for students in the course assessments. While flexibility was not entirely new for any of us, our COVID-19 experience reinforced the importance of this, and of considering the contexts that students may be embedded within during times of crisis or uncertainty. As instructors through different periods of COVID-19, we have learned lessons about ways to create engaging, rigorous assessments that are flexible and move away from some of the traditional methods of assessing knowledge. This course was part of that experience, and we carry those lessons into our future teaching, making this not just about reacting in times of crisis.

Allowing alumni to participate in the course showed us the possibilities associated with leveraging and further developing a university community beyond graduation. Not only did it remind us that alumni are looking for opportunities for “lifelong learning,” it also showed students that their relationship to academic knowledge and postsecondary institutions can and should continue beyond their degrees. The online format of the course also allowed alumni not located in Guelph to participate, allowing them to engage and contribute despite the distance, continuing their development as learners and helping to maintain their ties to the institution.

There is also something to be said about accessibility and equity when it comes to content. Students may feel that they are not able to understand material that is outside of their discipline; this may be particularly stark when it comes to the divide between the physical and biological sciences and the humanities. Offering a multidisciplinary course meant that students and alumni with diverse academic degrees could participate and engage with material that they might otherwise not encounter. The key was for panelists to pitch their talks to a wide audience, making knowledge accessible to a broad range of disciplinary backgrounds.

The COVID-19 pandemic has made it increasingly clear that responding to broad societal issues requires the engagement of all academic disciplines. It has also made clear the important societal role that universities play through research and education and the importance of bringing our collective contributions to scholarship to the community while being receptive to its needs. For us, developing and implementing UNIV*2020 has helped to reinforce the importance of bringing scholarship to the community and the need to create accessible, caring, and supportive communities of lifelong learners who learn and reflect on societal challenges together.

Acknowledgements

We thank Karen Gordon, Annie Benko, Malcolm Campbell, Catherine Carstairs, Patricia Tersigni, as well as all the graduate

teaching assistants, panelists, alumni, and students who participated in the course in fall 2020, winter 2021, and fall 2021.

References

- Auerbach, Jess, and Jethro Longwe. 2021. *Archive of Kindness: Stories of Everyday Heroism during the South African Lockdown*. Pretoria: BK Publishing.
- Baldock, Brandi L., Anthony L. Fernandez, Jimmy Franco, Brian A. Provencher, and Mark R. McCoy. 2021. "Overcoming the Challenges of Remote Instruction: Using Mobile Technology to Promote Active Learning." *Journal of Chemical Education* 98: 833–42.
- Cheuk, Ka-Kin. 2021. "Teaching Ethnographic Research Methods in the Time of COVID-19: Virtual Field Trips, a Web Symposium, and Public Engagement with Asian American Communities in Houston, Texas." *Teaching and Learning Anthropology* 4 (1): 87–96. <https://doi.org/10.5070/T34151655>.
- Christian, David D., Danny L. McCarty, and Cian L. Brown. 2021. "Experiential Education during the COVID-19 Pandemic: A Reflective Process." *Journal of Constructivist Psychology* 34 (3): 264–77. <https://doi.org/10.1080/10720537.2020.1813666>.
- Huish, Robert. 2021. "Global Citizenship amid COVID-19: Why Climate Change and a Pandemic Spell the End of International Experiential Learning." *Canadian Journal of Development Studies/Revue canadienne d'études du développement* 42 (4): 441–58. <https://doi.org/10.1080/02255189.2020.1862071>.
- Jacobs, Shoshanah, Christine E.B. Mishra, Erin Doherty, Jessica Nelson, Emily Duncan, Evan D.G. Fraser, Kelly Hodgins, William Mactaggart, and Daniel Gillis. 2021. "Transdisciplinary, Community-Engaged Pedagogy for Undergraduate and Graduate Student Engagement in Challenging Times." *International Journal of Higher Education* 10 (7): 84–95. <https://doi.org/10.5430/ijhe.v10n7p84>.
- Mandache, Luminita-Anda, Anne Browning, and Keith Bletzer. 2021. "Zooming in on the COVID-19 Pandemic in Community

- College Classrooms: Experiments with a Pedagogy of Place in Anthropology Courses.” *Teaching and Learning Anthropology* 4 (1): 48–66. <https://doi.org/10.5070/T34151839>.
- Robertson, Lisa, Elizabeth Porter, M. Alex Smith, and Shoshanah Jacobs. 2021. “Evidence-Based Course Modification to Support Learner-Centered and Student-Driven Teaching in a Pandemic: Leveraging Digital and Physical Space for Accessible, Equitable, and Motivating Experiential Learning and Scientific Inquiry in a First-Year Biology Course.” *International Journal of Higher Education* 10 (7): 96–109. <https://doi.org/10.5430/ijhe.v10n7p96>.

CHAPTER 6

Pedagogical Adaptions in Undergraduate Health Sciences Courses during the COVID-19 Pandemic at Hispanic-Serving Institutions

Thomas A. Clobes, *California State University, Channel Islands, US*

In response to the COVID-19 pandemic, by mid-March of 2020, nearly all colleges and universities in the United States (and worldwide) had canceled or were in the process of canceling in-person classes, converting to full-time online instruction, and requiring many students living on campus to relocate (Davidson College 2020; National Conference on State Legislators 2020). Although some students were already enrolled in online programs or courses, this pivot resulted in a significant change in the educational experience for approximately 26 million college students in the United States alone (US Department of Education 2019).

In addition, faculty across the nation were thrust into a teaching environment that many were not prepared for and had potentially never experienced before. Throughout the 2020–21 academic year, I served as a facilitator for a faculty development course to aid faculty with the transition to virtual learning, providing mentoring and support to faculty as they navigated this new territory. This course, which I participated in as a student while facilitating, was the inspiration for some of the interventions used to address the issues observed in the 2020 spring semester. While I facilitated the course, several faculty in the social sciences, humanities, and life sciences shared with me that they had never taught an online course prior to the sudden shift. Although the campus does not track what percentage of faculty have online teaching experience, in the two semesters prior to the COVID-19 pandemic, 11% of the

total sections of scheduled courses were fully online, and approximately 3% were blended with an online component. Thus, it is reasonable to assume many of the instructors had limited, or not any, online teaching experience. With very little time to prepare and transition, they suddenly had to familiarize themselves with the pedagogical methods and technological requirements of online learning. Given the short notice, although faculty at my university were given an extra week of non-instructional time to prepare, and support staff was made more available, no formal training was provided until the summer of 2020, when the university offered an optional faculty development course to better prepare faculty for the fall 2020 semester.

Case Study

This case study was undertaken at a primarily undergraduate university composed of 58% first-generation students and a total student population just under 7,000. It is a designated Hispanic-serving institution (HSI) with the student body that is 53% Latino, 27% White, 6% Asian, 4% mixed race, 2% Black, and 1% all other reported ethnicities. The majority of students, 81%, are eligible for government-sponsored financial assistance, indicating they are of lower income. Campus wide, female students constitute 65% of the enrolled population, but within the health sciences program, the selected major of the students in the classes used for this research, 82% are female.

The main purpose of this case study was to investigate the impact of the pandemic and pedagogical interventions on undergraduate health sciences students at a public four-year university. In my spring 2020 courses, there was a notable change in student attendance (95% to 65%) and number of students submitting assignments on time (91% to 69%) from pre-pandemic face-to-face instruction to the sudden transition to virtual instruction. Specific interventions were implemented in the first full semester of 100% remote learning (fall 2020) to address the concerns observed in class attendance, students submitting assignments on time, and students maintaining

course performance. This research sought to answer the following question: How did students respond to interventions aimed at improving class attendance, increasing the number of students submitting assignments on time, and maintaining a consistent level of student performance throughout the term?

Literature Review

The sudden change from in-person learning to remote due to the pandemic and the inexperience of some faculty with virtual instruction were significant challenges on their own. However, the challenges of the switch to online learning were compounded with the unprecedented mental health issues that have come with the isolation, lockdowns, and other restrictions of the pandemic response (Cullen, Gulati, and Kelly 2020; Pfefferbaum and North 2020). Students and faculty alike had to overcome many unique obstacles to successfully complete the spring 2020 terms at colleges and universities across the globe.

In a survey of chemistry students, Petillion and McNeil (2020) discovered nearly all students experienced increased stress, fear, and anxiety with the transition to online learning from the pandemic. In most cases, the reported emotional responses related to a lack of familiarity with remote learning. Students also expressed concerns about losing dedicated study spaces on campus, increased family responsibilities with returning home, and the inability to adequately prepare for the transition with the suddenness of it. More concerning, though, were reports from students who experienced issues with engagement with their classes and course content; 69% reported a decrease in engagement, and 64% stated their performance in class was impacted by the pandemic and the unexpected requirement to shift to remote learning. From their findings, these researchers recommended college instructors design courses during the pandemic with opportunities for active learner participation and interaction, clear and regular feedback and communication, and flexibility with assignments (Petillion and McNeil 2020).

Allan, Garriott, and Keene (2016) found that first-generation college students often come from lower socioeconomic backgrounds and experience academic challenges from limited resources to acquire the needed materials to be successful in their courses. Further, these students have lower levels of perceived life and academic satisfaction. Similar research established a relationship between financial strain, mental health, and academic engagement among first-generation college students (Adams, Meyers, and Beidas 2016). Prior research has also shown that first-generation students are more likely than other college students to have family obligations, such as taking care of a sibling or providing physical care for an older family member; these outside obligations were generally greater for females (Covarrubias et al. 2018). Knowing the economic consequences of the pandemic and that families from lower socioeconomic levels, people of color, and women were more adversely affected, it is reasonable to assume first-generation college students were under even more extreme stress during the pandemic (Fairlie 2020).

There are some concerns with online learning, even with the best of circumstances. Xu and Jaggars (2014) determined that a performance gap exists between traditional and online courses. The gap widened for younger, male, Black, or lower performing students. It was also more significant in the social sciences, business, law, and nursing disciplines. Additionally, research has confirmed that a digital divide exists for many students. Approximately 20% of US students, particularly students of color or those from lower socioeconomic groups, were unable to maintain access to technology needed for virtual learning. Students had damaged or broken hardware, data plans with insufficient limits, and other such problems accessing the internet (Chulkov and VanAlstine 2013; Gonzales, McCrory Calarco, and Lynch 2020).

With these issues in online learning identified, the COVID-19 pandemic served to exacerbate them. Dumford and Miller (2018) stressed the importance of student engagement, which they defined as “student involvement in educationally purposeful activities” (454). Collaboration with peers and student-faculty interactions

are important components of student engagement, which can be particularly challenging in the online environment. The specific challenge, though, given the pandemic, was maintaining this engagement while students were struggling with extraordinary and unanticipated stressors (Cullen, Gulati, and Kelly 2020; Petillion and McNeil 2020; Pfefferbaum and North 2020). Theodosiou and Corbin (2020) reported both a student preference for and improved academic performance with online courses that provide opportunities to create connections, build a sense of community, and promote engagement. These opportunities for connection included interaction with peers and instructors, time for discussion of personal non-class related items in synchronous sessions, and opportunities to connect outside of scheduled class time.

Students can have emotional reactions to feedback provided on assignments, and they prefer feedback that is clear and motivational. Some students prefer to have written feedback that is accompanied by direct interaction and explanation from the instructor (Pitt and Norton 2017). Researchers identified the most common reactions to assignment feedback in college courses are annoyance and frustration; these emotional reactions can limit the effectiveness of the feedback as it is not interpreted objectively (Wass et al. 2018). This research also indicated the emotional response and limited effectiveness of the feedback can be aggravated by stressful conditions. Given the conditions of the pandemic and the unexpected forced remote learning, it could be reasonably predicted that students would have exceptional challenges to processing instructor feedback, particularly feedback that was indicative of poor performance (Cullen, Gulati, and Kelly 2020; Petillion and McNeil 2020; Pfefferbaum and North 2020; Pitt and Norton 2017; Wass et al. 2018).

Case Study: Student Reactions to the Pandemic

I taught three undergraduate classes in each of the spring 2020 and fall 2020 semesters which were examined for this case study. The classes were undergraduate health sciences courses at a public

four-year institution in Southern California with just under 7,000 students, nearly all undergraduate.

In the spring 2020 semester, the classes were being taught in-person and transitioned, along with the entire university, to virtual instruction with synchronous meetings. The comparison classes, in the fall 2020 semester, were taught virtually the entire semester, with live synchronous lectures and specific interventions implemented to address the issues observed during the spring semester. I was the sole instructor for all these classes, with full discretion over how to implement (or not implement) any interventions to improve student success. I did not, however, have any say whether the class was virtual, meeting on campus together, or if I needed to record my lectures ahead of time.

Context and Issues Identified

Most of the students enrolled in the classes were under the age of twenty-five. Many had employment outside of their student responsibilities. There was a blend of students who attended the university straight from high school, and who transferred from a community college. In the fall semester, due to the pandemic, some of the newly enrolled students had never physically been on campus as they were unable to tour the campus or attend in-person orientation. One class in each semester was a lower division course, primarily made up of students who were new to the university, whether incoming first-year or transfer students. The other two courses were upper division courses made up entirely of students with third or fourth year standing.

With the transition to virtual instruction in March 2020, there was an immediate change in student engagement. Attendance at synchronous Zoom meetings was 69% of what the pre-virtual instruction average had been. There was a marked change in the number of students submitting assignments on time or at all (table 6.1). Even prior to the formal announcement from university leadership, in-person student class attendance started to drop off with increasing fears and concerns regarding COVID-19. Over

one-third of the students finished the course with a lower grade than they had earned prior to the transition to virtual instruction; two of the three classes had at least one student who was active prior to the transition but completely disengaged and failed to successfully complete the course afterward.

	Pre- Transition	Post- Transition
Attendance	95%	65%
Submitting assignments on time	91%	69%
Submitting assignments at all	99%	95%
Receiving passing grade	99%	95%
Maintained same or better grade	n/a	65%

Table 6.1. Change in student engagement and performance before and after transition to virtual instruction in spring 2020 semester (n=74)

Many of these changes in performance are explained by the stress of economic and emotional factors of the pandemic, as reflected in student communications and responses to the end-of-course surveys (Cullen, Gulati, and Kelly 2020; Fairlie 2020; Pfefferbaum and North 2020).

When students missed class or failed to submit an assignment in a timely fashion, they communicated to me such issues as being:

- too tired to attend class after virtually working from home all day;
- distracted due caring for younger siblings as parent(s) is/are essential workers and student returned home after campus closure;
- unable to concentrate after using digital devices to complete all school work through virtual instruction;
- stressed about contracting COVID;
- stressed about economic issues (family member or student losing employment);
- concerned about the state of the country or world in general;

- restless while stuck in their home all day given public health lockdown orders.

Revised Teaching Methods

The change in student engagement and performance in the spring 2020 semester indicated that something needed to be done differently, from a pedagogical perspective, in subsequent virtual semesters. Although the COVID-19 pandemic lasted longer than many predicted, students were still moving forward with their lives, deserving the same high-quality education despite the unique challenges they and faculty were presented with. From the observed engagement and performance issues, combined with student communications, universities and colleges knew they needed to prioritize several things. Among these were improving class attendance, increasing the number of students submitting assignments on time, and maintaining a consistent student performance throughout the term.

After completing a summer faculty development course and enrolling in ongoing faculty development, both designed around evidence-based methods to help with virtual instruction during the pandemic, I implemented a variety of methods in my fall semester courses. Primary and secondary interventions were designed to address the identified priorities, with primary interventions intended as the main strategy and secondary interventions to support the main strategies. The primary interventions, aimed at directly addressing the issues observed in the first semester of virtual instruction and described in detail below, included accountability groups, individual student outreach, quality feedback, quick assignment turnaround times, and careful alignment of the course content with reinforcement from assignments. The secondary interventions, designed to provide additional support to the students and also elaborated on later, included utilizing a learner intake survey, creating a welcoming environment, and having flexibility with assignment due dates.

Accountability Groups

At the first class meeting of the semester, groups of four to five students were randomly created. Students were given ten minutes in breakout rooms to introduce themselves, get to know one another, and exchange contact information. At the beginning of each class session throughout the term, students were given approximately thirty seconds to one minute to peruse the participant list logged into the virtual session. Group members were asked to reach out to any other members who were not in attendance. If a student communicated to me in advance of a class meeting that they would be absent, they were encouraged to also communicate that to their accountability group. These same groups were used for any group work done throughout the semester in breakout rooms.

The goal of these accountability groups was to increase class attendance by having students hold their classmates accountable for attending class. This acknowledged the challenging emotional and stressful times of the pandemic, and the benefit of a support system to encourage one another. I would reinforce the idea that the accountability groups' intentions were to support one another at each class session's group check-in time.

Individual Outreach

Students who performed below 80% on any individual assignment or examination received an individual communication from me via course email. The email identified specific university resources (e.g., the university writing center) that the student should consider utilizing with relevant links to schedule an appointment or access services. I also requested my students attend virtual office hours with me to discuss the assignment or examination. If a student did not attend the next available office hour or reply to the communication within 48 hours, I sent one additional email communication; however, additional email communications were sent if the criteria were met by the same student on a subsequent assignment regardless of whether they engaged previously.

The primary goals of the individual outreach were to ensure that students (a) understood the course content; (b) read, understood,

and knew how to apply feedback; (c) knew how to access applicable campus resources; and (d) felt engaged and valued by me, as their instructor, despite poor performance. These goals were particularly important without the face-to-face time the students would have normally had prior to the transition to virtual instruction. Additionally, the stress and other mitigating factors from the COVID-19 pandemic made it even more important that students felt engaged and valued, and knew how to utilize the campus resources in the virtual environment.

Feedback Quality and Turnaround Time

Each assignment received extensive feedback in a timely fashion. Feedback was provided within the learning management system (LMS) in three different areas for written assignments: I wrote detailed comments focused on content and writing embedded within the students' submitted documents; I added comments in the grading rubric on all criteria if less than full points were awarded; and in the general assignment feedback area I summarized the overall feedback, directed students where to find the more detailed feedback, and, if warranted, suggested university resources or an individual meeting, with me, to review the assignment together.

Prior to the commencement of the semester, I blocked out sufficient time in my schedule to evaluate each assignment in every course within 48 hours of its due date. This also required careful planning so that assignments in different courses were appropriately spaced to not have this be an overwhelming process. Additionally, prior to the due date of the first assignment, I reviewed the LMS notification settings with the class during one of our synchronous class meetings and asked that they change their settings from the default to receiving notifications whenever an assignment was graded or an instructor comment was added to a submission.

The goal of this quality and extensive feedback was to help students master the course content despite the unique challenges of the pandemic. Students always need clear and thorough feedback on their assignments, but it was particularly important during the pandemic. The intent to provide feedback in a timely manner was to

keep students engaged with the content soon after they completed their assignments, and to keep their minds focused on the course material rather than distracted by the stressors of the pandemic. This feedback also provided the opportunity to interact with them directly and individually for those who needed additional support. Reviewing the LMS settings in class and requesting students modify them was to address previous observations of students not receiving notifications of feedback; they, at some point, noticed a grade for a given assignment but did not always notice the instructor feedback.

Content Schedule and Assignment Alignment

The scheduling of course content and assignments was closely reviewed and considered when planning the course and syllabus. The different assignments throughout the semester were closely timed to align with the completion of the relevant content. Due dates for assignments, while reasonable in turnaround time, were close to when content finished so that students immediately put into practice the material that was covered in their reading, lectures, and other course material. There was also a reasonable amount of time in between due dates before another assignment was due.

The realities of the pandemic came with a lot of distractions and stressors. The goal of aligning the content schedule and assignment due dates so closely was to prevent students from being distracted from these realities before solidifying the course concepts in their minds. With immediate application of the course concepts, the intent was to keep their minds focused on the course material and its application before stress of the pandemic kept them from doing so. The goal of spacing out the different assignments, though, was to allow students appropriate downtime to relax and refresh before another assignment was due.

Learner Intake Survey

During the first week of class, students were asked to complete a brief survey containing three questions:

- What is one goal you have for this course?
- In one word, how are you feeling about this course?

- Is there anything I need to know that may impact your success in this course? This information will remain confidential between you and me.

All student responses were acknowledged through the LMS. Students who provided any responses that indicated a need for academic or social support received acknowledgement through the learning management system and a direct email providing specific campus resources relevant to any issues they indicated. If a concern was noted that was worthy of ongoing support (e.g., extreme anxiety regarding the pandemic), a flag was indicated in the LMS gradebook to function as a reminder that the student needed follow-up throughout the semester.

Creating a Welcoming Environment

Two different techniques were implemented to create a welcoming environment with the students: a slide presentation to share personal information about one another and starting each class session with music playing. In the first week of the semester, students were asked to add a slide onto a class Google slides file sharing their name, where they are from, something interesting about themselves, and at least one photo of themselves or something they were passionate about. I prepared a slide prior to the start of the semester as an example that included a summary of my professional background, academic interests, and love of travel, with pictures of different countries I have been to. After the due date to complete this, I shared it in a synchronous class session together so that everyone could learn about their classmates.

Ten minutes prior to each synchronous class session, I logged into the Zoom session and started a preselected playlist of current music. The music was selected from current popular hits that would appeal to the young age of the students; it was intentionally played at a high volume to create a fun atmosphere. This music was played while the screen shared a recent humorous meme relevant to either the pandemic or the course content; given that these were health sciences courses, it was generally easy to find appropriate memes.

As the class progressed, I solicited requests from the students to add songs to the playlist so that it consisted of songs of interest to them.

The goal of sharing this personal information presentation and pre-class music and humorous meme was two-fold. First, it was intended to provide social connections and stress relief despite the issues presented by the pandemic. Additionally, though, it was to recreate some of the atmosphere that students would have experienced if classes had been in-person on campus: the interaction, opportunities, and spontaneity that occur while students and faculty are arriving to a classroom prior to the class time. Rather than students logging into yet another Zoom session when almost every other aspect of their life incorporated digital devices and Zoom, this allowed them to listen to some upbeat, current music, while enjoying a quick laugh from the meme, before resuming their virtual lives.

Flexibility with Firm Expectations

The reality of the pandemic was that it was stressful for many. In the spring 2020 semester, after the transition to virtual learning, there was a marked increase in the number of students who submitted assignments late; this was anticipated to continue in the fall 2020 semester. Students were given flexibility to submit assignments late without any penalty but, in agreement with me, a new due date was established, and the student was held to that due date. Students were given wide latitude to determine the new due date; however, this flexibility was not explicitly offered to students without them first coming to me with an expressed need.

The goal of this flexibility with firm expectations was to acknowledge the stress the lockdown environment and other stressors of the pandemic created while still establishing reasonable expectations for students to meet. This policy recognized the unique situations the pandemic created without giving students carte blanche to turn assignments in without any regard to scheduling.

	Spring Semester	Fall Semester
Attendance	65%	88%
Submitting assignments on time	69%	86%
Submitting assignments at all	95%	96%
Received passing grade	95%	96%

Table 6.2. Comparison of student engagement and performance after transition to virtual instruction in spring 2020 semester (n=74) versus after interventions implemented in fall 2020 semester (n=83)

Findings: Identified Priorities

Class Attendance

There was a considerable increase in class attendance between the post-transition semester in the spring and the fall semester with the interventions in place (table 6.2). An increase from 65% of students attending class post-transition to 88% attending after the interventions was observed. Students commented in their course evaluations that their accountability groups helped motivate them to attend class even when they felt down and stressed from the realities of the pandemic.

Submitting Assignments

Table 6.2 also shows an improvement in the number of students who were submitting assignments on time, with an increase from 69% in the spring semester to 86% in the fall semester. There was minimal change in the number of students who submitted any assignment at all (on time or late) from 95% to 96%.

Maintaining Performance

Student performance did not drastically change at any point during the fall semester as it did during the spring semester. However, there was not a meaningful difference in the number of students who passed the courses in the two semesters with a change from 95% to 96% (table 6.2). In the course evaluations, several students

did comment that they appreciated the timing of the assignments to the content and that “it helped reinforce the course material well.”

Other Observations

Accountability Groups—Extra Benefits

Although the intention of the accountability groups was to increase class attendance, other benefits were noted as well. One student who performed poorly on an assignment emailed me, stating, “I was upset about my grade but when I talked to my accountability group about it, I realized that I did it wrong and failed to meet expectations. They reminded me about the resources you provided regarding this and I will be reviewing them.” Some of the students turned the accountability groups into more than just holding one another accountable for showing up to class. Additionally, at the beginning of classes, students would often update me if a member of their accountability group was going to be absent or was ill. There was clearly regular communication between the group members and a support network created.

Individual Outreach and Office Hours

Although the number of students attending office hours was not specifically tracked in either semester, the number attending the virtual office hours was markedly higher than the number attending in previous semesters in-person. Historically, there would be many weeks with no students attending office hours at all and, at most, one or two students attended. With the virtual office hours in the fall semester, approximately 30% (around twenty-five different students) attended office hours at least once. This increase is likely because of the individual outreach efforts indicating to students that they needed to follow-up with me to discuss their performance. It is also, likely, partially due to the ease and flexibility of attending virtual office hours versus in-person office hours, particularly given that our campus is primarily a commuter campus with most students living off-campus.

Feedback Quality and Turnaround Time

Students made comments, both in email communication to me and in the course evaluations, that they appreciated the thorough feedback and how timely it was provided. Several students commented along the lines of “the thorough feedback on the earlier assignments helped me perform better on later assignments.” Another student stated that the most helpful part of the class for them was the “honest, thorough, clear, and timely feedback, even though Dr. C is dealing with the pandemic too.”

Learner Intake Survey

Due to the promised confidentiality of the learner intake survey, I am not providing details of what the students shared. However, there were between one and three students in each course who were dealing with very stressful events directly related to the pandemic. Utilizing this survey and using the flagging tool in the LMS allowed me to be aware of the students who were dealing with unusually stressful events and make appropriate accommodations.

Sense of Community

Students seemed to enjoy the environment created with the music before each class session. When students were asked to submit suggestions for songs to add to the playlist, quite a few students from each class took the time to make suggestions. In the end-of-course evaluations, several students commented about “the fun music before class” that put them in a good mood.

Challenges

I would be remiss if I did not point out the time commitment these interventions required. The workload during the pandemic semesters was considerable. While many of these tasks are routine for university faculty, such as providing extensive feedback on assignments, individually reaching out to students, following up with those who do not respond, and setting up one-on-one meetings takes a considerable amount of time. For example, there was one day that I had back-to-back individual virtual meetings with students from 10:00 a.m. to 4:30 p.m. while trying to complete

other work in between. However, I justified this with my own work-life balance since I had no commuting time nor wasted time finding a parking space on campus given that all instruction was conducted remotely. Nonetheless, given the time demands on and assigned workloads of many faculty, some of these interventions may simply not be practical. Administrative policy changes are necessary to reduce workload assignments and other obligations for faculty to focus more on students and provide this individualized attention.

There were also challenges in that there simply were some students, despite my best efforts, who disengaged. Some students still did not attend class regularly and several did fail their respective classes. Others, though passing, could have done better with higher levels of engagement.

Discussion

Students responded, generally, to the pandemic and transition to virtual instruction in an undesirable way in terms of attendance, on-time assignment submission, and maintaining their class grade. The decreases in attendance and on-time assignment submission were more dramatic. I implemented interventions to address two of the three identified priorities: improving class attendance and increasing the number of students submitting assignments on time. While no drastic change in student performance was observed during the semester, it was harder to note consistent student performance throughout the term. However, even in the spring term, with the inherent challenges and lack of preparation time, the far majority of students still received a passing grade; observing a significant change in this area was unlikely.

Bawa (2016) concluded that both social exclusion and family commitments can be reasons students withdraw from online courses or are unsuccessful in them. These obligations are also more commonly demanded of Hispanic, female, and first-generation students, who were the focus of this project (Covarrubias et al. 2018). It is likely these factors were heightened, given the stress and isolation of the pandemic (Cullen, Gulati, and Kelly 2020;

Pfefferbaum and North 2020). Several of the methods implemented in this research directly addressed these two concerns: accountability groups, learner intake surveys, and creating a welcoming environment. The success of these interventions was demonstrated by the improved class attendance and increase in students submitting work on time.

First-generation students and Hispanic students are often under additional emotional and economic challenges that were worsened by the pandemic (Adams, Meyers, and Beidas 2016; Allan, Garriott, and Keene 2016; Fairlie 2020). The improved attendance and on-time assignment submission, along with the higher number of students coming to office hours and the positive student comments, indicate that the interventions applied during the fall 2020 semester to help students adjust to the pandemic were effective in mitigating these additional stressful factors.

There is an emotional reaction to assignment feedback, particularly when the feedback is associated with a lower grade (Pitt and Norton 2017). Students' emotional responses to feedback are often negative and include annoyance, frustration, and disappointment; these are all exacerbated when experiencing other stressful life events (Wass et al. 2018). With the heightened stress everyone experienced during the pandemic, the interventions of individual outreach, feedback quality and turnaround time, and flexibility with firm expectations were much more important (Cullen, Gulati, and Kelly 2020; Pfefferbaum and North 2020). The individual outreach to students afforded me the opportunity to not only facilitate their understanding of the provided feedback, but to also reduce the emotional reactions to it by including the personal element of a one-on-one meeting with the student, which they craved and needed given the social isolation brought on by the pandemic and exacerbated by the forced virtual instruction (Bawa 2016).

Though time-consuming, the interventions used in the fall 2020 semester were ones that can easily be implemented by faculty at any institution. It is also important to not overlook the increased strain placed on faculty who had to cope with the same unique challenges

the pandemic presented (Cullen, Gulati, and Kelly 2020; Pfefferbaum and North 2020). These techniques and strategies do not require any special skills or complicated technology, though, but a dedication to students and teaching. Faculty interest and commitment to teaching is a key indicator of student success (Roksa et al. 2017). Implementing these strategies is a simple way to demonstrate that commitment and help students succeed.

Conclusion

The pandemic made learning online necessary, but inexperienced faculty and rushed circumstances created an unsuccessful experience for students. By implementing accountability groups to keep students engaged with one another, individual outreach to create a relationship with the instructor, individual outreach to help open lines of communication, and extensive feedback to become stronger students, we saw success. More students engaged with the materials and found community with their classmates and instructors. The interventions improved student performance. To obtain equity in education among first-generation students, students who qualify for financial aid, and students attending a designated HSI during the pandemic and non-pandemic times, the interventions described in this case study are critical. While it does take additional time for faculty to meet the needs of students, this can be acknowledged by reducing faculty teaching loads or reducing class sizes so that faculty have time to reach out individually to students and provide unique, individualized feedback about assignments. In the chaos of the pandemic, we saw students feeling overwhelmed, and feeling like they were being left behind. Students need and deserve the individualized attention that these interventions provide, and institutions need to provide those students with faculty who have the time and availability to provide them with those interventions.

References

- Adams, Danielle R., Steven A. Meyers, and Rinad S. Beidas. 2016. "The Relationship between Financial Strain, Perceived Stress,

- Psychological Symptoms, and Academic and Social Integration in Undergraduate Students.” *Journal of American College Health* 64 (5): 362–70. <https://doi.org/10.1080/07448481.2016.1154559>.
- Allan, Blake A., Patton O. Garriott, and Chesleigh N. Keene. 2016. “Outcomes of Social Class and Classism in First- and Continuing-Generation College Students.” *Journal of Counseling Psychology* 63 (4): 487–96. <https://doi.org/10.1037/cou0000160>.
- Bawa, Papia. 2016. “Retention in Online Courses: Exploring Issues and Solutions—A Literature Review.” *SAGE Open* 6 (1). <https://doi.org/10.1177/2158244015621777>.
- Chulkov, Dmitriy V., and Jason VanAlstine. 2013. “College Student Choice Among Electronic and Printed Textbook Options.” *Journal of Education for Business* 88 (4): 216–22. <https://doi.org/10.1080/08832323.2012.672936>.
- Covarrubias, Rebecca, Ibette Valle, Giselle Laiduc, and Margarita Azmitia. 2018. “‘You Never Become Fully Independent’: Family Roles and Independence in First-Generation College Students.” *Journal of Adolescent Research* 34 (4): 381–410. <https://doi.org/10.1177/0743558418788402>.
- Cullen, W., G. Gulati, and B. D. Kelly. 2020. “Mental Health in the COVID-19 Pandemic.” *QJM: An International Journal of Medicine* 113 (5): 311–12. <https://doi.org/10.1093/qjmed/hcaa110>.
- Davidson College. 2020. “The College Crisis Initiative.” <https://collegecrisis.shinyapps.io/dashboard/>.
- Dumford, Amber D., and Angie L. Miller. 2018. “Online Learning in Higher Education: Exploring Advantages and Disadvantages for Engagement.” *Journal of Computing in Higher Education* 30 (3): 452–65. <https://doi.org/10.1007/s12528-018-9179-z>.
- Fairlie, Robert. 2020. “The Impact of COVID-19 on Small Business Owners: Evidence from the First Three Months after Widespread Social-Distancing Restrictions.” *Journal of Economics & Management Strategy*. <https://doi.org/10.1111/jems.12400>.
- Gonzales, Amy L., Jessica McCrory Calarco, and Teresa Lynch. 2020. “Technology Problems and Student Achievement Gaps: A Validation and Extension of the Technology Maintenance

- Construct.” *Communication Research* 47 (5): 750–70. <https://doi.org/10.1177/0093650218796366>.
- National Conference on State Legislators. 2020. “Higher Education Responses to Coronavirus (COVID-19).” Updated March 22, 2021. <https://www.ncsl.org/education/higher-education-responses-to-coronavirus-covid-19>.
- Petillion, Riley J., and W. Stephen McNeil. 2020. “Student Experiences of Emergency Remote Teaching: Impacts of Instructor Practice on Student Learning, Engagement, and Well-Being.” *Journal of Chemical Education* 97 (9): 2486–93. <https://doi.org/10.1021/acs.jchemed.0c00733>.
- Pfefferbaum, Betty, and Carol S. North. 2020. “Mental Health and the Covid-19 Pandemic.” *New England Journal of Medicine* 383 (6): 510–12. <https://doi.org/10.1056/NEJMp2008017>.
- Pitt, Edd, and Lin Norton. 2017. “‘Now That’s the Feedback I Want!’ Students’ Reactions to Feedback on Graded Work and What They Do with It.” *Assessment & Evaluation in Higher Education* 42 (4): 499–516. <https://doi.org/10.1080/02602938.2016.1142500>.
- Roksa, Josipa, Teniell L. Trolan, Charles Blauch, and Kathleen Wise. 2017. “Facilitating Academic Performance in College: Understanding the Role of Clear and Organized Instruction.” *Higher Education* 74 (2): 283–300. <https://doi.org/10.1007/s10734-016-0048-2>.
- Theodosiou, Nicole A., and Jeffrey D. Corbin. 2020. “Redesign Your In-Person Course for Online: Creating Connections and Promoting Engagement for Better Learning.” *Ecology and Evolution* 10 (22): 12561–72. <https://doi.org/10.1002/ece3.6844>.
- US Department of Education. 2019. “National Center for Education Statistics 12-Month Enrollment Component.” IPEDS Data Explorer. https://nces.ed.gov/ipeds/Search?query=&query2=&resultType=all&page=1&sortBy=date_desc&dataYears=2019-20&dataYears=2018-19&overlayTableId=27428.
- Wass, Rob, Julie Timmermans, Tony Harland, and Angela McLean. 2018. “Annoyance and Frustration: Emotional Responses to Being

- Assessed in Higher Education.” *Active Learning in Higher Education* 21 (3): 189–201. <https://doi.org/10.1177/1469787418762462>.
- Xu, Di, and Shanna S. Jaggars. 2014. “Performance Gaps between Online and Face-to-Face Courses: Differences across Types of Students and Academic Subject Areas.” *The Journal of Higher Education* 85 (5): 633–59. <https://doi.org/10.1080/00221546.2014.11777343>.

CHAPTER 7

The Transition to Online Education amid the COVID-19 Pandemic and the Impact on International Students' Mental and Physical Health and Well-Being

Eugena Kwon, Trent University, Canada

Min-Jung Kwak, Saint Mary's University, Canada

Steven Smith, Saint Mary's University, Canada

Michael Zhang, Saint Mary's University, Canada

Katelynn Carter-Rogers, St. Francis Xavier University, Canada

Megan Manels-Murphy, Saint Mary's University, Canada

The sudden transition to online learning with the outbreak of the pandemic had an unavoidable impact on the higher education experiences of postsecondary students (Besser, Flett, and Zeigler-Hill 2022; Statistics Canada 2020). Notably, international students have been disproportionately impacted, and concerns have been raised regarding the relatively little support available to assist them (Cheng 2020; Sharp 2020). Over the past decade, a growing body of literature has focused on international students' experiences of pursuing their education abroad (Nilsson and Ripmeester 2016; Smith and Khawaja 2011; Zhang and Zhou 2010), but there are still gaps to be addressed. Not only is there a dearth of research conducted in the Canadian context, there is also insufficient literature on the impacts of international students' online learning experiences on their mental and physical well-being. With international students making up more than 20% of students enrolled in Canadian postsecondary institutions (Canadian Bureau for International Education 2018), combined with the sudden online transitions during the COVID-19 pandemic, this is a gap that warrants further exploration.

Even before the pandemic, prior studies have consistently documented evidence that resettling and making the academic transition to a new country often expose international students to various psychological stressors that may have a detrimental impact on their overall health and well-being (Mori 2000; Park and Rubin 2012). Moreover, studies have found that increased stress is also associated with unhealthy lifestyle behaviours (e.g., poor diet, lack of physical activity, sleep disorders, etc.) that may also undermine one's overall health and well-being (Dodd et al. 2010; Laska et al. 2009; Voelker 2004). International students are more vulnerable to social isolation and may also experience a reduced sense of belonging to the country where they are pursuing their education, both of which are associated with adverse mental and physical health outcomes (de Moor, Denollet, and Laceulle 2018; Teo, Choi, and Valenstein 2013). The transition to online learning may exacerbate the severity of such issues.

In this chapter, we draw upon a mixed methods research design that reports quantitative findings (descriptive results) from the Nova Scotia International Student (NSIS) survey and qualitative findings based on focus group interviews. Our aim is to better understand how the transition to online education amid the COVID-19 pandemic impacted international students' higher education experiences, what their challenges and specific needs are, and what implications this might have on their mental and physical health and well-being.

Literature Review

Prior to the pandemic, online learning was identified as a flexible delivery method that provides higher education opportunities to students who are unable or prefer not to engage in in-person learning environments (Boling et al. 2012; Edmunds et al. 2021; Gillett-Swan 2017; Napier, Dekhane, and Smith 2011; Schmidt, Tschida, and Hodge 2016). Though this flexibility allows for a greater diversity and inclusivity in higher education, several challenges have been identified. Some of these challenges relate to low retention rates (Simpson 2004), concerns regarding insufficient interactions with

professors and peers (Kim, Liu, and Bonk 2005; Swan 2001, 2003), and a lack of student community development and institutional connectedness (Rovai, Whiting, and Liu 2005). For some, online education creates an environment where students who lack independence, self-discipline, time management skills, and intrinsic motivation may be less likely to succeed academically (Abouchdid and Eid 2004; Chaney 2001; Savenye 2005; Sit et al. 2005; You and Kang 2014). Furthermore, the online learning environment may also contribute to feelings of isolation and disconnection, as students find it more difficult to develop peer/professor relationships (Haigh 2004; McManus, Dryer, and Henning 2017; Zembylas 2008). This isolation may lead to learning disengagement, which can affect retention and degree completion (Haigh 2004).

With the abrupt change of course delivery due to the outbreak of the COVID-19 pandemic, there has also been a growing interest in whether students experienced greater challenges in adjusting to and navigating the sudden transition to online learning. Studies reported similar findings to the previous literature—that students faced challenges related to motivation, engagement, and time management (Getenet et al. 2024; Xiao et al. 2020; Kim, Liu, and Bonk 2005; Oswal and Meloncon 2014; Rovai, Wighting, and Liu 2005). However, these challenges were further exacerbated during the pandemic due to the combined stress of having to adjust to and navigate such a sudden transition in education delivery and the general uncertainties during this period (Al-Kumaim et al. 2021; Rahiem 2021; Biwer et al. 2021; Maqableh and Mohammad 2021).

Prior empirical research has consistently found evidence that international students (particularly those from non-Western countries) experience greater academic challenges than domestic students—as they struggle to adjust to and navigate the education system in a new context. Further, these studies reveal that non-Western international students tend to struggle more with online learning than international students from Western countries (Chen, Bennett, and Maton 2008; Hughes 2013; Liu et al. 2010; Karkar-Esperat 2018). More specifically, international students from non-Western

countries (particularly those from East Asia) not only experience greater communication issues (with their professors and peers) due to language barriers, but also experience cultural challenges and struggle to grasp the different academic conduct and assessment structures at Western institutions (Hughes 2013; Liu et al. 2010).

Moving to a new country and making adjustments to a new environment often exposes international students to various psychological stressors (Mori 2000; Park and Rubin 2012). Also referred to as acculturative stress, their stress is often related to re-establishing social capital, making cultural adjustments, navigating a new environment, and dealing with various forms of racial/ethnic discrimination (George et al. 2015; Orjiako and So 2014). The COVID-19 pandemic may have presented international students with an even more challenging integration process. Due to the restrictions related to the pandemic, international students may also have been more vulnerable to social isolation, as they had limited opportunities to establish social networks and build a sense of belonging in the new context. Combined with other uncertainties experienced during the pandemic, social isolation and a lack of a sense of belonging may have exacerbated their risk of experiencing psychological distress and depressive symptoms (de Moor, Denollet, and Laceulle 2018; Teo, Choi, and Valenstein 2013). Increased acculturative stress could potentially result in adverse health outcomes. However, this still remains as a gap in the current literature.

In addressing such a notable gap, we aim to provide a better understanding of how the transition to online education amid the COVID-19 pandemic affected international students' learning experiences, what their challenges and specific needs are, and what implications this had on their mental and physical well-being. By shedding light on these implications, our chapter aims to provide a more nuanced understanding of the particular needs of international students in their pursuit of online learning. Our findings offer insights that could be utilized to implement more targeted support systems and responsive strategies aimed at supporting international students' online education.

Methods

In this chapter, we present research findings drawn from the Nova Scotia International Student (NSIS) Survey (n=775) and focus group interviews with fifty-seven international students in Nova Scotia. A mixed-method approach was employed for this research. These data were collected as part of a larger research project that aimed to examine the impact of the changing nature of work and learning during the COVID-19 era on international students' health and well-being. A research ethics approval was obtained from a university ethics board for all phases of the data collection.

1. NSIS Survey, 2020-2021

This survey consisted of eighty questions covering a wide range of topics, such as: socio-demographic characteristics, general academic and remote learning experiences, career preparedness, labour market mobility, future plans in Canada, and health and well-being. The primary objective of the survey was to seek better understanding of international students' experiences during the COVID-19 pandemic and how it affected their mental health, physical health, and other aspects related to their well-being. Data collection started in October 2020 and went through March 2021 via the online-based survey platform Qualtrics. A convenience sampling method was used by distributing the online survey link to various stakeholders that work closely with international students in Nova Scotia.

To participate in this survey, the participant had to be at least sixteen years of age and be an international student in a postsecondary institution in Nova Scotia OR a recent graduate (within the past two years) from a postsecondary institution in Nova Scotia. The survey took approximately 30–45 minutes to complete, and participants were given the option to opt in for a prize drawing for an Apple iPad. Out of all the collected responses, incomplete questionnaires and those with duplicate completion were removed from the data, leaving 775 participants. For our descriptive results, the total sample size may vary by variable due to missing responses in certain survey questions. A statistical tool called Stats iQ, which

is accessible via the Qualtrics platform, was used for our descriptive results provided in this chapter.

2. Focus group interviews with 57 international students (and recent graduates)

In the NSIS Survey, the last question asked respondents about their interest in being contacted for a follow-up focus group interview, and those that expressed their interest in participation were contacted to participate in a focus group. From February 10, 2021 to February 27, 2021, a total of nine focus group sessions (one pilot session and eight regular sessions) were conducted. All of the focus group sessions took place virtually via Zoom, and a total of fifty-seven students took part in this data collection.

Focus group participants were asked to share their general experiences of being an international student, particularly in the COVID-19 context. The focus group sessions were semi-structured in nature with questions and probes covering various themes, such as: (1) health and well-being, (2) remote and online learning, (3) career and labour market mobility, (4) finances, and (5) social integration. With the participants' consent, all focus group sessions were recorded. Each focus group session was about two hours in length, and the recordings were transcribed for coding. We used the software QDA Miner for coding and analysis. After the initial coding using grounded theory, we adopted an open coding strategy (Corbin and Strauss 1990) to identify the broader themes inductively. Moreover, we used focused coding strategy to further refine the themes into various sub-themes (Lofland et al. 2006).

Findings and Discussion

International students' general online learning experiences during the COVID-19 pandemic

Our survey included several questions that provide insights into international students' online learning experiences during the pandemic, such as: the mode of course delivery in the 2020–2021 academic year, their ability to communicate with professors and

classmates, and their experiences of practicing their English, being exposed to Canadian culture, and making friends in Canada during the pandemic (table 7.1). The emerging themes from the focus group interviews complement our understanding of the sweeping impact that the sudden transition to online learning had on international students.

Variables	% (n)
Mode of course delivery (n=699)	
Online	71 (496)
Hybrid/Blended	27.3 (191)
In-person/Other	1.7 (12)
Online learning has made it difficult to communicate with professors. (n=686)	
Strongly disagree	7.6 (52)
Somewhat disagree	11.8 (81)
Neither agree nor disagree	16.5 (113)
Somewhat agree	33.2 (228)
Strongly agree	30.9 (212)
Online learning has made it difficult to communicate with classmates. (n=683)	
Strongly disagree	3.4 (23)
Somewhat disagree	7.5 (51)
Neither agree nor disagree	13.3 (91)
Somewhat agree	28.3 (193)
Strongly agree	47.6 (325)

Variables	% (n)
Because of the COVID-19 pandemic, I find it difficult to practice my English. (n=703)	
Strongly disagree	27.3 (192)
Somewhat disagree	16.5 (116)
Neither agree nor disagree	25.6 (180)
Somewhat agree	18.2 (128)
Strongly agree	12.4 (87)
Because of the COVID-19 pandemic, I find it difficult to make friends in Canada. (n=708)	
Strongly disagree	3.1 (22)
Somewhat disagree	12.0 (85)
Neither agree nor disagree	21.9 (155)
Somewhat agree	30.8 (218)
Strongly agree	32.2 (228)
Because of the COVID-19 pandemic, I find it difficult to be exposed to Canadian culture. (n=704)	
Strongly disagree	8.5 (60)
Somewhat disagree	9.7 (68)
Neither agree nor disagree	19.2 (135)
Somewhat agree	36.4 (256)
Strongly agree	26.3 (185)

Table 7.1. Descriptive analysis of variables related to online learning experiences, Nova Scotia International Student (NSIS) Survey, 2020-2021
Note: The total percentage for certain variables does not add up to 100% due to rounding. The rounding does not systematically bias the results.
Source: Nova Scotia International Student (NSIS) Survey, 2020-2021.

Mode of course delivery

The findings from both the survey and the focus group interviews showed that although a significant proportion of international students' courses were delivered fully online, there were several who were enrolled in hybrid/blended courses. At the time of the survey, 71% of the international students from our survey responded that their courses were being delivered fully online, followed by 27.3% enrolled in hybrid/blended courses, and 1.7% that responded that their courses were being delivered "in-person/other" (table 7.1). The sample characteristics of the focus group participants were somewhat consistent with the survey. At the time of the focus group interview, 61% of the participants responded that all their classes were delivered completely online, 26% responded that it was being delivered in a combination of in-person and online (hybrid/blended), and less than 2% responded that all of their classes were being delivered in-person. About 11% did not disclose the mode of course delivery at their institution.

Relationships with professors in the online learning environment

To a survey question that asked whether online learning has made it difficult for them to communicate with their professors, 31% responded that they strongly agree and 33% responded that they somewhat agree (table 7.1). Similar to the survey findings, several of our focus group participants also shared that the sudden transition to online learning was accompanied by challenges in communicating with their professors. For some, these communication challenges were difficulties that international students experienced in articulating their inquiries and questions via email (e.g., challenges in asking clarification questions for course materials).

For the first few weeks, I just really struggled with it. I had a lab, which involved so many small details to it, and is really hard to ask (my questions) through emails. Like you kind of just like, you really have to see

what's on the screen to figure out (on your own) what is wrong or right. (*James, pilot focus group*)

There were several participants who felt that they received inadequate resources or support from some of their professors, and they expressed frustration that they had to navigate the online learning themselves by reviewing the course materials on their own.

I know for one of my classes, the professor didn't even have any classes. And she didn't post any material. (*Akeem, focus group 3*)

There were a few courses where I felt like I did not have the adequate support from the professor. It felt like I was self-teaching the course to myself, because he just told us to purchase the textbook and he just gave us assignments. And he did not put any lectures or course notes or anything. So that is what has been really difficult. (*Michie, focus group 5*)

As online learning was also an abrupt change for professors, it seemed that there were inconsistencies in the quality of the courses being delivered online. In contrast to the above experience shared by the participants like Akeem and Michie, there were several other participants who shared about the increased workload during the pandemic. It was discussed that some professors tried to compensate for the lack of in-class experience with more deliverables (e.g., more assigned readings, weekly quizzes, and ongoing discussion forums), which made the course workloads overwhelming for many.

I kind of agree about the online school, I think the professors are trying to overcompensate with everything. . . . You have things to do before class, things to do after class. (*Emma, focus group 4*)

Right now, this semester has been quite crazy because of the way the professors have designed the system. They give assignments almost every day, and it feels

like the professors are unaware that you have other classes or other work to do. . . . So, I feel like that really affects our mental health. (*Michie, focus group 5*)

It's kind of sad because my university is famous and renowned for small size classroom which university students can communicate with their professors. But during the COVID pandemic, it seems like it's challenging for me and for all the international students to communicate with their professors and with the classmates. . . . It just like feels suddenly stopped, paused. And they're extremely different from my previous experience when I was taking in-person classes before the pandemic. (*Cory, focus group 3*)

These statements are consistent with recent studies that revealed how the overall academic workload increased for students during the pandemic, and that students spend more time completing their coursework in the online setting (Maqableh and Mohammad 2021; Al-Kumaim et al. 2021). These findings also relate to prior research that was conducted pre-pandemic, which discussed how online education benefits students by providing greater accessibility and flexibility, but how it also creates an environment where burnout and stress becomes more prevalent as the classes often do not have fixed schedules (Clark 2003; Heo and Han 2018).

Relationships with peers in the online learning environment

As mentioned above, the lack of in-person interactions not only seemed to hinder the student's communication with their professors, but also their ability to interact and build social relationships with their peers. Our survey asked whether online learning has made it difficult for them to communicate with classmates, and 48% responded that they strongly agree and 28% responded that they somewhat agree (table 7.1). A similar experience was also shared among the focus group participants.

And you know, like sometimes, you just sit in class and ask your colleague sitting next to you, oh how do you solve this problem? In an online environment, that doesn't happen. And when it happens, like, it's a really rare event, like, in some classes. (*Matt, focus group 1*)

The challenges with peer communication were particularly difficult for international students as many relied on in-person classes to make friends in a new country. However, with the transition to online learning, there are no “water cooler” conversations among classmates to help them broaden their social network and also be exposed to Canadian culture.

It is kind of difficult (to make friends) because as soon as the Zoom classes finish, everybody just leaves. And you don't have somebody to ask for help, unlike as if you were in actual classes, but yeah, it's different. (*Shaylah, focus group 7*)

Because of the pandemic, we couldn't get really close to our classmates because we are having all the courses online. So, I feel that it is harder for me to immerse myself into Canadian culture and network. (*Sunny, focus group 8*)

As previous studies (Haigh 2004; McManus, Dryer, and Henning 2017; Zembylas 2008) noted, our research participants also shared that they find it more difficult to develop relationships with peers in the online learning environment. In such contexts, international students may particularly be more susceptible to social isolation and disconnection from peers.

Challenges specific to international students

Several of our focus group participants, as mentioned in the quote above, shared that the online nature impeded their ability to experience Canadian culture and make local friends. The descriptive results from the survey also reported similar findings, revealing that international students experienced difficulties in: (1) practicing

English, (2) being exposed to Canadian culture, and (3) making friends in Canada (table 7.1). Approximately 31% responded that they somewhat or strongly agree that it is difficult to practice their English because of the COVID-19 pandemic. To a question asking whether they find it difficult to be exposed to Canadian culture because of the COVID-19 pandemic, 62.7% responded that they somewhat or strongly agree. Further, 63% responded that they somewhat or strongly agree that they have a difficult time making friends in Canada because of the COVID-19 pandemic. Although these survey questions did not specifically ask whether these difficulties were related to online learning, the qualitative findings from the focus group interviews provided insights that this might be related to the lack of interaction with their professors and peers due to the online transitions. Overall, our findings revealed that online learning provides insufficient opportunities for international students to be exposed to Canadian culture and environments where they can practice their English and establish new social networks. Such context may negatively impact their higher education experiences, and also have implications on their health and well-being.

Health and well-being of international students during the online learning transition amid the COVID-19 pandemic

Mental health and psychological well-being

We asked international students questions about their mental health and experiences of stress. With respect to mental health, about 38% rated their current mental health as “good/excellent,” with 31.5% who rated as “average,” and 30.9% who rated as “terrible/poor.” For experiences of stress during the pandemic, the findings from the survey indicate that 80.3% of the survey respondents are experiencing “more stress now” compared to before the pandemic (table 7.2).

Variables	% (n)
How would you rate your current mental health? (n=693)	
Terrible	8.7 (60)
Poor	22.2 (154)
Average	31.5 (218)
Good	26.6 (184)
Excellent	11.1 (77)
Compared to before the COVID-19 pandemic, do you experience more stress now? (n=697)	
Yes	80.3 (560)
No	17.4 (121)
Prefer not to say	2.3 (16)
How would you rate your current physical health? (n=695)	
Terrible	1.4 (10)
Poor	8.5 (59)
Average	32.5 (226)
Good	38.3 (266)
Excellent	19.3 (134)
How would you rate your current physical activity involvement? (n=694)	
Terrible	9.1 (63)
Poor	26.8 (186)
Average	28.1 (195)
Good	25.4 (176)
Excellent	10.7 (74)

Table 7.2. Descriptive analysis of variables related to health and well-being, Nova Scotia International Student (NSIS) Survey, 2020-2021
Note: The total percentage for certain variables does not add up to 100% due to rounding. The rounding does not systematically bias the results.
Source: Nova Scotia International Student (NSIS) Survey, 2020-2021.

From the focus group interviews, it was evident that some of our participants were going through a challenging time and experiencing various psychological stressors accompanying the online transition and navigating the changes to the different ways of learning. One of the frequently recurring topics during our focus group discussions was the increased levels of stress, anxiety, and depression that they experienced in the online learning environment.

So I feel like it has taken a toll on me, because I don't have as much time to do what I want to do. . . . I find myself to be more anxious now than I used to be prior to online learning. So, I think that's how it has affected me. (*Michie, focus group 5*)

We can only go to classes online—all the discussions, and all the projects, that we need to do . . . Everything online. All of sudden, I feel like my life had a lack of that human touch. . . . So, I was kinda very depressed at that moment. We changed a lot because before COVID, there was lots of supports in school and you can easily see your professor and reach out to people. But after COVID, everything is on the internet. (*Lola, focus group 6*)

Change can be hard for many to deal with, and it can negatively influence one's overall psychological well-being, even more so when it is abrupt and unexpected. This sentiment was expressed by several participants from the focus groups. A frequently emerging theme was study-related burnout, as the participants discussed academic challenges they experienced. More specifically, they mentioned lack of motivation and diminishing productivity that accompanied their online learning experiences.

I find it really hard to focus on online learning because especially like, if you have something like calculation, you prefer it to be like in class. Um, it is especially difficult when you're looking at a screen for like ten

hours a day, because I have like assignments due every day. And then I'm also working. So, uh, when you look at a screen for too long, you tend to get tired. So that also affects like your ability to focus. So that's what I find really challenging about the online classes. (*Michie, focus group 5*)

I can notice that my productivity in the college when I go [to in-person classes], it is way better. Way better than when I am at home. (*Matt, focus group 1*)

I find it can be stressful, of, like sitting in the family computer for, like, a really long time and just seeing the screen. (*Yanquin, focus group 1*)

The findings revealed that making such rapid adjustments and navigating the online learning environment had a significant impact on students' mental health and well-being. Nonetheless, several participants also showed resiliency and quickly adapted to the changes.

For the first few weeks I just really struggled with it. . . . I think I'm getting used to it now, but, looking back at September, it was pretty difficult. . . . It also ties up with disciplines too, right. Like you try to keep a habit, but then, you know, just one day you mess it up and, and just kind of have to build it up again. (*James, pilot focus group*)

So, this [online learning] was very unique experience for me because I have not attended any classes online previously. . . . Doing everything online was a new thing altogether for me, so I think this was posed as a challenge at first, but as things are progressing, we are adapting to it. (*Maverick, focus group 2*)

[Since the start of online classes] I feel like it's much harder because there's so much information. I just

cannot used to it, and I feel a lot of stress with a lot of homework and those stuff. But then, I use meditation to relax myself, calm myself down and then remove the stress. (*Jenny, focus group 7*)

Our findings resonate with a few recently published studies that revealed how a growth mindset helped college students to be more engaged in online learning during the pandemic (e.g., Zhao et al. 2021). In another study, Parpala et al. (2021) also showed that less organized and less reflective students were more likely to experience exhaustion from online learning and were more susceptible to study-related burnout. As these studies have also suggested, providing more sufficient academic support and guidance on how to improve study practices (e.g., time management skills and self-efficacy) is recommended for preventing study-related burnout among students who struggle academically.

Physical health and well-being

In addition to concerns related to mental health and psychological well-being, several participants identified issues with their overall physical health and other lifestyle aspects. According to our survey findings, only about 10% rated their current physical condition as “terrible/poor,” while 32.5% rated as “average,” and 57.6% rated as “good/excellent.” However, our survey data showed that there were significant proportions of respondents (36%) that indicated that their current physical activity involvement was “terrible/poor” (table 7.2).

In analyzing our focus group data, issues related to ergonomics emerged frequently among the participants. Due to the rapid and unexpected nature of the transition from in-person classes to online education, students had to quickly find a workspace at home to continue their online learning. Although this transition may not have been a significant issue for those who already had a proper home workspace, there were several participants who shared various physical issues that emerged due to not having a proper space and lacking ergonomically friendly equipment to study at home. These

issues added further constraints to several of our participants' physical health and impeded their productivity and academic performances.

Working from home was a big challenge for me. It felt like my productivity had gone down, because you know, I didn't have a good office in my house. I didn't have a good table or chair or anything like that and even having, like an ergonomic set-up. So I kind of like, started getting body pains too. I started overextending my hands and my shoulders to use keyboard and mouse without a proper table so those were my biggest challenges. (*Natash, focus group 4*)

Ergonomics . . . I was not paying attention to this before. August, September, October was all OK. In November, I started having problem [circulation problem for hands and feet] and it took a while to understand what is happening, so now I'm really aware that I need to watch out. We bought a new [ergonomic] chair. I had late assignments because of this problem in my hands, so the consequences were not only physical. I also got school work piled up. (*Isabella, focus group 7*)

Beyond ergonomic issues, several of our focus group participants shared that their physical activity involvement significantly diminished during their online learning. However, this was somewhat interrelated to the pandemic situation as a whole (e.g., closure of gym facilities, limited activities and gathering due to stay-at-home order).

For physical health . . . I feel like with the pandemic, it's hard for me to go out. First, I don't have reason to go out, I don't work, and it's all online course now. So I am just stuck at home all day. . . . But yeah, that kind of affected my physical health and there's not much activity I can do at home. (*Nina, focus group 4*)

I gained weight and the gym is sometimes open, and sometimes it is not. The fact that you have to make an appointment even when it is open—is actually making it less likely and more difficult for me to go. . . . I am also engaged in less outside activity just because it’s winter. (*Eleanor, focus group 8*)

In contrast, there were a few others who shared how they started to exercise more during the pandemic and how it helped them to maintain their mental health and psychological well-being. Grace, for example, shared how she managed her mental health and psychological well-being by continuing to stay physically active:

My physical . . . I did some running with my roommate, yeah but I did mainly “at-home” workouts. YouTube was like my best friend. . . . And hikes as well. Not too often, but still like nice like lengthy hikes to get out and clear my mind. (*Grace, focus group 3*)

Interestingly, while some had identified the lack of time due to increased workload involved with online learning, there were others who mentioned how the transition to online learning improved how they manage their health and overall lifestyle by saving them the commute time. Overall, the findings reveal that the physical health, lifestyle aspects, and mental health are all closely interrelated, simultaneously influencing each other and holistically shaping one’s well-being. For example, Jenny discussed:

I don’t have to take too much time to travel to school which is, I guess it saves me a lot of time because my commute was like 45 minutes bus ride. So, now that things are online, there’s a lot of time that I can spend to study, and also extra time for exercise and I trying to do meditation, just like recently now and I think my eating habit is a lot of better, better than before. (*Jenny, focus group 7*)

While the challenges related to online learning had a notable influence on international students' physical health and well-being (e.g., ergonomic issues, taking time away and energy to manage a healthy lifestyle due to increased workload), it was evident that the direction of this relationship could also be reversed. As outlined in the findings from this chapter, health issues (both physical and mental) could also, in turn, hinder students' higher education experiences and academic performances.

Conclusion

Making such rapid adjustments and navigating the sudden transition to the online learning environment amid the pandemic had a notable impact on the health and well-being of postsecondary students (Statistics Canada 2020). Nonetheless, there was relatively little research that specifically focused on international students' experiences. In addressing such a gap, this chapter aimed to provide a better understanding of the online learning experiences of international students during the COVID-19 pandemic, and what implications this had on their physical and mental health and well-being.

In sum, a confluence of factors shaped international students' online experiences. Not only did international students in our study experience greater challenges in communicating with professors and interacting with peers (often due to exacerbated challenges related to language and cultural barriers), the abrupt transition to online learning also created an environment that made it more difficult for them to practice their English, establish local social networks, and be exposed to opportunities to learn more about Canadian culture. In addition, our findings revealed that various challenges related to online learning (e.g., diminishing motivation and productivity) were accompanied by various mental health and psychological issues (e.g., burnout, depression, anxiety). Furthermore, the unexpected shift to an online learning environment also had implications on students' physical health. Our findings identified issues related to ergonomics and the sedentary lifestyle (e.g., diminished physical

activity involvement). Although some students demonstrated resilience to such a challenging situation, it is important for institutions and policymakers to consider response strategies that can be more inclusive to international students' specific needs, to ensure the successful academic life and well-being of the international population amid the pandemic.

The transition to online education was necessary, and the institutions had to adapt quickly, however it is of utmost importance that at-risk student populations, like international students, have sufficient access to resources to ensure their mental and physical health and their overall well-being. Past studies show evidence that migrants (including international students) are more likely to experience barriers in accessing health and wellness resources (Ra 2016; Dombou et al. 2023). This is problematic, given the effectiveness of social support resources (Kristiana et al. 2022; Ra 2016). Our findings provide valuable insights that can be utilized by relevant stakeholders to implement adequate response strategies that go beyond the "one-size-fits-all" approach, with plans specifically tailored to offer better support and resources for international students. Notably, an inadequate response to the needs of international students during these difficult times may adversely affect future recruitment and retention rate in Canada, and Nova Scotia in particular. This is an issue that must be considered, given international students' contribution to Canada's economy and to the diversity of our higher education system. For example, Monterio (2020) recently identified the vital role of international students in Canada's post-COVID recovery plan. This is not a surprise, considering that international students contributed about \$21.6 billion to Canada's GDP in 2018 (Government of Canada 2019).

Recommendations and Implications

Prior to the pandemic, research had explored how to alleviate the challenges that students were facing in online learning, and what should be implemented to ensure student success within an online environment. When considering the current state of higher

education, and the number of institutions that had to integrate to online learning during the pandemic, institutions would benefit from understanding the core literature that already exists. First, ensuring that courses are designed adequately, are easy to navigate, and are engaging to students will help flatten learning curves (Hill 2002; Hooper and Rieber 1995; Song et al. 2004). As there are many personal adjustments that were made by students during the COVID-19 pandemic, ensuring that the courses are designed and delivered in an impactful way will alleviate stress and allow the students to be successful. Second, implementation of time management strategies within courses is a way to ensure that students can interact with the course materials more effectively (Hill 2002; Tabvuma et al. 2022), and that they can even gain an important life skill useful beyond their academic life. Most importantly, the university should ensure that international students have resources and opportunities to connect to peers, instructors, and the campus. Such resources will stimulate their campus engagement and sense of belonging to the university (Kim, Liu, and Bonk 2005; Slaten et al. 2018; Song et al. 2004).

Even though our sample was restricted to international students in Nova Scotia, our study provides a better understanding of the online learning experiences and the needs of international students, as well as its implications for their mental and physical well-being. Focusing on Nova Scotia as our research context also allowed for a diverse pool of participants, as well as a better understanding of the experiences of those in mid-sized Canadian cities. Nevertheless, we would like to note that we are unable to generalize our findings. One of the limitations of our study is that we are unable to speak to the experiences of domestic students or international students in other Canadian provinces. That being said, future research could also consider the experiences of other domestic students in Nova Scotia or international students across Canada for more comparative insights. Moreover, consideration should be given to recognizing the heterogeneity of the international student population. Further consideration of how their experiences may further vary by various socio-demographic characteristics (e.g., gender, country of origin,

socioeconomic status, age of arrival and more), may also be a valuable direction for future research.

References

- Aboucheddid, Kamal, and George M. Eid. 2004. "E-Learning Challenges in the Arab World: Revelations from a Case Study Profile." *Quality Assurance in Education* 12 (1): 15–27.
- Al-Kumaim, Nabil Hasan, Abdulsalam K. Alhazmi, Fathey Mohammed, Nadhmi A. Gazem, Muhammad Salman Shabbir, and Yousef Fazea. 2021. "Exploring the Impact of the COVID-19 Pandemic on University Students' Learning Life: An Integrated Conceptual Motivational Model for Sustainable and Healthy Online Learning." *Sustainability* 13 (5): 2546.
- Besser, Avi, Gordon L. Flett, and Virgil Zeigler-Hill. 2022. "Adaptability to a Sudden Transition to Online Learning during the COVID-19 Pandemic: Understanding the Challenges for Students." *Scholarship of Teaching and Learning in Psychology* 8 (2): 85.
- Biwer, Felicitas, Wisnu Wiradhany, Mirjam Oude Egbrink, Harm Hospers, Stella Wasenitz, Walter Jansen, and Anique De Bruin. 2021. "Changes and Adaptations: How University Students Self-Regulate their Online Learning during the COVID-19 Pandemic." *Frontiers in Psychology* 12: 642593.
- Boling, Erica C., Mary Hough, Hindi Krinsky, Hafiz Saleem, and Maggie Stevens. 2012. "Cutting the Distance in Distance Education: Perspectives on What Promotes Positive, Online Learning Experiences." *The Internet and Higher Education* 15 (2): 118–26.
- Bowden, Jana Lay-Hwa, Leonie Tickle, and Kay Naumann. 2021. "The Four Pillars of Tertiary Student Engagement and Success: A Holistic Measurement Approach." *Studies in Higher Education* 46 (6): 1207–24.
- Canadian Bureau for International Education. 2018. "Facts and Figures." <https://cbie.ca/media/facts-and-figures/>. Accessed September 15, 2021.

- Chaney, Elizabeth Griffin. 2001. "Web-Based Instruction in a Rural High School: A Collaborative Inquiry into its Effectiveness and Desirability." *NASSP Bulletin* 85 (628): 20–35.
- Chen, Rainbow Tsai-Hung, Sue Bennett, and Karl Maton. 2008. "The Adaptation of Chinese International Students to Online Flexible Learning: Two Case Studies." *Distance Education* 29 (3): 307–23.
- Cheng, Ruby. 2020. "The COVID-19 Crisis and International Students." *Inside Higher Ed*, March 18, 2020. <https://www.insidehighered.com/views/2020/03/19/higher-ed-institutions-arent-supporting-international-students-enough-during-covid>.
- Clark, Ted. 2003. "Disadvantages of Collaborative Online Discussion and the Advantages of Sociability, Fun and Cliques for Online Learning." In *Proceedings of the 3.1 and 3.3 Working Groups Conference on International Federation for Information Processing: ICT and the Teacher of the Future*, Volume 23, 23–25.
- Corbin, Juliet M., and Anselm Strauss. 1990. "Grounded Theory Research: Procedures, Canons, and Evaluative Criteria." *Qualitative Sociology* 13 (1): 3–21.
- de Moor, Elisabeth L., Johan Denollet, and Odilia M. Laceulle. 2018. "Social Inhibition, Sense of Belonging and Vulnerability to Internalizing Problems." *Journal of Affective Disorders* 225: 207–13.
- Dodd, Lorna J., Yahya Al-Nakeeb, Alan Nevill, and Mark J. Forshaw. 2010. "Lifestyle Risk Factors of Students: A Cluster Analytical Approach." *Preventive Medicine* 51 (1): 73–77.
- Dombou, Christelle, Olumuyiwa Omonaiye, Sarah Fraser, Jude Mary Cénat, Karine Fournier, and Sanni Yaya. 2023. "Barriers and Facilitators Associated with the Use of Mental Health Services among Immigrant Students in High-Income Countries: A Systematic Scoping Review." *PLoS One* 18 (6): e0287162.
- Edmunds, Julie A., Dora Gicheva, Beth Thrift, and Marie Hull. 2021. "High Tech, High Touch: The Impact of an Online Course Intervention on Academic Performance and Persistence

- in Higher Education.” *The Internet and Higher Education* 49: 100790.
- George, Usha, Mary S. Thomson, Ferzana Chaze, and Sepali Guruge. 2015. “Immigrant Mental Health, a Public Health Issue: Looking Back and Moving Forward.” *International Journal of Environmental Research and Public Health* 12 (10): 13624–48.
- Getenet, Seyum, Robert Cante, Petrea Redmond, and Peter Albion. 2024. “Students’ Digital Technology Attitude, Literacy and Self-Efficacy and Their Effect on Online Learning Engagement.” *International Journal of Educational Technology in Higher Education* 21 (1): 3.
- Gillett-Swan, Jenna. 2017. “The Challenges of Online Learning: Supporting and Engaging the Isolated Learner.” *Journal of Learning Design* 10 (1): 20–30.
- Government of Canada. 2019. “Building on Success: International Education Strategy (2019–2024).” Ottawa. <https://www.international.gc.ca/education/strategy-2019-2024-strategie.aspx>.
- Haigh, Jackie. 2004. “Information Technology in Health Professional Education: Why IT Matters.” *Nurse Education Today* 24 (7): 547–52.
- Heo, JeongChul, and Sumi Han. 2018. “Effects of Motivation, Academic Stress and Age in Predicting Self-Directed Learning Readiness (SDLR): Focused on Online College Students.” *Education and Information Technologies* 23: 61–71.
- Hill, Janette R. 2002. “Overcoming Obstacles and Creating Connections: Community Building in Web-Based Learning Environments.” *Journal of Computing in Higher Education* 14: 67–86.
- Hooper, Simon, and Lloyd P. Rieber. 1995. “Teaching with Technology.” *Teaching: Theory into Practice* 2013: 154–70.
- Hughes, Hilary. 2013. “International Students Using Online Information Resources to Learn: Complex Experience and

- Learning Needs.” *Journal of Further and Higher Education* 37 (1): 126–46.
- Karkar-Esperat, Tala Michelle. 2018. “International Graduate Students’ Challenges and Learning Experiences in Online Classes.” *Journal of International Students* 8 (4): 1722–35.
- Kim, Kyong-Jee, Shijuan Liu, and Curtis J. Bonk. 2005. “Online MBA Students’ Perceptions of Online Learning: Benefits, Challenges, and Suggestions.” *The Internet and Higher Education* 8 (4): 335–44.
- Kristiana, Ika Febrian, Nugraha Arif Karyanta, Ermida Simanjuntak, Unika Prihatsanti, Tri Muji Ingarianti, and Muhammad Shohib. 2022. “Social Support and Acculturative Stress of International Students.” *International Journal of Environmental Research and Public Health* 19 (11): 6568.
- Laska, Melissa Nelson, Keryn E. Pasch, Katherine Lust, Mary Story, and Ed Ehlinger. 2009. “Latent Class Analysis of Lifestyle Characteristics and Health Risk Behaviors among College Youth.” *Prevention Science* 10: 376–86.
- Liu, Xiaojing, Shijuan Liu, Seung-hee Lee, and Richard J. Magjuka. 2010. “Cultural Differences in Online Learning: International Student Perceptions.” *Journal of Educational Technology & Society* 13 (3): 177–88.
- Loffland, John, David A. Snow, Leon Anderson, and Lyn H. Loffland. 2006. *Analyzing Social Settings: A Guide to Qualitative Observation and Analysis*. Belmont, CA: Wadsworth/Thomson Learning.
- Maqableh, Mahmoud, and Mohammad Alia. 2021. “Evaluation Online Learning of Undergraduate Students under Lockdown amidst COVID-19 Pandemic: The Online Learning Experience and Students’ Satisfaction.” *Children and Youth Services Review* 128: 106160.
- McManus, Dean, Rachel Dryer, and Marcus Henning. 2017. “Barriers to Learning Online Experienced by Students with a Mental Health Disability.” *Distance Education* 38 (3): 336–52.
- Monterio, Stein. 2020. “International Students Are Vital to Canada’s Economic Recovery after COVID-19.” *Open Democracy*:

- Free Thinking for the World*, May 15, 2020. <https://www.open-democracy.net/en/pandemic-border/international-students-are-vital-to-canadas-economic-recovery-after-covid-19/>.
- Mori, Sakurako Chako. 2000. "Addressing the Mental Health Concerns of International Students." *Journal of Counseling & Development* 78 (2): 137–44.
- Napier, Nannette P., Sonal Dekhane, and Stella Smith. 2011. "Transitioning to Blended Learning: Understanding Student and Faculty Perceptions." *Journal of Asynchronous Learning Networks* 15 (1): 20–32.
- Nilsson, Per A., and Nannette Ripmeester. 2016. "International Student Expectations: Career Opportunities and Employability." *Journal of International Students* 6 (2): 614–31.
- Orjiako, Ola-Edo Yvonne, and Dominic So. 2014. "The Role of Acculturative Stress Factors on Mental Health and Help-Seeking Behavior of Sub-Saharan African Immigrants." *International Journal of Culture and Mental Health* 7 (3): 315–25.
- Oswal, Sushil K., and Lisa Meloncon. 2014. "Paying Attention to Accessibility when Designing Online Courses in Technical and Professional Communication." *Journal of Business and Technical Communication* 28 (3): 271–300.
- Park, Hyun-Sun, and Allen Rubin. 2012. "The Mediating Role of Acculturative Stress in the Relationship between Acculturation Level and Depression among Korean Immigrants in the US." *International Journal of Intercultural Relations* 36 (5): 611–23.
- Parpala, Anna, Nina Katajavuori, Anne Haarala-Muhonen, and Henna Asikainen. 2021. "How Did Students with Different Learning Profiles Experience 'Normal' and Online Teaching Situation during COVID-19 Spring?" *Social Sciences* 10 (9): 337.
- Ra, Young-An. 2016. "Social Support and Acculturative Stress among Korean International Students." *Journal of College Student Development* 57 (7): 885–91.
- Rahiem, Maila D.H. 2021. "Remaining Motivated despite the Limitations: University Students' Learning Propensity during

- the COVID-19 Pandemic.” *Children and Youth Services Review* 120: 105802.
- Rovai, Alfred P., Mervyn J. Wighting, and Jing Liu. 2005. “School Climate.” *Quarterly Review of Distance Education* 6 (4).
- Savenye, Wilhelmina C. 2005. “Improving Online Courses: What Is Interaction and Why Use It?” *Distance Learning* 2 (6): 22.
- Schmidt, Stephen W., Christina M. Tschida, and Elizabeth M. Hodge. 2016. “How Faculty Learn to Teach Online: What Administrators Need to Know.” *Online Journal of Distance Learning Administration*. 19 (1). https://ojdla.com/archive/spring191/schmidt_tschida_hodge191.pdf.
- Sharp, Morgan. 2020. “Nerves, Anxiety and Hunger for International Students during COVID-19.” *Canada’s National Observer*, April 20, 2020. <https://www.nationalobserver.com/2020/04/30/analysis/nerves-anxiety-and-hunger-international-students-during-covid-19>.
- Simpson, Ormond. 2004. “The Impact on Retention of Interventions to Support Distance Learning Students.” *Open Learning: The Journal of Open, Distance and e-Learning* 19 (1): 79–95.
- Sit, Janet W.H., Joanne W.Y. Chung, Meyrick C.M. Chow, and Thomas K.S. Wong. 2005. “Experiences of Online Learning: Students’ Perspective.” *Nurse Education Today* 25 (2): 140–47.
- Slaten, Christopher D., Zachary M. Elison, Eric D. Deemer, Hayley A. Hughes, and Daniel A. Shemwell. 2018. “The Development and Validation of the University Belonging Questionnaire.” *The Journal of Experimental Education* 86 (4): 633–51.
- Smith, Rachel A., and Nigar G. Khawaja. 2011. “A Review of the Acculturation Experiences of International Students.” *International Journal of Intercultural Relations* 35 (6): 699–713.
- Song, Liyan, Ernise S. Singleton, Janette R. Hill, and Myung Hwa Koh. 2004. “Improving Online Learning: Student Perceptions of Useful and Challenging Characteristics.” *The Internet and Higher Education* 7 (1): 59–70.
- Statistics Canada. 2020. “Impacts of the COVID-19 Pandemic on Postsecondary Students.” *Ottawa: Government of Canada*. <https://>

www150.statcan.gc.ca/n1/daily-quotidien/200512/dq200512a-eng.htm.

- Swan, Karen. 2001. "Virtual Interaction: Design Factors Affecting Student Satisfaction and Perceived Learning in Asynchronous Online Courses." *Distance Education* 22 (2): 306–31.
- Swan, Karen. 2003. "Developing Social Presence in Online Course Discussions." In *Learning and Teaching with Technology: Principles and Practices*, edited by Som Naidu, 147–64.
- Tabvuma, Vurain, Katelynn Carter-Rogers, Tom Brophy, Steven M. Smith, and Sheila Sutherland. 2022. "Transitioning from In Person to Online Learning during a Pandemic: An Experimental Study of the Impact of Time Management Training." *Higher Education Research & Development* 41 (7): 2441–57.
- Teo, Alan R., HwaJung Choi, and Marcia Valenstein. 2013. "Social Relationships and Depression: Ten-Year Follow-Up from a Nationally Representative Study." *PLoS One* 8 (4): e62396.
- Voelker, Rebecca. 2004. "Stress, Sleep Loss, and Substance Abuse Create Potent Recipe for College Depression." *JAMA* 291 (18): 2177–79.
- Xiao, Jun, Hong-Zheng Sun-Lin, Tzu-Han Lin, Mengyuan Li, Zhimin Pan, and Hsu-Chen Cheng. 2020. "What Makes Learners a Good Fit for Hybrid Learning? Learning Competences as Predictors of Experience and Satisfaction in Hybrid Learning Space." *British Journal of Educational Technology* 51 (4): 1203–19.
- You, Ji Won, and Myunghee Kang. 2014. "The Role of Academic Emotions in the Relationship between Perceived Academic Control and Self-Regulated Learning in Online Learning." *Computers & Education* 77: 125–33.
- Zembylas, Michalinos. 2008. "Adult Learners' Emotions in Online Learning." *Distance Education* 29 (1): 71–87.
- Zhang, Zuochen, and George Zhou. 2010. "Understanding Chinese International Students at a Canadian University: Perspectives, Expectations and Experiences." In *China's Higher Education Reform and Internationalisation*, edited by Janette Ryan, 123–33. Routledge.

Zhao, Hui, Jianping Xiong, Zhen Zhang, and Chunhui Qi. 2021. "Growth Mindset and College Students' Learning Engagement during the COVID-19 Pandemic: A Serial Mediation Model." *Frontiers in Psychology* 12: 621094.

SECTION 2

Faculty Development

CHAPTER 8

Online Learning, Open Education, and Equity in the Age of COVID-19

Fulfilling the Promise of Higher Education
through Blended Learning

Dianne Bateman and Karen Zacy Benner

Champlain College Saint-Lambert, Canada

Higher education is experiencing a pedagogical revolution that has the potential to profoundly transform policy, practice, and research in a positive way, or negate the limited progress that has been made in the past thirty years toward learner-centered approaches to teaching and learning. In the spring of 2020, education at all levels entered what was thought to be a temporary period of remote emergency teaching caused by the onset of COVID-19. All educators were forced into online teaching, an approach that most were unfamiliar with. The spring 2020 semester grew into another full academic year of teaching and learning online. Spurred on by necessity and curiosity, interest in online and blended learning pedagogies burgeoned.

The basic premise of this chapter is that current interest in blended learning provides a once-in-a-generation opportunity for colleges and universities to support and collaborate with faculty who wish to transition to a blended learning modality which requires learner-centered teaching, the cornerstone of educational change (Weimer 2002). While emanating from advances in cognitive psychology (Bransford and Brown 2001; Brown, Collins, and Duguid 1989; Ambrose et al. 2010), the role of assessment in learning (Shepard 2000; Huba and Freed 2000; Whitfield and Hartley 2019; McArthur 2016), and information and communication technologies

(Bates 2015; Hiltz and Turoff 2005; Williamson Shaffer, Nash, and Ruis 2015), the imperative for educational change has been propelled forward by the onset of COVID-19.

The Promise of Higher Education

The promises of higher education to society, in general, and to the students who enter their programs of study are embodied in learner-centered teaching. Higher education institutions promise to provide life-enriching learning experiences that prepare students to succeed academically and professionally as they become well-rounded, responsible, and informed citizens of the world. Mission statements speak of valuing creativity, critical thinking, and self-directed, independent, lifelong learning. Today twenty-first century essential dispositions are added to the promised list: flexibility, leadership, initiative, productivity, and the ability to collaborate with their peers (Urbani et al. 2017).

The promise of higher education rests upon how these intellectual skills, abilities, and dispositions will be learned. We promise learner-centered institutions with classrooms which foster partnerships between the students and the teacher, between the students and each other, and between the students and the subject under study. We promise timely formative feedback which will prepare them to complete complex, performance-based, and authentic assessments that are directly linked with the goals of instruction. We promise that they will learn actively, complete meaningful learning tasks, be evaluated on authentic assessment tasks that are valid, reliable, transparent, and fair, while constantly receiving faculty and institutional support. All institutions of higher education promise that students will experience meaningful learning (Fink 2013).

Higher education assumes the role of creating capable, thoughtful graduates (Reimers and Steinbach 2016), and studies show that a college education can and does make a difference for most students (Bateman 1990; Pascarella and Terenzini 2005). However, in the latter part of the twentieth century, frustration with the abilities and skills exhibited by college and university graduates emerged in

Canada and the United States. A new approach to supporting faculty in their role as teachers, in addition to their role as subject-matter experts, prompted a rethinking of learning and teaching in higher education. An emphasis was placed on identifying and measuring the achievement of specific learning outcomes, establishing accountability processes and the benefits of institutional assessment (Mentkowski et al. 2000). A paradigm shift away from a focus on providing instruction to a focus on learner-centered teaching began (Barr and Tagg 1995). This launched twenty-five years of research on teaching and learning in higher education that has primarily reached some policy makers, some interested faculty, and educational developers. Teaching centers, graduate programs in education, and professional organizations focusing on higher education blossomed, but all faced the challenge of coaxing faculty to enter the pedagogical world and reflect on their educational practice (Christensen Hughes and Mighty 2010; Matthews 2019; Carbone et al. 2019; Lakhali, Bateman, and Bédard 2017).

The results of research on teaching and learning in higher education are clear. How the educator teaches and assesses student learning directly influences how students approach their learning and whether they choose to adopt a deep or surface approach to their studies (Ramsden 2003; Prosser and Trigwell 2017). In addition, approaches to learning are dynamic and context-specific, and can thus vary from one learning activity or learning situation to another. There seems to be a general consensus that fundamentally sound teaching practices are based on constructive alignment, which refers to teaching where the learning objectives are appropriate and clear to the students, and the teaching methods and assessment tasks support student engagement in learning activities, the completion of which result in the achievement of the desired skills and understandings (Biggs 1996).

The onset of COVID-19 and the accompanying demand for remote emergency teaching brought with it a plethora of challenges, unexpected benefits, and a new era of experimentation, reflection, and questioning. Educators around the globe experimented with

narrated PowerPoints, video conferencing, online quizzes, Google Docs, software programs, forums, discussion groups, and learning management system features previously ignored (Stanistreet 2021). Assessments became online quizzes, take-home exams, and problem based. Some teachers were able to create communities of learners who worked together on projects and assignments, but many found themselves teaching to black boxes on a screen and wondering what happened to that teacher-student partnership. From a pedagogical perspective it forced many educators to consider their role in getting students engaged with the subject matter and assuming responsibility for their own learning. Most importantly, it exposed the complexities of the teaching and learning dynamic and revealed that there is an absolute need for students to be engaged in a meaningful way with their peers and the course material, whether they are in a face-to-face or online class. As a result, many colleges and universities are now tentatively examining ways to implement alternative delivery methods. The benefits of blended learning, which maintains face-to-face contact with students while integrating online approaches and technologies, has continued to emerge as an effective instructional model (Allen and Seaman 2016; “Report on Blended Learning HRSDC Canada” 2011; Dziuban et al. 2018).

Nearly all colleges and universities surveyed in 2018 by the Canadian Digital Learning Research Association, representing 92% of all Canadian postsecondary students, stated that blended learning was equal to or superior to face-to-face teaching (Canadian Digital Learning Research Association 2018). In 2003, the American Society for Training and Development identified blended learning as among the top ten trends to emerge in the knowledge delivery industry (Rooney 2003). A blended approach to learning combines online and face-to-face instruction and has been posited as being more effective than strictly face-to-face or strictly online approaches (“Innovative Practices Research Project” 2013).

What constitutes blended learning is not agreed upon, but in many higher education institutions there are overlapping practices which are interchangeably referred to as hybrid or blended.

However, there is a consensus that for both hybrid and blended there is an integration of online and face-to-face learning, and includes multi-modalities, flexibility, and student choice (Johnson 2021). It has been described as a dynamic and fast-changing phenomenon, with the terminology often struggling to keep up with the reality of what's happening (Prinsloo 2017).

Blended learning is sometimes perceived as an add-on to regular classroom instruction, or, as seen during the pandemic when faculty were thrown into the online world, an effort to simply find the right mix of asynchronous vs. synchronous sessions while adding a few technologies. This is a serious misconception. The social constructivist view of learning, in which blended learning is situated, posits that knowledge is not transferred from the teacher to the student; rather the teacher's role is to design learning activities which prompt the learner, through interaction with the material and their peers, to construct their own understandings (Bransford, Brown, and Cocking 2000). In addition, it is virtually impossible today not to use some form of IT in the delivery of courses. However, the use of basic IT does not constitute a blended learning approach; it simply signifies that technology is "blended" into the teaching of the course, as in the case where technology either enables or enhances learning (Graham, Woodfield, and Buckley 2013). An effective blended learning course does not happen by accident (Baran, Correlá, and Thompson 2013; Garrison 2017). Current literature emphasizes the necessity of providing faculty support that "guides staff in innovative, interactive approaches to course design" (Salter 2006, 717). In the absence of such intervention, technological tools do little more than "replicate existing practice in an online environment" (Salter 2006, 717). Teachers trying to make this transition are constantly confronted by tensions and challenges that make them rethink their expectations and recraft their teaching strategies. To be transformative, blended learning requires "rethinking and redesigning the teaching and learning relationship" (Garrison and Kanuka 2004), which forces a re-evaluation of the way courses are developed, designed, and delivered in

higher education. The flexibility it affords, along with its emphasis on student engagement, collaboration, and discourse, makes blended learning an imperative.

Quebec Context

The challenges and issues surrounding blended learning are relevant to the CEGEP system in Quebec. Postsecondary education in Quebec is designed to provide a route to higher education to students who would otherwise not have access. The promise is a society composed of active, thoughtful citizens who can read, write, and think. These publicly funded colleges are called CEGEPs, an acronym for “collège d’enseignement général et professionnel” and in Quebec, Canada, it is a public educational institution where the first level of higher education is provided in both of the province’s official languages—French and English. This unique step in Quebec’s educational ladder offers students two years in their chosen discipline, before moving on to university where they spend three years completing their undergraduate degree.

One College’s Journey

Champlain College Saint-Lambert (CCSL) is an Anglophone college located on the South Shore of Montreal, with approximately 3,100 students and 252 daytime faculty offering pre-university programs in liberal arts, science, social science, and arts, communication, and literature, and career programs in nursing, business management, tourism, and computer science. At CCSL, blended learning is understood as courses that integrate traditional face-to-face class activities with structured, asynchronous learning activities that are completed outside of the classroom. An institutionally defined portion of face-to-face time is replaced by these learning activities, which are overseen, supported, and reinforced by the teacher (Picciano 2009). Teachers of first-semester students are allowed to reduce seat-time in their courses by 20%; teachers of subsequent courses can reduce seat-time up to 50%. Arriving at this definition, which appears to be straightforward and simple, has been a process

of ongoing adaptation requiring the collaboration of the faculty and administration.

The work of Graham, Woodfield, and Buckley (2013) establishes a framework for institutional adoption of blended learning which has three interconnected stages or levels: awareness/exploration, adoption/early implementation, and mature/implementation. Within each stage of adoption, they examine institutional strategies, structures, and supports that are used to move an institution toward the integration and adoption of blended learning. This framework is used to describe the evolution of blended learning at CCSL.

Stage 1: Awareness/Exploration

In this first stage there is no official institutional strategy, but an awareness of increased interest in blended learning with limited support for individual faculty. In the spring of 2019, Champlain College Saint-Lambert was in the awareness/exploration stage of moving faculty towards using a blended learning approach to deliver instruction. At this time, faculty were encouraged to register for a three-credit graduate course on blended learning offered by the University of Sherbrooke as part of their Performa Program designed to support CEGEP teachers (Bateman et al. 2016). The course focuses on course redesign and utilizes the Community of Inquiry and the Practical Inquiry Model as its instructional framework (Garrison 2017). At the same time, a task force, consisting of six faculty members and two administrators began discussing areas of concern such as class size, intellectual property, teacher substitution, technical support, and developing expertise on campus. There was also an underlying faculty suspicion that the provincial government viewed blended learning as an opportunity to impose online teaching. These discussions culminated in the creation of the first blended learning agreement between the administration and the faculty, which provided an initial definition of blended learning and outlined operating parameters.

In the winter of 2020, seven teachers were given permission to pilot a blended learning course. When COVID-19 struck, colleges

came to a temporary halt. When the reopening of schools shifted to a uniquely online platform, while most teachers entered a period of emergency remote teaching and scrambled to survive, these teachers and their students transitioned seamlessly to online teaching and learning, a transition which they credited to a “blended learning mindset” and the Community of Inquiry instructional framework they had used to design their courses (Garrison and Vaughan 2008; Garrison 2017). In March 2020, the aforementioned course on blended learning was offered to faculty at Anglophone colleges in Quebec but had to be cancelled due to insufficient enrollment. It was re-advertised during the COVID-19 lockdown and ultimately ran, requiring two sections to accommodate its forty participants. Eleven teachers from CCSL were among the forty.

Stage 2: Adoption/Early Implementation

The early implementation stage of an institution’s adoption of blended learning is marked by an increased awareness that something is happening; that life as we know it is changing; and in this case, that education is changing. The educational institution begins to provide resources, and the number of people advocating for the change increases. This stage, which CCSL still resides in, spanned the entire 2020–2021 academic year and is still ongoing. However, at that time, a small advocacy group, consisting of four faculty members who had expertise in blended learning, was given release time to begin introducing blended learning as a viable and preferable way of delivering instruction. They were christened the Blended Learning Transformational Lead Team (BLTLT). Given the limited pedagogical support offered by the college at that time and the fact that the entire faculty had to teach completely online, their efforts focused on survival strategies for teaching online during a pandemic. As almost no one was permitted on campus, authentic blended learning was a moot point. However, interested teachers continued to prepare to teach using a blended learning modality by registering and taking the course on blended learning.

As the academic year neared a close, the original task force reconvened to make plans and update guidelines for the fall of 2021. It was clear that colleges were returning to face-to-face instruction. The teachers who had studied blended learning might now be given the opportunity to apply it, but once again, policy, planning, resources, scheduling, and support needed to be considered (Garrison and Kanuka 2004; Garrison and Vaughan 2008). After intense dialog among members of the committee and the administration, it was agreed that teachers who had received training in the theoretical underpinnings and application of blended learning models could offer their courses using a blended learning format in the fall 2021 semester. This prompted an additional twenty-five teachers to take the blended learning course during the summer of 2021.

The fall 2021 semester was mixed with trials and tribulations. Advocacy increased when the four-member BLTLT was increased to twelve, and forty teachers began to apply blended learning principles, instructional strategies, and intense course design processes to their fall 2021 courses. While interest increased, a contrasting sentiment began to emerge. Driven by a misconception about what blended learning entails, some faculty members came to view those who were teaching their courses in a blended learning format as a group of teachers receiving special privileges. Issues of faculty fairness and access entered the conversation. A reconstituted task force was created and a conversation regarding the role of and opportunities for professional development continued.

Stage 3: Moving Toward an Institutional Understanding of Blended Learning

Stage 3 is described as having well-established blended learning strategies and support that are integral to the institution's operations. The rapid growth in blended learning implementation and research has focused on course-level issues as opposed to institutional policy and addressing adoption challenges. This is an essential stage if the transformative effect of blended learning is to be realized (Garrison and Kanuka 2004). The focus is now expanding to include the

college's administration and faculty leaders as they move forward to strategically adopt and implement blended learning in their college classrooms. Negotiations are currently underway with our college's teachers' union, the Champlain College Teachers Association, and the administration to devise a local college policy which defines how blended learning is understood and the parameters for its implementation. For blended learning to be accepted it must also be addressed in the institution's policy on student evaluation and learning. Through its integration into policy, it moves from individual effort to a collective awareness, whether it is adopted by many or few teachers across the college.

Teacher Voices

In the fall 2021 semester, forty teachers were offering their courses using a blended learning modality. Twelve of these teachers, representing English, humanities, psychology, biology, history, creative arts, and nursing participated in this part of our study. The following thematic analysis is based on the data collected through semi-structured interviews conducted on Zoom and in-person, as well as reflections received through email responding to questions and prompts.

Teachers' Professional Growth

Pedagogical themes related to student learning that emerged from the interviews focused on the complexities of course design, establishing learning communities within the course, and moving students towards independent learning. Most faculty who participated in the course on blended learning reported that when they registered they did not understand what would be involved. They "knew education was changing" and were searching for support and strategies to cope with these new demands. Most arrived with an assumption that the course would focus on integrating technology into their teaching. The course's focus on course design and its subsequent impact on many participants supports the premise of the literature on blended learning, which argues that blended learning requires

a fundamental course redesign that transforms the course structure and approach to student learning (Garrison and Vaughan 2008).

My understanding of blended learning changed entirely. I initially thought it was just a question of reducing F2F contact hours initially and didn't really think it was all related to a very intentional course design. Initially, I thought that if I met with students once per week and gave them asynchronous tasks to replace the missed contact hours, that would mean that what I was doing was blended learning. How very wrong I was! (English).

I had never planned my course before being conscious of the cognitive, teaching, and social presences. This along with the questioning steps in the Practical Inquiry Model made a big difference in the quality of the student interactions and in their discussions. (Psychology)

The creation of a community of learners that functions in small learning teams in and outside the classroom is a hallmark of the transformative blended learning model CCSL is following. Science and nursing teachers utilized a team-based approach in their labs and clinical classes. These carefully planned asynchronous learning activities, completed outside of class, individually and in learning teams, were viewed as a powerful link between face-to-face meetings that deepened students' understanding of the course content and provided an opportunity for students to learn how to collaborate and engage in the inquiry process in an authentic way. The teacher's role is to guide the group so that over time group members become drivers of their own learning (Chance 2014). The result is a movement toward independent learning and increased comfort with the inquiry process, a process that might not reveal an answer. This was deemed an important component particularly in content-driven disciplines where students are used to memorizing and seeking correct answers.

Asynchronous work remains highly useful in lieu of class time to deepen understanding and build collaboration. Establishing community is an element of my teaching that is here for good, as it was before the pandemic, but now with even more confidence that learning happens in a community, not just the classroom. (Humanities)

We reduced the number of labs and replaced them with team-based projects. The procedural knowledge learned in a typical lab was replaced with collaborative learning activities that required an inquiry approach and resulted in deeper learning of the content along with a willingness and ability to work together. It increased student motivation. (Biology)

While working in learning teams was valued, challenges emerged. Working collaboratively did not come naturally. Students need to be taught how to be in a learning team, and they need to be held accountable for their work and contribution to the team. The goals of a college are similar to the goals of a university, but they are not the same, nor are the teaching and learning environments.

Our students take eight courses, and most courses meet twice a week. These constraints influence the making of the learning groups and maintaining their stability. And then there is their maturity level. They are young adults with different levels of maturity. Apart from their courses, many work outside of class, and have different levels of commitment to their learning. Blended learning helps these students, but it is not easy to establish them in a learning group, and sometimes we shift them round to get the right dynamic. Once they get feedback and realize that they have the power to change their work—it gives them confidence to engage. (Art History)

For the first time in my twelve-year teaching career, I never doubted whether my students had read the stories we were discussing. They all had. The asynchronous tasks I had planned needed to be submitted before our class, so I could see who had done them and who hadn't. It enabled me to follow up with students and communicate my openness in helping them if ever they were struggling. I also checked their homework and offered informal feedback via MIO [the LMS] or in person, and hope this made them feel like these tasks were useful. (English)

Transitioning between Face-to-Face, Online, and Blended Learning Modalities

Many teachers credited their “blended learning mindset” for their smooth transition to online teaching at the onset of COVID-19, then back to authentic blended learning teaching in the fall 2021 semester. However, as the term progressed it was important for them to find their own professional voice and place of comfort with how the educational experiences they had designed progressed.

During the winter 2020 lockdown, I was slowly transitioning/adapting my courses to blended learning during that semester, but when the lockdown occurred, the sudden adjustments prevented me from doing anything that had any real pedagogical purpose. From fall 2020–winter 2021 required distance teaching. This is when I was able to do blended learning correctly. I had spent the summer creating course designs based first on objectives/competencies, then assessments, then content. By redesigning my courses and knowing that distance teaching would/could involve asynchronous learning activities, I created Moodle activities focused on learning tasks, some to be done individually and others in teams. Individual work usually preceded

teamwork; but since most tasks were work-in-progress, formative in nature, and building up to the final project/essay to be done in my different courses, teamwork was usually designed to help with individual work in the end. So yes, the pandemic helped me apply blended learning, since students were already adapting/adapted to online work. Remote Zoom synchronous classes replaced what would have been face-to-face classes in my blended learning plan. Breakout rooms worked wonderfully, I was always able to offer teacher presence, and I feel that we were able to create a community of inquiry. I did not have any major technical challenges, nor did the students. All went well. (History)

Because of blended learning's emphasis on engagement, I refrained from ever lecturing and instead opted for a flipped classroom model. This technique often felt unnatural in the sense that I had no guarantee that students were reading and truly understanding the material, except for the homework they completed, which, realistically, I couldn't all read. Perhaps next time, I'll allow myself a few more moments of lecturing to ensure that course materials are clear for students. (English)

Changing the Teacher's Role in the Classroom

Given that most faculty do not have pedagogical training, the course provided a sojourn into course design that resulted in new knowledge and renewed confidence. Many teachers reported increased commitment, motivation, satisfaction, and hope.

I had a set plan for the term. . . . My first educational experience was complete, and I knew exactly what the goals of this unit was. Therefore, I started the semester confident and organized: I knew where we were going and communicated the information to my students. I

felt in control and competent, and I think that must have influenced their perception of the course. I hope it made them feel like they were in good hands; their guide knew what she was doing. (English)

I now have a clear, clear purpose. In history we tend to lecture, so I was looking for different strategies to compensate for some in-class activities—by redistributing the work outside of class I find and feel that they are learning a lot more. This is what I got—it makes me more motivated as a teacher. (History)

It increased my self-confidence and the idea of new possibilities. New ways in the classroom have given me hope and energy. (Psychology)

Letting Go

The only way students can move towards self-directed learning is if teachers step back after planning the learner’s educational journey, allowing the learner to move forward. Many teachers, especially new or mid-career teachers, find this difficult to do.

New teachers have trouble because they go through an interview, get the job and start in two weeks. Bad teaching habits are formed. I feel that I am a much better teacher because it has given me confidence that I can let go. I do not control as much and feel more mature as a teacher. (History)

Feeling Fatigued but Satisfied

All in all, the people who think blended learning will allow them to coast and “take-it-easy” are entirely wrong. I’ve worked so hard this term! I’m drained. Still, I think blended learning is a good educational framework to work with, and perhaps the key is adapting it

to fit the capabilities of college students, who need, I think, a lot more guidance than adult learners. (English)

I am an experienced teacher, yet I have worked harder this term than any other. There is no denying that the planning takes time, the outcome is exciting, but the planning and implementation takes time. (Biology)

Implications

Any transformative process strong enough to positively affect ways of teaching and learning must be recognized through the creation of institutional policies that legitimate its practice. The strategy for its adoption must be intentional and official. It requires the commitment of the administration and teachers with varied perspectives on what constitutes effective teaching and learning to collaborate (Bager-Elsborg 2018).

Blended learning requires the educator to consider learning as a dynamic process which, through the course's design, integrates student collaboration and accommodates the diversity of student learners in the creation of knowledge. As such, it is essential to build a course that effectively integrates synchronous and asynchronous learning activities, whether these are in-person or online components. The knowledge students build, using this modality, goes beyond the acquisition of competencies and meeting required standards. Students' learning is connected to a complex of relationships with teachers, peers, and the college itself. One of blended learning's strengths is that students develop learning strategies which ultimately are transferable to new learning environments. The development of these intellectual and social processes, best attained through courses aligned within programs, accommodates the students' transitioning from high school to college, from semester to semester, and from college to university.

Blended learning implies a thoughtful integration of face-to-face and online learning, a rethinking of course design, and replacing traditional class contact hours with meaningful, carefully designed

learning experiences that can take place outside of class and optimize student engagement. Teachers who availed themselves of the blended learning training experienced a new understanding about what it meant to design a course and stood in awe at the amount of planning that goes into a well-constructed blended learning course. The time spent in intentional course planning led to feelings of confidence and self-efficacy on the part of the teacher and corresponding feelings of well-being and safety on the part of the students who entered their blended classrooms.

Done well, blended learning offers an instructional role for the teacher that is student-centered, requiring the design of meaningful learning experiences, timely feedback, enhanced teacher-student communication, and an emphasis on self-regulated learning (Garrison and Vaughan 2008). If not done carefully and with rigor, the shift to a totally online or a blended learning environment can negate pedagogical advances made in teaching and learning in higher education during the last thirty years by replicating negative aspects of the status quo and reinforcing the traditional emphasis on lecturing to transmit knowledge from teacher to student, as opposed to creating learning environments that engage students, foster their autonomy, and promote further learning. Blended learning is key to fulfilling the promise of higher education.

References

- Allen, I. Elaine, and Jeff Seaman. 2016. "Online Report Card—Tracking Online Education in the United States." Babson Survey Research Group, Online Learning Consortium.
- Ambrose, Susan A., Michael W. Bridges, Marsha C. Lovett, Michelle DiPietro, and Marie K. Norman. 2010. *How Learning Works*. Jossey-Bass.
- Bager-Elsborg, Anna. 2018. "How Lecturers' Understanding of Change Is Embedded in Disciplinary Practices: A Multiple Case Study." *Higher Education* 76: 195–212. <https://doi.org/10.1007/s10734-017-0195-0>.

- Baran, Evrim, Ana-Paula Correla, and Ann Thompson. 2013. "Tracing Successful Online Teaching in Higher Education: Voices of Exemplary Online Teachers." *Teachers College Record* 115 (3): 1–41.
- Barr, Robert B., and John Tagg. 1995. "From Teaching to Learning: A New Paradigm for Undergraduate Education." *Change* 27 (6): 12–25.
- Bateman, Dianne. 1990. "A Longitudinal Study of the Cognitive and Affective Development of CEGEP Students" (Doctoral thesis, McGill University). <https://escholarship.mcgill.ca/concern/theses/xw42n8744>.
- Bateman, D., W. Brown, S. Hughes, and S. Lahkal. 2016. "Using a Blended Format in the Master Teacher Program." Conference presentation, 5th Annual SALTISE Conference, June 3, 2016, Montreal.
- Bates, A.W. 2015. Teaching in a Digital Age. <https://opentextbc.ca/teachinginadigitalage/>.
- Biggs, John. 1996. "Enhancing Teaching Through Constructive Alignment." *Higher Education* 32: 1–18.
- Bransford, John D., Ann L. Brown, and Rodney R. Cocking. 2000. *How People Learn*. Washington, DC: National Academy Press.
- Brown, John Seely, Allan Collins, and Paul Duguid. 1989. "Situated Cognition and the Culture of Learning." *Educational Researcher* 18 (1): 32–42.
- Canadian Digital Learning Research Association. 2018. "Tracking Online and Distance Education in Canada: Canadian National Survey on Online and Distance Education." http://www.cdla-acrf.ca/wp-content/uploads/2020/07/2018_national_en.pdf.
- Carbone, A., S. Drew, B. Ross, J. Ye, L. Phelan, K. Lindsay, and C. Cottman. 2019. "A Collegial Quality Development Process for Identifying and Addressing Barriers to Improving Teaching." *Higher Education Research & Development* 38 (7): 1356–70.
- Chance, Shannon M. 2014. "Bringing It All Together through Group Learning." *New Directions for Higher Education* 165 (165): 107–19.

- Christensen Hughes, Julia, and Joy Mighty. 2010. *Taking Stock: Research on Teaching and Learning in Higher Education*. Queen's Policy Studies Series. McGill-Queen's University Press.
- Dziuban, Chards, Charles R. Graham, Patsy D. Moskal, Anders Norberg, and Nicole Sicilia. 2018. "Blended Learning: The New Normal and Emerging Technologies." *International Journal of Educational Technology in Higher Education* 15 (3): 1–16.
- Fink, L. Dee. 2013. *Creating Significant Learning Experiences*. Revised and Updated. Jossey-Bass.
- Garrison, D. Randy. 2017. *E-Learning in the 21st Century: A Community of Inquiry Framework for Research and Practice*. 3rd ed. New York: Routledge.
- Garrison, D. Randy, and Heather Kanuka. 2004. "Blended Learning: Uncovering Its Transformative Potential in Higher Education." *The Internet and Higher Education* 7 (2): 95–105.
- Garrison, D. Randy, and Norman D. Vaughan. 2008. *Blended Learning in Higher Education: Framework, Principles, and Guidelines*. San Francisco: Jossey-Bass.
- Graham, Charles R., Wendy Woodfield, and J. Buckley Harrison. 2013. "A Framework for Institutional Adoption and Implementation of Blended Learning in Higher Education." *Internet and Higher Education* 18: 4–14.
- Hiltz, Starr Roxanne, and Murray Turoff. 2005. "Education Goes Digital: The Evolution of Online Learning and the Revolution in Higher Education." *Communications of the ACM* 48 (10): 59–64.
- Huba, Mary E., and Jann E. Freed. 2000. *Learner-Centered Assessment on College Campuses: Shifting the Focus from Teaching to Learning*. Boston: Allyn and Bacon.
- "Innovative Practices Research Project." 2013. Collaboration for Online Higher Education.
- Johnson, Nicole. 2021. "Evolving Definitions in Digital Learning: A National Framework for Categorizing Commonly Used Terms." Digital Learning in Canadian Higher Education. Canadian Digital Learning Research Association. <http://www.cdlra.ca>

- cdlra-acrfl.ca/wp-content/uploads/2021/07/2021-CDLRA-definitions-report-5.pdf.
- Lakhal, Sawsen, Dianne Bateman, and Janie Bédard. 2017. “Blended Synchronous Delivery Modes in Graduate Programs: A Literature Review and How It Is Implemented in the Master Teacher Program.” *Collected Essays on Learning and Teaching* 10 (June): 47–60. <https://doi.org/10.22329/celt.v10i0.4747>.
- Matthews, Kelly E. 2019. “Rethinking the Problem of Faculty Resistance to Engaging with Students as Partners in Learning and Teaching in Higher Education.” *International Journal for the Scholarship of Teaching and Learning* 13 (2). <https://digitalcommons.georgiasouthern.edu/ij-sotl/vol13/iss2/2/>.
- McArthur, Jan. 2016. “Assessment for Social Justice: The Role of Assessment in Achieving Social Justice.” *Assessment and Evaluation in Higher Education* 41 (7): 967–81.
- Mentkowski, Marcia, Glen Rogers, Austin Doherty, Georgine Loacker, Judith Hart, William Richards, Kathleen O’Brien, et al. 2000. *Learning that Lasts*. Jossey-Bass.
- Pascarella, Ernest T., and Patrick T. Terenzini. 2005. *How College Affects Students: A Third Decade of Research*. Jossey-Bass.
- Picciano, Anothony G. 2009. “Blending with Purpose: The Multimodal Model.” *Journal of the Research Center for Educational Technology (RCET)* 5 (1): 4–14.
- Prinsloo, Paul. 2017. “Deconstructing Online Learning: Salvation, Stigma and/or Snake Oil.” Presented at the Learning Carnival – Celebrating Innovation and Excellence in Teaching and Learning, North-West University, Mahikeng, South Africa, June 2, 2017. <https://www.slideshare.net/prinsp/deconstructing-online-learning-salvation-stigma-andor-snake-oil>.
- Prosser, Michael, and Keith Trigwell. 2017. “Student Learning and the Experience of Teaching.” *HERDSA Review of Higher Education* 4: 5–27.
- Quebec (Province) and Ministre de l’éducation et de l’enseignement supérieur. 2019. *Digital Competency Framework*. <http://collections.banq.qc.ca/ark:/52327/4010462>.

- Ramsden, Paul. 2003. *Learning to Teach in Higher Education*. 2nd ed. London: Routledge.
- Reimers, Fernando, and Alison W. Steinbach. 2016. "On International Education: Global Comparative Education Analysis and Study to Advance Development, Collaboration and Effective Teaching and Learning." *Harvard International Review* 38 (1): 48–51.
- "Report on Blended Learning HRSDC Canada." 2011. Collaboration for Online Higher Education Research (COHERE).
- Rooney, J.E. 2003. "Blended Learning Opportunities to Enhance Educational Programming and Meets." *Association Management* 55 (5): 26–32.
- Salter, Diane. 2006. "E-Scholars: Staff Development through Designing for Learning." In *Proceedings of the 23rd Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education*, edited by L. Markauskaite, P. Goodyear and P.Reimann, 717–26. Sydney: University of Sydney.
- Shepard, Lorrie A. 2000. "The Role of Assessment in a Learning Culture." *Educational Researcher* 29 (7): 4–14. <https://doi.org/10.3102/0013189X029007004>.
- Stanistreet, Paul. 2021. "Reasons to Be Hopeful: Learning and Becoming in a Time of Crisis." *International Review of Education*. <https://doi.org/10.1007/s11159-021-09915-9>.
- Urbani, Jacquelyn M., Shadi Roshandel, Rosemarie Michaels, and Elizabeth Truesdell. 2017. "Developing and Modeling 21st-Century Skills with Preservice Teachers." *Teacher Education Quarterly* 44 (4): 27–50.
- Weimer, Maryellen. 2002. *Learner-Centered Teaching: Five Key Changes to Practice*. San Francisco: Jossey-Bass.
- Whitfield, Ruth, and Peter Hartley. 2019. "Assessment Strategy: Enhancement of Student Learning Through a Programme Focus." In *Employability via Higher Education: Sustainability as Scholarship*, edited by Alice Diver, 237–53. Champaign: Springer.

Williamson Shaffer, David, Padraig Nash, and A.R. Ruis. 2015.
“Technology and the New Professionalization of Teaching.”
Teachers College Record 117 (12): 1–30.

CHAPTER 9

“Knowing that We Are Not Alone”

Nurturing Faculty Members as Adult Learners
through Technology-Rich, Task-Oriented,
Experiential, and Relational Supports

Lucas Wright, Kari Grain, and Charlyn Black

University of British Columbia, Canada

The COVID-19 pandemic raised significant challenges for the higher education community worldwide, with one particular challenge being the urgent and unexpected requirement for previously face-to-face university courses to rapidly switch to an online format. Suddenly, in March 2020, thousands of postsecondary faculty members and educators in Canada and elsewhere, many with little or no training in online teaching, were required to continue their research and teaching priorities, while also implementing what, for many, was an entirely new way of teaching. Moreover, instructors of all backgrounds and ages suddenly had to prepare and deliver their classes from home, with a myriad of related challenges, and often without proper technical support.

Literature Review

Prior to the COVID-19 pandemic, online learning had been steadily growing in Canadian higher education. In 2019 10% of all course enrollments in Canadian credit programs at the university and college level were fully online (Bates 2020). In the face of this growth, there were debates about its effectiveness in comparison to in-person learning. While some meta-analyses reported that online teaching is at least equivalent to more traditional formats for those who have access to adequate technology (Means et al. 2009; Ngyuen

2015), others found that the format negatively impacts student performance, especially for students who are more likely to struggle in academic settings (Figlio, Rush, and Yin 2013; Krieg and Henson 2016; Xu and Jaggars 2014; Alpert, Couch, and Harmon 2016). According to Glazier (2021), the relationship between the instructor and student is also important for online learning. From this research, it is clear that online teaching approaches must be intentionally developed to optimize student learning, with a concerted effort to go beyond replicating a physical class/lecture through video capabilities; instead, a range of collaboration tools and engagement methods that promote active learning and personalization for the learner must be thoughtfully deployed. Accordingly, simple comparisons of online to in-person learning miss key contextual information and show that the two are not easily compared.

Despite the growth in online courses prior to the start of the COVID-19 pandemic, there had been limited faculty adoption of online and “blended” teaching and learning formats. While some faculty “early adopters” had implemented online and blended teaching approaches, they were limited in number. These faculty members were innovators with vastly different timelines and needs than the large proportion of “emergency adopters” who suddenly needed to rapidly shift to a strictly online format. The sudden closure of universities across the globe meant that universities had to provide emergency faculty support and develop programs that focused on helping large numbers of faculty to make rapid transitions to teach online. Universities were thus charged not only with continuing to teach their students, but also with teaching faculty members—as adult learners (Collins 2004). The responsibility for responding to the urgent transition to online teaching, in many cases, shifted to teaching and learning centres and their staff who have extensive experience in online education.

Emergency shifts to remote teaching and learning were a common institutional reaction during the early response to the COVID-19 pandemic (Johnson, Veletsianos, and Seaman 2020). While technology provided the ability for universities to transition

to teaching online during the spring 2020 semester, what was offered for the remainder of that semester was described as “emergency remote teaching” (Bond et al. 2021; Bozkurt et al. 2020), in contrast to more robust online teaching (Hodges et al. 2020). The sudden changes that were required, in combination with limited understanding about effective online pedagogy among many faculty, meant that a wide variety of emergency changes were implemented, ranging from many instructors “pretending nothing had changed and attempting to transition their course without making revisions to it” (Schlesselman 2020, 1042), to others reporting that faculty were able to quickly adopt online teaching approaches and make adjustments to assignments, exams, and grading policies (Johnson, Veletsianos, and Seaman 2020).

In the face of the rapid shifts that were required, there were multiple reports of university professors feeling completely overwhelmed by changes brought on by the pandemic and finding it exceedingly difficult to cope with the workload and the new teaching circumstances (CBC 2020). One Canadian study on the impacts of the rapid transitions demonstrated an increased number of university educators who identified feelings of anxiousness: 68% were worried about the impact of the pandemic on their teaching, and 84% of respondents reported “somewhat” or “much higher” levels of stress (Canadian Association of University Teachers 2020). Hodges et al. (2020) suggested that all parties involved—students, faculty, and staff—were “being asked to do extraordinary things regarding course delivery and learning that have not been seen on this scale in the lifetimes of anyone currently involved.”

Context

Given this challenge, colleges and universities—and in particular, teaching and learning centres—were called upon like never before to provide training, offering one-on-one consultations, troubleshooting issues, developing resources, and finding a way to support faculty through the immediate challenge of moving online. As it became clear that the pandemic would likely impact

programming for additional terms and even the upcoming 2020/21 academic year, many developed longer term programming to draw upon the rich evidence base that supports the effectiveness of online teaching modalities.

This chapter outlines the general approach undertaken at one Canadian university to develop such longer-term support to “keep teaching.” In particular, it describes a week-long intensive training program, which was rapidly developed and implemented to support adoption of effective online practices among faculty, and analyses evaluation data from this program. We provide information about specific aspects of the program that faculty valued, as online learners themselves, to support their development of competencies to offer their own courses in an online format. Through qualitative analysis of evaluation data from the program, we identified four pillars of effective online teaching that emerged during this challenging time for faculty members. We found that faculty development for online teaching during the pandemic was not simply about teaching skills for online course delivery, but that faculty, as adult online learners, deeply valued emotional and relational support at a time when so many faced isolation and anxiety.

The Transitioning to Online Teaching Course

As noted above, at the University of British Columbia (UBC) the online teaching environment was new, both pedagogically and technologically, for the majority of faculty members. This situation created a significant demand for university-wide faculty professional development opportunities—and to complicate matters, the opportunities needed to be created and delivered quickly to enable faculty to keep teaching.

In response to the challenges, leadership at UBC charged the Centre for Teaching and Learning Technology (CTLT) to develop supportive programming to rapidly enhance faculty skills to deliver online courses, to complement services available within faculties. One focus of the response was the development of the **Online Teaching Program**. As outlined in figure 9.1, this programming provided different pathways of support: 1) for those new to teaching

online, 2) for those who wanted to “brush up” on key areas, and 3) for those who wanted higher levels of support. The types of resources available included self-paced online courses, one-on-one consultations, and workshops. This program was developed rapidly with intent to provide flexible support at scale for faculty at UBC.

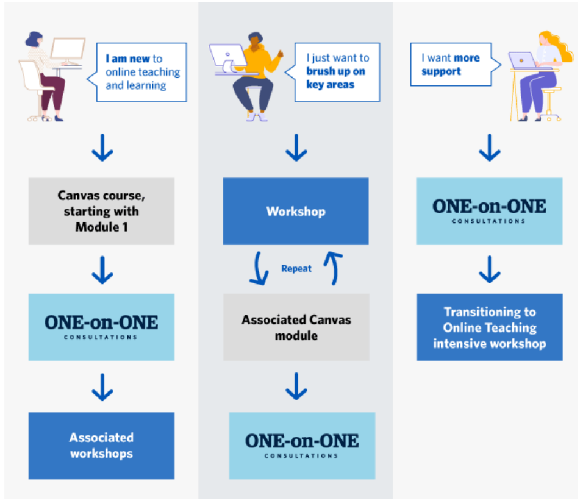


Figure 9.1. The Online Teaching Program at UBC

The Online Teaching Program by the Centre for Teaching, Learning and Technology is used under a Creative Commons 4.0 License, CC-BY 4.0

For faculty willing and able to invest more significant time, one specific component involved a major and rapid revision of a previously existing intensive program, a one-month course that had been offered annually and was intended to support faculty in designing or redesigning courses to optimally blend online and face-to-face teaching and learning. It was rapidly redesigned to provide an intensive and cohort-based one-week experience for those faculty members who sought an intensive learning experience and were able to accommodate this schedule.

To develop a high-quality course quickly, designers focused on reusing, revising, and remixing open educational resources about online teaching and learning, and rapidly prototyping and building the first course model. The intent was to develop a short intensive

course that would model strengths of online learning for faculty members to emulate, and to provide as much support as possible for them to pilot and prototype approaches that could be used in their own courses. A key focus was on incorporating approaches that could be implemented rapidly and effectively, without the necessity for faculty to entirely revise their courses. The course design team (the authors of this chapter) brought a range of pedagogical and technical skills and backgrounds to the process to ensure that the course would be designed and delivered within a tight timeline and respond to different goals of faculty participants. Lucas Wright is an educational consultant with expertise in learning technology. Kari Grain is a faculty member in education who was serving in a dual role as an educational consultant at CTLT (specializing in experiential education) and a sessional instructor in the faculty of education. Charlyn Black is a faculty member in medicine who is active in teaching and who then had a senior leadership role overseeing graduate education for the School of Population and Public Health. In addition, a CTLT learning designer supported the overall course design.

The first offering of the one-week intensive Transitioning to Online Teaching (TOT) program took place in June 2020. Participants were asked to commit ten to twelve hours to the intensive short course; however, the time spent by faculty members varied depending on their own goals and abilities. In contrast to many other pedagogy-oriented offerings which are typically one to two hours each and scaled to large groups of participants, the TOT was an individually focused program designed to concurrently engage approximately thirty faculty members. It was open to those who were currently teaching or would be doing so in the near future and who were facing the challenge of moving to an online format. Only registrants who met this criterion were accepted. Throughout the summer of 2020, four TOT courses were offered with an aim of supporting participants to ready their courses for online delivery in the summer and upcoming fall 2020 terms. Another two TOT courses were offered during the fall term, with a focus

on supporting faculty to prepare to teach online in January 2021. A total of 155 faculty participants completed the TOT course, with attendees from faculty units and departments across the institution including medicine, science, arts, land and food systems, and law.

The online course was situated in our main learning management system, Canvas. It balanced asynchronous (7–9 hours) and synchronous (two 1.5-hour sessions) learning components, and optional “Learning Lounges” (informal drop-in Zoom sessions), with the timing of these components designed to model their intentional integration. The course placed particular emphasis on “teaching presence” and strategies educators could apply to create more of a sense of teaching presence in asynchronous and synchronous course elements. It also drew heavily upon the Community of Inquiry framework (Vaughan, Cleveland-Innes, and Garrison 2013) in order to maximize social, cognitive, and teaching presence elements to facilitate and model a rich online experience for participants.

The asynchronous course elements included short readings, discussion activities, and “course development challenges.” The TOT discussion activities were designed for participants to share and learn from one another about transitioning their courses online, with some interaction from instructors. The synchronous course components supported real-time connection and discussion between the course participants. By emphasising interaction and connection within these sessions, the course team was better able to leverage what Finkelstein (2006, 285) refers to as the “unique potential of synchronous interaction and real-time communication.” Each day of the course contained explicit learning outcomes and a host of pedagogical strategies meant to offer some variety but not to overwhelm. Pedagogical strategies included synchronous Zoom sessions (using options such as whiteboard, polling, and breakout group discussions), learning lounges, Canvas options such as announcements and discussion boards, optional practical activities, and a course development project.

To help us evaluate the program, participants received a link to a survey during the closing synchronous session of each TOT

program, followed by an email requesting them to complete the short evaluation of the program. The evaluation consisted of a Qualtrics survey asking for responses to three open-ended questions:

1. What were your goals in taking the program, and in what ways were they met, or not?
2. Which aspects of the program were most valuable for you?
3. What changes would you recommend to improve the program?

Answers to these questions were used for ongoing evaluation and improvements of subsequent iterations of the course. Results from the October survey suggested that participants were gaining increased experience and accordingly, significant changes were made to the final course offering in December.

Methods

Two of the co-authors (Kari and Lucas) collaboratively analyzed data from the evaluation surveys. Given the changing needs of attendees over time and the subsequent changes made to the final course offering in December, the analysis was restricted to evaluation of survey responses from the first course offerings during the months of June, July, August (two sessions), and October. This involved a total of sixty-three completed evaluation forms from a total of 115 participants who completed one of these five course offerings, a completed response rate of 55%.

Thematic content analysis of the sixty-three evaluations was conducted through the manual coding of the open-ended qualitative evaluation responses to identify emergent themes. For the purposes of this paper, we aimed to identify the most valuable aspects of the TOT program for faculty development; thus, we focused the majority of our analysis on open-ended answers to question 2: Which aspects of the program were most valuable to you?

Following an inductive approach, we began with no predetermined theory or framework, and instead allowed the themes to develop through thematic analysis (Pope, Ziebland, and Mays 1999). Given that our evaluation data was derived from a relatively small

number of participants, we opted not to use a data analysis program (e.g., NVivo), but instead chose to manually code the responses in two phases: initial open coding, followed by code refinement and reduction. As per best practices in thematic content analysis, code refinement and reduction allowed for the important process of grouping together similar or related codes and refining the key emergent themes (Burnard 2006). For both analysis phases, the two co-authors worked together, simultaneously discussing the responses and coding them in a shared online document. Initial open coding generated connected and overlapping pedagogical themes such as: technical help, student engagement, empathy building, modeling good teaching practice, and peer learning, among many others. Phase 2 analysis allowed for the collation and combining of related themes, eventually generating four key themes about what was most valuable to faculty members as adult learners in the TOT program.

Findings

Evaluation feedback from the TOT revealed multiple aspects of the program that faculty members found to be most valuable. From these themes, we derived four key characteristics of valuable online learning for teaching faculty:

1. **Technology-rich:** Abundant attention to technical support in online teaching provides learners with knowledge of learning platforms, new technologies, and pedagogical strategies involving the use of technology. In the case of the TOT, such supports included one-on-one, informal learning lounges, asynchronous discussion forums with peers, curated resources, and synchronous group sessions.
2. **Task-oriented:** Task-oriented course design holds time, space, and facilitated activities for relevant projects that participants need to fulfill at some point, regardless of their level of participation.
3. **Experiential:** Experiential online learning includes the modeling of effective pedagogy and useful strategies that participants can practice as learners in online spaces. Online

learning that is experiential allows participants to experience the role of “learner” in situations where they typically serve the role of “teacher,” therefore generating empathetic and informed decision-making in their own course design.

4. Relational: Relational online learning cultivates a teaching/learning community and holds ample space for peer learning and shared reflection; it includes attention to contextual stressors that may be facing the learners, and encourages support and solidarity through shared ideas and challenges.

Below, we expand on these four characteristics and share some selected quotes from qualitative evaluation feedback from the TOT course.

1. Technology-Rich

Technological support for online educators is arguably the first and most urgent type of support that comes to mind when one thinks back to the onset of the pandemic. Research from the early stages of the pandemic showed that many educators had to teach in an online environment for the first time (Johnson, Veletsianos, and Seaman 2020). Participants in this study emphasized the importance of individualized technical support during the program. In different iterations of the TOT program the participants commented on the specific technical skills that they developed during the course from “sharing slides in Zoom” to creating a welcome video for the course. As was evident in both the survey feedback and in conversations in the learning lounge, for some participants the individualized technical support helped them to feel more confident using different tools in their teaching.

Interestingly, instances where our own instructional team made errors with the use of technology were also a point of reference in evaluation feedback. For example, during one synchronous session, an instructional team member struggled to erase the virtual whiteboard comments, and a participant highlighted this foible as a weakness of our teaching team’s effectiveness. From our perspective, we discussed this as an important teachable moment because it showed

that even people who practice using these technologies are bound to make errors with them. Depending on the learner, this could serve as comforting information (that everyone is prone to error) or give them more anxiety (that they, too, are likely to make errors). This example was a reminder that technology and online teaching tools are not only pragmatic essentials for teaching online, but they are also representative of significant stress, vulnerability, and emotionality for some educators (Cutri and Mena 2020). These stresses were further compounded for learners who felt they were arriving in the TOT with less experience than their peers in online teaching. One participant wrote, "I felt many of the participants already had ongoing online/part-online courses so for someone 'brand new' to teaching with any online component there was a steep curve."

The TOT was designed in a way that allowed for several entry points to a variety of technical teaching components. Our intention was to not only model the ways that tools such as Canvas, Kaltura, or Zoom could be used creatively, but to also provide participants with direct technical support in small group or one-on-one scenarios. "Learning lounges" were informal online drop-in spaces with the most technologically experienced members of our team, and they were well attended by TOT participants. One participant wrote that "the learning lounge was the most valuable—the ability to drop in with [the facilitator] one on one was fabulous." Because of the less structured approach in learning lounges, TOT instructors were able to approach each individual inquiry in unique ways, and this allowed them to support faculty members to troubleshoot issues they encountered, or to practice using specific platforms or tools. Practicing in the presence of an instructor proved to be valuable for one individual who wrote, "The opportunity for some hands-on practice was also really important for me, as I had not hosted a Zoom call or shared ppt slides before—I was able to practice the annotation function, which is going to be crucial in my classes."

Another aspect that one participant particularly valued was what our team called the "10-minute rule," which we emphasized repeatedly. The 10-minute rule, especially in emergency shifts to

online teaching, was particularly relevant because it encourages learners to spend no more than ten minutes learning a new technology or figuring out a problem on their own. “Once I noticed the 10-minute rule it was golden—you might want to make that even more explicit because the first night I spend more like 100 minutes trying to make the video thing work. Seems like it was a browser problem—but serendipitously it got me into Kaltura Capture which is where I want to be.”

Of great interest to our TOT teaching team was the observation that discussions about learning new technologies were frequently accompanied by expressions of anxiety, stress, joy, and gratitude, among others—an intersection that we discuss later in this paper.

2. Task-Oriented

Principles of adult learning have long emphasized that adult learners typically arrive in educational environments with a wealth of knowledge and experience, but also with a shortage of time or energy due to professional and familial responsibilities (Collins 2004). This has been especially true during the pandemic, wherein increased familial responsibilities (e.g., childcare, elder care) were compounded by workload expectations that suddenly included learning a new skill set for teaching online. Given the tremendous time pressures faced by faculty members during the rapid transition to online teaching, participants expressed an appreciation of the practical and applied nature of the TOT’s workload. It was our aim in the design of the TOT to ensure that the assigned tasks or suggested activities constituted labour that the faculty members would need to do regardless of their time in the course. Several participants reported an appreciation of being “forced” to do the work through the course activities, even though all activities and assignments were “recommended” rather than required. For example, one person wrote that what they found most valuable in the TOT was that it “forced me to sit down and do concrete work for courses.” Similarly, another expressed, “I’m very glad that you forced us to work on something specific about our courses for the last day. I feel that I actually got out something very tangible from this

course (I've re-worked my syllabus and decide how I will balance synchronous/asynchronous activities)."

More insights into task-oriented goals of TOT participants were elucidated through responses to the survey question "What were your goals in taking the program, and in what ways were they met, or not?" Although many mentioned goals related to learning specific technologies and connecting with others who faced similar challenges, several participants shared specific and concrete tasks they had for completing the TOT course and described how they were met by completing the program. For example, one participant wrote their goal was to "rethink my syllabus and modules" and that "I didn't actually finish creating either, but I did make progress." Another participant described some of the course design planning they were able to do within the TOT program: "I made a lot of progress in putting together a vision of what the course will look like, how it will function (from my perspective and from the students' experiences) as well as an overall strategy of how I am going to use my time over the next two months."

3. Experiential

Until recent years, experiential education has rarely been considered in online contexts; instead, the "experience" cited in much of the traditional experiential education literature has been understood as involving excursions outside of the classroom, away from books, and off of the computer. But with recent technological advances and the growing popularity of online education, the dominant understanding of "experiential" has begun to shift and expand to include online forms of experience. Indeed, even learning that happens online or through technology can include Kolb's (1984) four learning modes that constitute the cycle of experiential learning: experiencing, reflecting, thinking, and acting. In particular, the TOT focused on supporting faculty members to learn about and integrate technological tools into their teaching and course design. Educational research has long indicated that modeling the effective integration of technology is a vital means of teaching educators in online spaces (Hughes, Liu, and Lim 2016). Furthermore, it has been

consistently demonstrated that effective faculty development for online teaching is contingent not only on technological learning, but also on a pedagogical emphasis—that is, a focus on how to teach using such technologies. Koehler and Mishra (2005, 113) pointed out that “merely introducing technology to the educational process is not enough to ensure technology integration since technology alone does not lead to change.”

Findings from qualitative evaluations suggested a particular value for TOT participants in experiencing the course in an online space, as learners. For example, one person wrote, “I enjoyed learning experientially by going through the course and seeing how the technology is used.” As course instructors, we aimed to demonstrate the use of any pedagogies or technologies that we taught about so that participants could undergo an online form of experiential learning. Participants indicated in synchronous sessions and in evaluation responses that it was useful for them to understand how an online course looks and feels from the learner’s side; from this experience, they were able to glean strategies and ideas that they could use in their own courses. For example, in response to the question, “Which aspects of the program were most valuable to you?”, one participant wrote, “The modeling from the instructional team. Seeing them using all the ‘techniques’ and ‘approaches’ suggested, help me think if they were appropriate to my class and my learning objectives.” In a similar vein, another participant indicated that:

The opportunity to be a “student” in an online course was really valuable, giving me a chance to see it from the “other side.” The way the instructors structured the Canvas platform and communicated with us provided me with a really valuable model from which I feel I can pass forward to my own students.

This imagery of the “other side” of the teacher/learner relationship in TOT emerged repeatedly. One participant wrote, “Perhaps the most valuable aspect was to have experienced the asynchronous activities and challenges somewhat from a student’s perspective

albeit it was only for a short period of time.” Another cited the value of being guided through the learning process by somebody else, saying, “I also liked how [TOT instructors] sent overviews of our readings and discussion activities every day. It is nice to have somebody else (for a change) ensuring that you are doing the right work.”

Empathy and a transformed perspective emerged as valuable experiences for several faculty members who rarely have the opportunity to be in the role of learner rather than teacher:

I think through taking an online course, I identify some feelings students may have. For example, they may feel bad that they are not able to complete all the work. I learn to empathize with their feelings when they come to ask for extra time for assignment submission. Another thing I came to realize is it will take a lot more time for students to learn a new subject than someone who has many years in the field. All those are very valuable experiences for me.

Participants pointed out that in their unusual role as a “learner” in that educational relationship, clear communication throughout the program was vital. This emphasis could be due at least in part to the fact that modes of communication have, by necessity, shifted so drastically in the transition from in-person to online teaching. One participant articulated that the most valuable aspect of the program was “the organization of the course (from the announcements, communication, expectations), to the readings, to the ‘assignments,’ and synchronous sessions). Everything was valuable, particularly seeing how the instructors modelled effective communication with us.”

Taken together, participants in the TOT valued the experience of being a learner when they are so often accustomed to the role of facilitator, educator, and guide; moreover, they recognized that their experience as learners in this setting enabled an immersive

understanding of pedagogical techniques and technological components that may or may not work in their own teaching contexts.

4. Relational

It is not a new or radical proposition to suggest that adult learners benefit tremendously from their peers and learning community; in fact, scholars of adult education have long emphasized the importance of social relationships and extrinsic factors as a key motivator for adult learning (Collins 2004). What is unique about this finding, in the context of a rapid shift to online teaching among faculty members, is the extent to which they appeared to value the sense of solidarity and emotional support gained through interactions with peers. Evaluation data elucidated that faculty participants in the TOT placed a high value on the experience of connecting with a teaching community not only for the purpose of sharing ideas but also for the purpose of gaining comfort through reflecting upon shared challenges and fears. With the pandemic's isolating effects and the physical displacement of university community members, participants cited an array of positive impacts from the teaching community connections that were forged throughout the program. They referenced the value of peer learning in synchronous small-group discussions and asynchronous discussion boards, as well as the mutual sharing of teaching strategies.

One sub-theme that arose among participants was a sense that through discussion forums and synchronous sessions, they were able to brainstorm pedagogical ideas and share problems and solutions among peers. For example, one participant used the term "crowdsourcing" to describe this process: "Some of the readings were helpful, but what felt productive to me was the crowdsourcing of problems and solutions from fellow participants and from the facilitators." Another participant, echoing this sentiment, called it "collective wisdom": "Collective wisdom from the synchronous sections were most valuable to me." Other participants used pragmatic language, saying that they valued "the ability to connect with other faculty members and hear their ideas—I got concrete, valuable ideas."

The interdisciplinary nature of the synchronous learning space was identified as particularly enriching for some participants: “I got a couple of good ideas from some colleagues from different faculties. I think the break-out room discussions were the ones that I really learned the most from.” Participants identified that hearing from peers was not only valuable for the brainstorming and problem-solving potential, but also for the pragmatic examples that were offered up by several educators. One participant wrote, “The online discussion and break-out room discussion are so valuable to me, since I had the chance to hear concrete examples from others and think how those strategies can be applied to my own teaching.”

Another sub-theme that arose in this theme was a sense of interpersonal and communal connection, which seemed to highlight feelings of generosity and mutual support:

I truly appreciate the generosity of my colleagues who were eager to share their experiences in such great detail.

Even though it was only a week it was nice to see a support community forming amongst the educators present.

Beyond an appreciation of a generous community of fellow educators, one participant identified the specifically inter- and intra-personal exchanges that enabled their own learning. They wrote, “The activities were exceptional, as they allowed self-reflection and meta-cognition, and allowed us to think about what would work best in our own courses as we plan to teach the next two terms. Creating a platform for this intra-personal and interpersonal exchange depends a lot on the questions, and thanks for designing them so thoughtfully.”

It may be an understatement to say that the pandemic presented educators with challenging situations both professionally and personally. During several iterations of the TOT, faculty members tearfully shared stories about the stress they faced, and—among other things—the anxiety of learning a new technology or teaching strategy in the

midst of societal upheaval. It was not surprising, then, to see that the evaluation data were replete with comments about the impact of a nurturing environment and the sense of comfort gained through connection to others faced with similar challenges. For example, one participant responded that the most valuable component of the TOT was “realising that we’re all in this together and that we’ve got this :)”. Similarly, another wrote that the most valuable aspect was “to know that we are supported!” One participant wrote that they valued “meeting other folks and feeling less anxious as we are all sorting out our issues together.” There was an undeniable sense of comfort derived through shared learning and a visible sense of solidarity with other university educators who were facing similar struggles:

Our discussions were very valuable—knowing that you are not alone in trying to figure out this transition and finding that people are willing to generously share their own experiences (and failures) was very important to boost my own enthusiasm and interest in implementing some of these approaches in the future.

Implications

The findings from our TOT course illuminated several insights that we had anticipated, and several that surprised us. For example, as facilitators of the TOT, we expected evaluation data that elucidated the high value that participants place on technology-rich, task-oriented teaching and experiential, practice-based aspects of the intensive course. However, the prominence and recurrence of the theme of relational learning in the evaluation data has constituted an important insight for us as educators; it shone a light on a deeply human and interpersonal aspect of adult online learning that is often underplayed in comparison with the curricular and technical components of teaching people (like university faculty members) who are already experts in their own right. Education, as the late Brazilian philosopher-activist, Paulo Freire, espoused, should not

be an act of depositing information into a learner's head (what he termed "banking education"); instead, it ought to cultivate solidarity amongst people who are not the same but share in similar struggles (Freire 1972). In the context of supporting university educators to teach online, this means using technology, task-oriented activities, and experiential learning as interconnected strategies to cultivate a sense of community among learners. While the solidarity that Freire spoke of was imbricated in socioeconomic status and identity, he was clear that one of education's key purposes *writ large* is to bring people together across difference and enhance critical understandings of the unique contexts and struggles facing each learner.

The implications of such relational emphases can be far-reaching, if you consider that the task of online education is not just to teach the pedagogical and technical content, but to also cultivate a sense of community. "Knowing that you are not alone," as we shared in the findings, is what one TOT participant claimed as the most valuable aspect of the course. This phrase is a poignant reminder that faculty development for online teaching during the pandemic was not only about supporting efficient and effective online teaching, but also about the cultivation of whole adult learners who needed the comfort of relationships and community in a time when so many faced isolation and anxiety. The TOT was not the only support our faculty members had access to, and it was likely just one of many educational opportunities that faculty members took advantage of. Although it is tempting to say that evaluation data collected during a pandemic was reflective only of that moment in time during which university educators faced unprecedented stressors and drastic shifts in their teaching identity, to do so would discredit the valuable teachings that this era has bestowed on us. Even if we, as university educators, never again face a universal, societal transition as disorienting and rapid as COVID-19, it remains true in our educational context that faculty members are still adult learners who, as they navigate changing personal and global contexts, want to know that they are not alone in their struggles and successes. The lesson to take forward, and indeed the key recommendation

that our work has elucidated, is for online educators to consider relationships, community, and solidarity as vital factors in engaging online teaching practice. This relational learning, in tandem with technology-rich, task-oriented, and experiential pedagogies, offers a holistic approach to teaching faculty members as adult learners.

References

- Alpert, William T., Kenneth A. Couch, and Oskar R. Harmon. 2016. "A Randomized Assessment of Online Learning." *The American Economic Review* 106 (5): 378–82. <https://doi.org/10.1257/aer.p20161057>.
- Bates, Tony. 2020. "Online Enrolments after COVID-19: Some Predictions for Canada." *University Affairs*, May 11, 2020. <https://www.universityaffairs.ca/opinion/in-my-opinion/online-enrolments-after-covid-19-some-predictions-for-canada/>.
- Bond, Melissa, Svenja Bedenlier, Victoria I. Marin, and Marion Handel. 2021. "Emergency Remote Teaching in Higher Education: Mapping the First Global Online Semester." *International Journal of Educational Technology in Higher Education*. 18 (50). <https://doi.org/10.1186/s41239-021-00282-x>.
- Bozkurt, Aras, Insung Jung, Junhong Xiao, Viviane Vladimirschi, Robert Schuwer, Gennady Egorov, Sarah R. Lambert, et al. 2020. "A Global Outlook to the Interruption of Education Due to COVID-19 Pandemic: Navigating in a Time of Uncertainty and Crisis." *Asian Journal of Distance Education* 15 (1): 1–126. <https://doi.org/10.5281/zenodo.3878572>.
- Burnard, Philip. 2006. "A Pragmatic Approach to Qualitative Data Analysis." In *Research for Evidence-Based Practice in Healthcare*, edited by Robert Newell and Pphilip Burnard, 97–107. Oxford: Blackwell Publishing.
- Canadian Association of University Teachers. 2020. "What Impact Is the Pandemic Having on Post-Secondary Teachers and Staff?" Accessed November 15, 2022. https://www.caut.ca/sites/default/files/covid_release-impacts_of_pandemic-en-final-08-19-20.pdf.

- CBC. 2020. "University Professors Feeling Overwhelmed by Move to Online Teaching" *CBC News*, November 12, 2020. <https://www.cbc.ca/news/canada/new-brunswick/professors-overwhelmed-by-pandemic-1.5799343>.
- Collins, Jannette. 2004. "Education Techniques for Lifelong Learning: Principles of Adult Learning." *RadioGraphics* 24 (5): 1483–89. <https://doi.org/10.1148/rg.245045020>.
- Cutri, Ramona Maile, and Juanjo Mena. 2020. "A Critical Reconceptualization of Faculty Readiness for Online Teaching." *Distance Education* 41 (3): 361–80. <https://doi.org/10.1080/01587919.2020.1763167>.
- Figlio, David N., Mark Rush, and Lu Yin. 2013. "Is It Live or Is It Internet? Experimental Estimates of the Effects of Online Instruction on Student Learning." *Journal of Labor Economics* 31 (4): 763–84. <https://doi.org/10.1086/669930>.
- Finkelstein, Jonathan. 2006. *Learning in Real Time: Synchronous Teaching and Learning Online*. San Francisco: Jossey-Bass.
- Freire, Paulo. 1972. *Pedagogy of the Oppressed*. New York: Herder and Herder.
- Glazier, Rebecca A. 2021. *Connecting in the Online Classroom: Building Rapport between Teachers and Students*. Baltimore: Johns Hopkins University Press.
- Hodges, Charles B., Stephanie L. Moore, Barbara B. Lockee, Torrey Trust, and Mark Aaron Bond. 2020. "The Difference Between Emergency Remote Teaching and Online Learning." *EDUCAUSE Review*, March 27, 2020. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>.
- Hughes, Joan E., Sa Liu, and Mihyun Lim. 2016. "Technological Modeling: Faculty Use of Technologies in Preservice Teacher Education from 2004 to 2012." *Contemporary Issues in Technology and Teacher Education* 16 (2): 184–207. <https://citejournal.org/volume-16/issue-2-16/current-practice/technological-modeling-faculty-use-of-technologies-in-preservice-teacher-education-from-2004-to-2012/>.

- Johnson, Nicole, George Veletsianos, and Jeff Seaman. 2020. "U.S. Faculty and Administrators' Experiences and Approaches in the Early Weeks of the COVID-19 Pandemic." *Online Learning* 24 (2): 6. <http://dx.doi.org/10.24059/olj.v24i2.2285>.
- Koehler, Matthew J., and Punya Mishra. 2005. "What Happens when Teachers Design Educational Technology? The Development of Technological Pedagogical Content Knowledge." *Journal of Educational Computing Research* 32 (2): 131–52. <https://doi.org/10.2190/0EW7-01WB-BKHL-QDYV>.
- Kolb, David A. 1984. *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice-Hall.
- Krieg, John M., and Steven E. Henson. 2016. "The Educational Impact of Online Learning: How Do University Students Perform in Subsequent Courses?" *Education Finance and Policy* 11 (4): 426–88. https://doi.org/10.1162/EDFP_a_00196.
- Means, Barbara, Yukie Toyama, Robert Murphy, Marianne Bakia, and Karla Jones. 2009. "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies." ERIC Document ED505824.
- Nguyen, Tri. 2015. "The Effectiveness of Online Learning: Beyond No Significant Difference and Future Horizons." *MERLOT Journal of Online Learning and Teaching* 11 (2): 309–19.
- Pope, Catherine, Sue Ziebland, and Nicholas Mays. 1999. "Analysing Qualitative Data." In *Qualitative Research in Health Care*, edited by Catherine Pope and Nicholas Mays, 2nd ed., 75–88. London: BMJ Books.
- Schlesselman, Lauren S. 2020. "Perspective from a Teaching and Learning Center during Emergency Remote Teaching." *American Journal of Pharmaceutical Education* 84 (8): 1042–44. <https://doi.org/10.5688/ajpe8142>.
- Vaughan, Norman D., Martha Cleveland-Innes, and D. Randy Garrison. 2013. *Teaching in Blended Learning Environments: Creating and Sustaining Communities of Inquiry*. Edmonton, AB: AU Press.

Xu, Di, and Shanna S. Jaggars. 2014. "Performance Gaps between Online and Face-to-Face Courses: Differences Across Types of Students and Academic Subject Areas." *The Journal of Higher Education* 85 (5): 633–59.

CHAPTER 10

“Thrust into the Fire”

Supporting Faculty Development,
While Building a Teaching and Learning Centre,
Amidst a Global Pandemic

**Sarah Driessens, Kyle Charron,
Denyse Lafrance Horning, and Patrick T. Maher**
Nipissing University, Canada

The COVID-19 pandemic represented an unprecedented time for most faculty members, many of whom had never experienced teaching online before. For example, a BC Campus survey found that 63% of faculty members in the province of British Columbia, Canada, had never taught online prior to the pandemic (Caldwell 2020). Faculty members and course instructors at Nipissing University had similar experiences, and anecdotal evidence suggests that even the most experienced professors reported feeling like novices while navigating unfamiliar systems such as Blackboard Learn, Zoom, and Microsoft 365. In that same BC Campus survey, 57% of faculty members indicated that access to instructional and learning design support, including educational technology support, would be beneficial in a post-pandemic recovery plan (Caldwell 2020).

Enabling instructional and learning design support, both pre- and post-pandemic, depends on a high level of institutional investment in centers for teaching and learning, a distinguishing feature of most large postsecondary institutions. For example, the University of Toronto has over twenty-five staff members working in its Centre for Teaching Support and Innovation; the University of British Columbia offers specialized support in curriculum and

course services, teaching and learning professional development, teaching and learning technologies, and Indigenous initiatives; and the University of Waterloo's Centre for Teaching Excellence fosters innovation by employing over thirty-five highly qualified staff members.

It is evident that institutions who have the financial capital and staffing complement to invest in teaching and learning likely experienced fewer pressure points as we pivoted online at the beginning of the pandemic. This is not to suggest that these larger institutions were immune to these pressure points, but rather to recognize that pre-pandemic institutional investment perhaps mitigated the messiness incurred by the pivot. At Nipissing University, a smaller post-secondary institution in the early stages of re-establishing a centre for teaching and learning, how we responded to the COVID-19 pandemic to prepare educators for a rapid transition to online learning was somewhat limited, and we often wondered what the impact of this was for faculty members and course instructors. As such, our reflection is grounded in the question: How did a smaller postsecondary institution, which was in the very early stages of launching a formal teaching and learning centre, fare in supporting faculty adjustments to online learning? Put differently, when your staffing complement is small and you are just starting to build capacity as a centre for teaching and learning, how do you avoid burning up (or out) immediately when thrust into the fire?

In this chapter, we share with you the journey of an emerging centre for teaching and learning, known as the Teaching Hub, at Nipissing University (NU) in North Bay, Ontario, Canada. The centre opened its doors only six weeks before Ontario went into a province-wide lockdown due to pandemic health measures to curb the spread of COVID-19. The Teaching Hub offers a unique perspective because it began with just two staff members pre-pandemic, underwent significant restructuring and redeployment during the pandemic, and will be a critical factor in the university's post-pandemic recovery plan. Through autoethnographic narrative accounts, we map our journey through a triologue of experiences

(Richardson, Parr, and Campbell 2008) representing three levels of institutional support: Kyle, a learning systems technologist responsible for rapidly transitioning all faculty members online at the beginning of the pandemic; Denyse, a full-time faculty member who, prior to the COVID-19 pandemic, had never taught online; and a combined reflection from the Teaching Hub administration (TH Admin) comprised of Sarah, the manager of eLearning, and Pat, the dean of teaching. Our triologue highlights the collaborative capacity of a small, regional, postsecondary institution; the lived experiences of an emerging centre for teaching and learning; and the promise of connection as an opportunity for responsiveness and growth. We conclude our chapter with reflective questions to ponder, as well as recommendations for those supporting faculty members and course instructors interested in adopting or adapting some of our practices and strategies.

To start our critical reflection and triologue, each of us considered the following questions:

1. What were some of the challenges you faced supporting open, equitable, inclusive, and accessible online learning during the pandemic?
2. What were some of the promises of supporting open, equitable, inclusive, and accessible online learning during the pandemic?
3. How did you humanize online learning?
4. What were the significant lessons learned?

As we reflected on the above questions, three themes emerged that enabled our success: capacity or skill building, shifting mindsets, and leveraging relationships. Each one of these themes help to frame this chapter as we contextualize the growth of the Teaching Hub. Woven throughout our collective narrative are points of convergence, including experiences and perspectives, at three levels of institutional organization: academic staff support, faculty member, and administrative leadership. By weaving these narratives together, it is our hope to demonstrate the complex, intricate, and interrelated layers of institutional support that enabled our success.

Context

In 2012, Nipissing University (NU) dismantled its Centre for Flexible Teaching and Learning (CFTL), including most instructional design support. Over the resulting time frame (approximately seven years), NU's learning systems technologists (LSTs), who supported course management and users on Blackboard Learn (our institutional learning management system) and instructor training, balanced this against instructional design tasks. Here's the thing, though—folks can only stretch and bend so far before they break. Is that to suggest that the LSTs broke? Absolutely not! However, when we think about the work that was being asked of this team in 2012–2019, it is evident that there was a greater need for investment in re-building capacity to support teaching and learning.

As a result of a visionary provost and some external funding, the Teaching Hub, and its need for a decanal posting, took shape in 2017–2018. In October 2019, the inaugural dean of teaching started. This position emerged due to a merging of faculties, alongside the physical infrastructure being built for the Teaching Hub. On February 6th, 2020, the Teaching Hub, which consisted of the dean of teaching and an administrative assistant, opened its (physical) doors to the NU community. A little over a month later, NU announced that they would be canceling all face-to-face classes due to the pandemic, shifting the remainder of the semester online. This decision gave faculty and instructors teaching face-to-face classes, and the LSTs supporting them, less than one week to pivot online.

The pandemic catalyzed a rapid and deeper investment in teaching and learning at NU. The decision was made to expand the capacity of the Teaching Hub further, and the five LSTs joined the Teaching Hub team for emergency redeployment almost immediately. At the time, LSTs supported approximately 400 faculty members (full- and part-time) across a variety of faculties and disciplines. To put that into perspective, when the pandemic hit, there was a 1:80 ratio of LST support per faculty member and a 1:200 ratio of LST support per course, with approximately 20,000 Blackboard users. Talk about heavy lifting! These five staff members truly

were the “instructional superheroes” (Eaton 2020, para. 1) of the university, due, in large part, to their Herculean efforts during the pandemic.

A few months into the pandemic, the immediate consolidation of the LSTs under the dean of teaching became permanent (before the pandemic, they had been supervised in a decentralized fashion at the faculty level), and a manager of eLearning was hired with the LSTs then reporting to them. This shift represented a coalescing of areas from across the university where a once siloed system was starting to break down institutional walls. The challenge, however, was learning how to do this virtually, while struggling to keep our heads above water. We were all balancing our personal and professional lives, and the lines of the personal and professional blurred the deeper we ventured into the pandemic. We were working from home (or perhaps living at work) with children and pets and partners all around. We mourned the loss of classes, connections, colleagues, and so much more. Yet we persevered, finding new ways of building the Teaching Hub community, including our capacity to serve and support NU.

The shift to online learning also impacted Nipissing University’s students. The rapid transition in the middle of the semester was undoubtedly disruptive. For example, the Maclean’s magazine annual student survey revealed that 69% of Canadian postsecondary students felt lonely, 77% anxious, 63% worried about their own health, and 79% worried about the health of their loved ones (Kong 2022). From navigating Blackboard to learning online and experiencing increased levels of fear and anxiety, to feeling disconnected from class and the campus community, the new and emerging needs of students during the pandemic were great. Knowing the student experience was crucial, the Teaching Hub took action. Drawing inspiration from various students-as-partners models (see Bovill 2017; Healey, Flint, and Harrington 2014; Matthews 2017), the Teaching Hub created a new student position called the online learning partner (OLP). OLPs are upper-year NU students who provide peer-to-peer support related to online learning (e.g., answer

questions about Blackboard or educational technology tools, host workshops, participate in NU community events). At the beginning of the fall 2020 semester, the Teaching Hub hired four student OLPs, and later extended their contracts into the winter semester. This program continued to grow and expand, so that in summer 2021, we hired five new OLPs to work until April 2022, and six more were hired for the 2022–2023 academic year.

As the dust started to settle during the “great onlining of 2020” (Siemens, as cited in Noffs 2020), the Teaching Hub had to be intentional in further developing our capacity to fill what we viewed as significant institutional and pedagogical gaps. As a team, we decided to take up the funding call presented by the Ontario government’s Virtual Learning Strategy (VLS), “an historic investment by the Ontario Ministry of Colleges and Universities (MCU) to drive growth and advancement in virtual learning across the province’s post-secondary institutions” (eCampus Ontario, n.d., para. 3) through eCampus Ontario (<https://www.ecampusontario.ca/>), a non-profit consortium of Ontario’s publicly funded colleges, universities, and Indigenous institutes. Our efforts were successful, and we used these funds to hire for two new positions in April 2021 and August 2021, respectively: a senior instructional designer and a media, design, and development specialist. The latest team of OLPs (those who ended in January 2023) were also supported with VLS funding.

When NU made the decision to have most classes remain online for the 2021–2022 academic year, the Teaching Hub expanded once more, and two Teaching Hub technologists were hired in August 2021 and October 2021, respectively, again funded externally using the tremendous VLS success we achieved in spring 2021. These folks have supported faculty teaching on-site by providing hands-on technology help within the physical space of the Teaching Hub, developed new website content to capture the growth of the Teaching Hub, and worked alongside the five LSTs who continue to support faculty members deliver quality online instruction.

Findings

Theme 1: Building Skills and Capacity

Early in February of 2020, the media began to fill with stories of a coronavirus spreading around parts of Asia and Europe that caused respiratory illness, later referred to as COVID-19. Concern of a pandemic started circulating through the media and seemed to be an issue of concern by both the provincial and federal governments in Canada. Kyle remembers talking to a close friend and coworker in the early days of the pandemic and thinking “they’re going to need to have a plan to move [classes] online.” Feelings of persistent uncertainty, and the many stresses that accompany the unknown, left us all feeling uneasy as we wondered how to best support and prepare educators to rapidly transition online, as well as modify their course delivery to include multiple modalities and formats.

Kyle: Our faculty are certainly not technology averse, but most of our classes occurred in a traditional classroom space, meaning technology is deployed to support that mode of delivery. Most educational technology was used to support this classroom space as a file management system or “drop box” location for assignment file submissions. This showed many potential pressure points in the content assessment and communication pillars of course delivery, if classrooms were to transition to the virtual. We were assured that things would progress as normal. They did not. In March 2020, the VP Academic asked us what would it take to move all our courses online? The planning process for the mass exodus to virtual classrooms had begun. When someone wanted to do an online course before the pandemic, the instructor would often share their course design, and we would help reshape and repackage their existing content into an online-friendly format and then curate their tools and assessments to match their lessons. Now, because of the pandemic, the faculty have found themselves

dropped into the virtual classroom out of necessity and not knowing how to navigate all terrains found in this space.

Denyse: I was overwhelmed by the many available options and skeptical of the promised support, always hoping that a return to campus would void the need for these new approaches. But with time, and many trials and errors, platforms and tools for teaching online became less intimidating and more useful with the support of the newly launched Teaching Hub.

TH Admin: Pre-pandemic, pieces of the Teaching Hub were in the formulation and incubation stage in March 2020, but the pandemic put us into overdrive. As a new centre for teaching and learning, we grew up very quickly. Sometimes that means we don't have all our processes together, which has created tension and uncertainty during an already stressful time.

As we pivoted online, we knew a one-size-fits-all approach wouldn't work. We had to consider the nuanced needs of each faculty member and what would best support and prepare them during the pandemic, and beyond. Through in-person and online workshops, and one-on-one virtual meetings, Kyle and the other technologists guided instructors to effectively use a variety of teaching practices, multiple modalities and formats, and alternative assessment strategies.

Kyle: Instructors couldn't just upload a slide deck for their weekly content, but rather were coached how to transform their content into short videos. Text-based lessons had to have clear segments and a visual design that aided accessibility software which supplies text-based information in multiple formats such as braille-compatible (BRF Electronic braille) markup and mp3 audio recordings of the text for those with visual needs. We had to train faculty members how to use the various communication tools available in

online learning. This ranged from asynchronous tools, such as discussion boards, to live in-person video conferencing options such as Blackboard Collaborate, Zoom, and Microsoft Teams. When it came to assessments, we had to support faculty to develop their comfort level with receiving and grading assignments electronically. To achieve this, we held multiple workshops and one-on-one chats about how to use the online grade book, the in-line grading tool to mark assignments, and the retention centre software to get early warnings about struggling students or students who were achieving excellence. For our professional, math, and science folks, we also needed to implement online proctoring options for exam invigilation, which ended up being one of the most challenging aspects of transitioning to an online space. It was a balancing act between exam integrity and student privacy. One-on-one training was also offered, and a system of drop-in office hours for faculty was implemented. This allowed some faculty, who were self-explorers, to navigate the virtual classroom space but have a network of resources with which to check in. In addition to these support options, LSTs would regularly check in with faculty members to ensure that their classes were going as well as possible, listen to their concerns, and aide or guide as needed.

TH Admin: We assisted folks where they were by focusing on primer workshops for new online instructors, but also allowing for continued professional development of more seasoned professionals.

Through collaboration, connection, compassion, and a humanized or human-centred approach to support, the impact of our collective approach was tangible. For example, Denyse, who was a self-proclaimed novice to online teaching, affirmed that “the countless hours devoted to technical training of online platforms and

tools was originally very overwhelming and frustrating. But now, I expect to maintain many of these tools regardless of future course delivery methods."

Theme 2: Shifting Mindsets

As the pandemic persisted, embracing new learning approaches was critical, regardless of how un/comfortable instructors felt. Because learning is uncomfortable; it pushes up against old ways of doing, but we all had to lean into our own discomfort.

Kyle: We were able to facilitate the transfer of both technical and instructional knowledge. Since we were "leading by example," the faculty were able to see the merits of offering smaller digestible chunks of knowledge, as well as the merits of checking in often and providing reliable and consistent office hours. These three things, when used in tandem, are the foundations of not just building a course, but sustaining a course and the community around it. Building and sustaining community positively contributes to students' sense of belonging, including their "social connectedness, support, and respect . . . [which] lead to improved outcomes including academics, happiness, relationships with peers and teachers, motivation, engagement, and self-efficacy" (Borkoski 2019, para. 3). The community-oriented approach also allows the instructor to have a clear understanding of where their students are within the boundaries of their course requirements, and it gives the faculty member the opportunity to adjust content and assessments as needed. Through these supports, and our ability to remain flexible, adapt to continually changing circumstances, and adopt the role of travel guide, we supported faculty members to become their own guide, rather than an agent, in their new virtual classroom. By shifting the roles from travel agents to travel

guides allowed us to support faculty by presenting best practices through modeling.

Denyse:

As a faculty member who had never delivered an online course, there have been significant challenges through every stage of this pandemic. These include technical and connectivity issues, scheduling and time zone conflicts, student and instructor disengagement, diluted collegiality, cancelation of events, and ongoing proctoring, academic integrity, and quality of education debates. I spent the spring and summer of 2020 committed to mastering the tools for exceptional virtual teaching. If needed, I was determined to be ready. When the fall semester began, my courses included optional weekly synchronous sessions (with available recordings), office hours, interactive tools (such as breakout rooms, polls, whiteboards, etc.), guest speakers, email and video announcements, and student discussion groups. I made myself available and accessible to students and apologized profusely for not being able to deliver a true campus experience. I missed the connections to my students. In virtual settings where attendance, participation, and camera use are optional, this connection to students is compromised, and performance and engagement issues can remain undetected. I felt like I was working 24-7. As the pandemic progressed, I adopted a more open mindset and accepted that not all approaches would be successful, and that some failure could actually be constructive. I approached my live virtual sessions in a less formal and scripted manner, and encouraged students to join me in testing and learning these new approaches. Many online tools, such as chat functions, virtual hand raising, voting, annotating, and polling, facilitated class discussions and encouraged new forms of participation. Breakout

rooms were also used to encourage and facilitate small-group exchanges, foster student networking and peer support, and offer a more accessible and flexible medium for student involvement. The various features of online learning platforms also allowed for efficient submission of assignments, feedback to students, and monitoring of engagement and performance. When we first transitioned online, the focus was simply to “get through.” At the midway point, I collected anonymous student feedback. Not only did I share results back with students, but I utilized their feedback to modify the course, thus reinforcing a willingness to adapt and remain flexible. What I learned was that, while status quo is comfortable and requires little effort, we must embrace new learning and approaches, even, and perhaps especially, if it pushes us beyond our comfort zones.

Leading by example, using a community-oriented approach, created the conditions where faculty members felt supported exploring new online tools and shifting their mindsets to embrace the opportunities of online learning. This approach allowed our team to reframe presumptions that online learning is of lesser quality compared to in-person learning. Moreover, compassionate strategies, such as pedagogies of kindness (Denial 2019; Rawle 2021) and care (Bali 2021; Noddings 1984; Stommel, n.d.) that suggest transparency, connection, and self-compassion for ourselves including in our personal and professional boundaries and limitations (Neff 2021), grounded our approaches to faculty support and development, as well as how we interacted within our team, department, and institution more widely.

Theme 3: Leveraging Relationships

As detailed earlier, the Teaching Hub went from two staff members pre-pandemic to twelve, plus five student partners, in less than two years. The centre had just opened as the pandemic began, which meant we had no programming and really no staff either. We

wondered how we could prepare educators to adopt sustainable pedagogical practices with limited internal resources.

TH Admin: We couldn't do much ourselves, but given our previous roles and relationships, we had connections, networks, and knowledge of opportunities. Really it was other institutions that saved us at the start—we capitalized on already existing opportunities such as free, online workshops offered by larger universities and the Ontario Extend program, which is a micro-credentialed professional learning program focusing on technology-enabled and online learning experiences, developed by eCampus Ontario, a non-profit consortium of Ontario's publicly funded colleges, universities, and Indigenous institutes. We committed to collaborating with various departments, accepted redeployments to keep folks working, and worked tirelessly to give instructors and students what was needed to continue teaching and learning. We survived and thrived because we played nice, prioritized relationships, and offered a helping hand as soon as we were able. But before then we found willing, kind partners who could assist us, and were willing to. We needed to hire good, strong people to build capacity—folks who prioritized relationships, understood the importance of meeting people where they are, and would lead with open hearts and open minds. We knew if we could find those people, the rest would (and did) just happen.

Relationship building was critical to the success of the Teaching Hub. The path forward through the pandemic was grounded in caring, authentic relationships; leaning into the discomfort of not knowing; staying curious about how to best support each other; and remaining flexible by changing course as needed. In this way, leadership during a global pandemic required a lot of the same pieces

as good online teaching: care, flexibility, responsiveness, humility, and humanity.

Denyse: Instructors are not super-human and should not hold themselves (or be held) to such unrealistic standards. Faculty struggled through the pandemic alongside students and, as such, also required flexibility and compassion. The pandemic taught me that everyone is more than an instructor or a learner. They have lives and responsibilities beyond courses. We have to appreciate that many folks are struggling with overwhelming demands, and that flexibility and compassion can make an important difference. Students know who cares. Show them you care. For example, screen time can feel longer than real time, so plan for more breaks and a variety of value-added presentation tools (e.g., slides, videos, polls, breakout sessions, etc.). Make students aware of university programs such as mental health and academic supports. To demonstrate care, I always used my camera and shared university images to bridge the virtual distance between students and campus. I allowed more time for casual exchanges and integrated topics that would encourage student sharing. I referred to students by their names (having names on screen was helpful) and encouraged them to do the same (with myself and their peers).

Online teaching also increased access to a variety of learners and learning opportunities, uncovering ways to integrate equity, openness, and innovation. For example, pre-pandemic, Denyse mentioned a limited pool of guest speakers, primarily consisting of local connections who could visit campus.

Denyse: The transition to online course delivery removed geographical barriers and effectively extended access to stakeholders across the globe. Online offerings also integrated students from diverse programs who traditionally have been separated into different

course sections. This more inclusive mix of students allowed for broader perspectives from varied age cohorts, geographic locations, professional levels, and disciplines.

The pandemic also revealed multiple uncontrollable factors that can (and did) unexpectedly disrupt our lives.

TH Admin: We had an opportunity to set the norms of the Teaching Hub—what folks could expect, how we could support them, and what resources were available. Part of what kept us going as a centre for teaching and learning, and a newly formed team working online, was the sense of camaraderie and knowing we were all in it together. We also had a willingness to try, and adapt, and shift as needed, to meet the needs and demands of our instructors.

Denyse: As my understanding and appreciation for online methods and possibilities expanded, I more willingly tried new approaches to deliver learning outcomes. For example, my preparation for online synchronous sessions was less about flawless content delivery and more about exploring engagement tools and anticipating technical issues. With the support of the newly launched Teaching Hub, a valuable resource who assisted faculty throughout the pandemic, my perspectives on what is possible both online and in face-to-face classes has shifted. As I plan for future courses, I no longer think in terms of a rigid divide between online and in-person learning. Instead, I have adopted a more holistic approach to teaching and learning with consideration and appreciation for the multitude of virtual and face-to-face tools that can be used to best support positive learning experiences.

The stories recounted above demonstrate our institutional commitment to championing the value of teaching and learning. Utilizing everything from external resources like Blackboard

Academy, to the relationships established among the Northern Ontario group of universities (e.g., Nipissing University, Lakehead University, Laurentian University, Algoma University) which launched an online conference called the Borealis Summer Institute for Teaching and Learning, coupled by a supportive senior administration courageous enough to trust their team, made it all work.

TH Admin: We were intentional about what areas needed greater, and more rapid, supports; we brought the right team together at the right time; we always supported the team; we understood the need to remain flexible and compassionate during hard times; we saw the merits of humanized, equitable education; and the trust and influence earned throughout our careers allowed us to draw on connections to support our faculty as we continued to build capacity. Our existence just prior to the pandemic was a godsend to NU.

Institutionally, the Teaching Hub has demonstrated deep value to the university, from the learning systems technologists who supported faculty transition online, to our group of student partners who offered peer support, to the courageous administrative leadership who championed the team all the way through.

Implications

As we shifted into our post-pandemic recovery plan and reflected back on the last three years of the Teaching Hub, it was clear that pedagogical practices and instructional skills would have the greatest impact for learners, regardless of technical skills that had to be transferred. As a team, we met faculty members and instructors where they were through an empathic and community-building approach. In some cases, building capacity took place in small workshops, some of which were led by a technologist, and some of which were discussions between faculty peers, facilitated by a technologist. Our focus was to help faculty adapt and modify their courses for online delivery, rather than merely replicate the course online. Our approach helped to combat faculty members' belief

that, as Denyse noted, “the pivot should result in force fitting face-to-face teaching approaches into a virtual model.”

The Teaching Hub started off small, but grew exponentially in its capacity to prepare and support educators for continuous change, sometimes quite rapidly and unexpectedly, throughout the pandemic. The staff working in the Teaching Hub have rescued distressed faculty members, have lifted instructors up to achieve the impossible, have developed faculty and staff members’ capacity through ongoing coaching and workshops, and have kept faculty teaching—which kept students learning, and Nipissing University open.

As a cherry on top, the Teaching Hub’s strength in building up student success and teaching and learning was also awarded a Blackboard/Anthology Catalyst Award for 2021 and 2023—further recognition that we have arrived on the global stage, despite less than three years of existence. To bring this chapter full circle, how did the Teaching Hub avoid burning up (and out) when thrust into the fire? We adapted, leaned in, remained flexible, shifted perspectives, prioritized relationships, and adjusted our sails as necessary, which has set the stage that will allow the NU Teaching Hub to thrive for years to come.

Recommendations

To conclude this chapter, we wanted to offer reflective questions and practical strategies that you can adopt or adapt when working with faculty and course instructors. Take time to think deeply about the following suggestions and questions as they relate to your practice and profession:

1. Prioritize skill development and skill transfer by scaffolding your approach to build faculty and course instructors’ confidence levels. Ask yourself, *who is the learner in front of me and what are they trying to achieve? What are the small steps they can take to achieve their goals?*
2. Create multiple entry points for faculty members and course instructors so that you meet them where they are.

Ask yourself, *what support am I providing faculty and course instructors to achieve their goals? What is one new opportunity that I can explore to meet a need for faculty or instructors, programs, or departments?*

3. Remain open, responsive, and flexible so that you can modify your approach to meet diverse needs. Ask yourself, *how can I remain curious about rapidly changing needs for support? What questions might I pose when confronting new information or challenges? How can I build in opportunities for personal and critical reflection?*
4. Prioritize connection, relationships, and relationship-building by fostering a sense of belonging. Ask yourself, *how am I building connection and relationships with faculty members? Am I prioritizing connection over content? Am I using the resources at my disposal?*
5. Foster a growth mindset by practicing modeling and non-judgment. Ask yourself, *what does my language or body language signal to instructors? How can I foster a sense of trust and non-judgmental practices to encourage faculty members and course instructors to lean into risk-taking?*

So where does this all end? In a nice, neat braid, where a shared telling of three individual threads that represent three levels of institutional organization—academic support staff, faculty, and academic leadership—have come together to create one much stronger strand. The individuals sharing the narratives described in this chapter have done what was necessary for them to survive within Nipissing University's context. However, it's more than that, and the implications of what we achieved should not be trivialized. For example, faculty members and course instructors who had never taught online have gained the skills and confidence to continue using online learning tools and teaching practices both in-person and online. Perhaps more important than skill development are the ways in which we were able to shift the mindsets of many (not all!) course instructors and faculty members to not simply accept online teaching as a temporary response to the COVID-19 pandemic, but

rather view it alongside in-person teaching as a valuable modality in and of itself. Finally, to value the significance of relationships and relationship-building, even where face-to-face connection is limited, is to prioritize connection and humanity.

Note: Sadly, this chapter is already describing a bygone era. Some restructuring has recently occurred at Nipissing University and there are no longer manager of eLearning or dean of teaching positions. Sarah has left the institution completely, and Pat has now reverted to his faculty role as a full professor in the School of Physical and Health Education. Kyle is no longer a learning systems technologist (although those positions still exist with the restructure) and now works as an analyst in the Office of Institutional Planning and Research.

References

- Bali, Maha. 2021. "Pedagogy of Care – Caring for Teachers." *Reflecting Allowed*, April 10, 2021. <https://blog.mahabali.me/pedagogy/critical-pedagogy/pedagogy-of-care-caring-for-teachers/>.
- Borkoski, Carey. 2019. "Cultivating Belonging." *American Consortium for Equity in Education* (November/December). <https://ace-ed.org/cultivating-belonging/>.
- Bovill, Catherine. 2017. "A Framework to Explore Roles Within Student-Staff Partnerships in Higher Education: Which Students are Partners, When, and in What Ways?" *International Journal for Students as Partners* 1 (1) : 1-5. <https://doi.org/10.15173/ijasp.v1i1.3062>.
- Caldwell, J. 2020. "The Faculty Experience During a Pandemic: Survey Results." *BC Campus*, August 24, 2020. <https://bccampus.ca/2020/08/24/the-faculty-experience-during-a-pandemic-survey-results/>.
- Denial, Catherine. 2019. "A Pedagogy of Kindness." *Hybrid Pedagogy*, August 15, 2019. <https://hybridpedagogy.org/pedagogy-of-kindness/>.
- Eaton, Sarah Elaine. 2020. "Teaching and Learning Centres are the Academic Heroes of COVID-19." *University Affairs*, June 26,

2020. <https://www.universityaffairs.ca/opinion/in-my-opinion/teaching-and-learning-centres-are-the-academic-heroes-of-covid-19/>.
- eCampus Ontario. n.d. "Virtual Learning Strategy." Accessed July 6, 2023. <https://vls.ecampusontario.ca/>.
- Healey, Mick, Abbi Flint, and Kathy Harrington. 2014. *Engagement Through Partnership: Students as Partners in Learning and Teaching in Higher Education*. York, UK: HE Academy.
- Kong, Stacey Lee. 2022. "Did the Pandemic Make Post-Secondary Students More Resilient?" *Maclean's Education*, November 15, 2022. <https://education.macleans.ca/feature/did-the-pandemic-make-post-secondary-students-more-resilient/>.
- Matthews, Kelly E. 2017. "Five Propositions for Genuine Students as Partners Practice." *International Journal for Students as Partners* 1 (2): 1-9. <https://doi.org/10.15173/ij sap.v1i2.3315>.
- Neff, Kristin. 2021. *Fierce Self-Compassion: How Women Can Harness Kindness to Speak Up, Claim Their Power, and Thrive*. United Kingdom: Harper Collins.
- Noddings, Nell. 1984. *Caring: A Feminine Approach to Ethics and Moral Education*. Berkeley, CA: University of California Press.
- Noffs, Davis. 2020. "The Great Onlining of 2020: How Adult Education Theory Can Inform Optimal Online Learning." *Learning Environment Designer*, June 16, 2020. <https://david-noffs.com/2020/06/16/the-great-onlining-of-2020-how-adult-education-theory-can-inform-optimal-online-learning/>.
- Rawle, Fiona. 2021. "A Pedagogy of Kindness: The Cornerstone for Student Learning and Wellness." *Times Higher Education*, August 20, 2021. <https://www.timeshighereducation.com/campus/pedagogy-kindness-cornerstone-student-learning-and-wellness>.
- Richardson, Carole, Michelann Parr, and Terry Campbell. 2008. "Solitary Dissonance and Collaborative Consonance: Trialogue as a Reflective Practice that Resonates." *Reflective Practice* 9 (3): 281-91. <https://doi.org/10.1080/14623940802207147>.

Stommel, Jesse. n.d. “Designing for Care.” *Hybrid Pedagogy*.
[https://www.beautiful.ai/player/-Mj6CyTtXEknSRrgv0f1/
Designing-for-Care-Spokane](https://www.beautiful.ai/player/-Mj6CyTtXEknSRrgv0f1/Designing-for-Care-Spokane).

CHAPTER 11

What We Do Today Will Change What Happens Tomorrow

Learnings from University Teaching
during COVID-19 for Post-Pandemic Times

**Joerdis Weilandt, Richelle Marynowski,
Rumi Graham, Lorraine Beaudin, Sandra Dixon,
Stavroula Malla, and Angeliki Pantazi**
University of Lethbridge, Canada

As at most higher education institutions worldwide, the declaration of the COVID-19 pandemic (World Health Organization 2020) triggered a sudden migration of all face-to-face teaching to online environments at our university. This shift profoundly impacted our campus community and continues to influence our instructors' educational approaches today. All members of our research team are academic staff at the University of Lethbridge, Alberta, Canada. Established in 1967 on traditional Blackfoot land as a public institution, the university today is a research-intensive institution offering undergraduate, master's, and doctoral programs in a wide range of academic and professional fields to about 8,000 students (University of Lethbridge 2022).

Pre-pandemic, our institution offered primarily in-person instruction, with distance learning available in only a few faculties and departments. We thus had limited expertise and infrastructure dedicated to guide and support instructors and students in the sudden transition to online teaching (Weilandt et al. 2019). With this in mind and guided by a pedagogical transformation lens, our cross-disciplinary research team sought to learn about our colleagues' pandemic teaching experiences in order to identify

ways in which future teaching practices and learning supports at our institution might be strengthened.

Context and Methods

In spring 2021 we invited all colleagues who taught one or more courses at our university between May 2020 and April 2021 ($n=699$) to complete an anonymous survey on their teaching experiences in this one-year timeframe. Of 122 survey respondents (hereafter “respondents”), thirteen accepted our invitation to engage in a follow-up interview to explore specific issues (hereafter “interviewees”). We analyzed textual survey responses and interview transcriptions to surface themes and issues in the pandemic teaching experiences of our study participants (respondents and interviewees).

The pandemic forced instructors to quickly move classes online when on-campus teaching and learning were no longer safe. We understand “emergency online teaching” to mean a sudden switch to online delivery to address a crisis in the absence of support and processes designed specifically for online classrooms (Hodges et al. 2020). Like other investigations of teaching during the pandemic (e.g., Howe et al. 2021; Marinoni et al. 2020; OECD 2021; Navigator Inc. 2020; Rutherford et al. 2021; Watermeyer et al. 2021), our study confirmed the taxing nature of shifting to emergency online teaching. Since the lasting effects of COVID-19 may extend beyond those arising from physical illness, including behavioral and emotional challenges (APA 2020; Horesh and Brown 2020; Griffin 2020; Prideaux 2021), it was concerning to hear that our study participants faced significant well-being issues, such as feeling overwhelmed or burned out due to greatly increased workloads, physical distress, and challenges associated with working from home as they strove to sustain student learning and progression through the crisis.

Heightened attention to mental health and well-being is evident in recent education literature on emergency online teaching necessitated by the pandemic (Hodges et al. 2020). The Government of Canada (2020) describes mental health as a state of psychological

and emotional well-being. It can be influenced by a wide variety of factors, such as life experiences, relationships with others, work and school environments, and physical health. A multi-dimensional concept, well-being is viewed as “the balance point between an individual’s resource pool and the challenges faced” (Dodge et al. 2012, 230).

We learned from our study that some participants experienced a decline in well-being because the challenges they encountered with emergency online teaching exceeded their emotional and physical resources. These participants found the experience to be “disillusioning” and very “frustrating.” At the same time, other participants said their pandemic teaching experiences were “affirming,” “grounding,” or “illuminating,” and engendered significant personal learning, increased confidence, and shifting attitudes that are likely to have long-term effects on their educational practices.

Furthermore, some participants felt that they had experienced or facilitated a transformation in their pedagogical practices. For example, some reported striving to empower their students, build connections and community, provide predictability, and extend flexibility in assessment and expectations. Venet (2021) argues for pedagogical transformation to reach across three central aspects of education: practice, the mindset to know and do better; pedagogy, actions taken to bring change into our classrooms; and policy, requiring leadership-induced shifts in the university system. Drawing from Venet’s (2021, 17) equity-centred trauma-informed approach, we frame what is important for teaching, outlining five roles of the online educator as well as recommendations for future practice as they relate to each role.

Findings and Recommendations

This section describes changes our participants (respondents and interviewees) made to instructional practices and barriers experienced while adapting to online teaching. Our findings are organized according to particular roles assumed by our participants in their online teaching during the pandemic.

Reconsidering the Role of the Educator

Zhao and Watterston (2021, 4) identify three key areas of possible post-COVID change in education: “Curriculum that is developmental, personalized, and evolving; pedagogy that is student-centered, inquiry-based, authentic, and purposeful; and delivery of instruction that capitalizes on the strengths of both synchronous and asynchronous learning.” While undergoing a form of digital transition forced by a global pandemic, university educators across the globe dealt with stressed students, new technologies, and new approaches to teaching and learning. This environment was rich with opportunities for instructors to reflect critically on the curriculum they developed, their academic discipline as an educational system, and the ways in which they engaged with the system as an educator.

Our study explores strategies employed by participants while carrying out various aspects of their educator role during the pandemic, including creating and delivering content, interacting with students, and advancing their professional growth as teachers. While online teaching and emergency remote teaching are different, much of what our participants learned during COVID-19 has implications for their roles as online educators in general and the future of good teaching with technology specifically.

The online teaching literature defines a variety of roles for instructors (Ní Shé et al. 2019). This chapter discusses five roles—instructional designer, content creator, communicator, community builder, and professional learner—that best align with major themes that emerged from our analyses of the survey and interview data. Figure 11.1 visually represents those roles as shared by our participants regarding their experiences in navigating the online environment during COVID-19. By reflecting on previous practice and categorizing educators’ experiences into the various roles, we sought to make meaning of those experiences and synthesize collective learnings to help educators as they navigate the landscape of online teaching going forward.

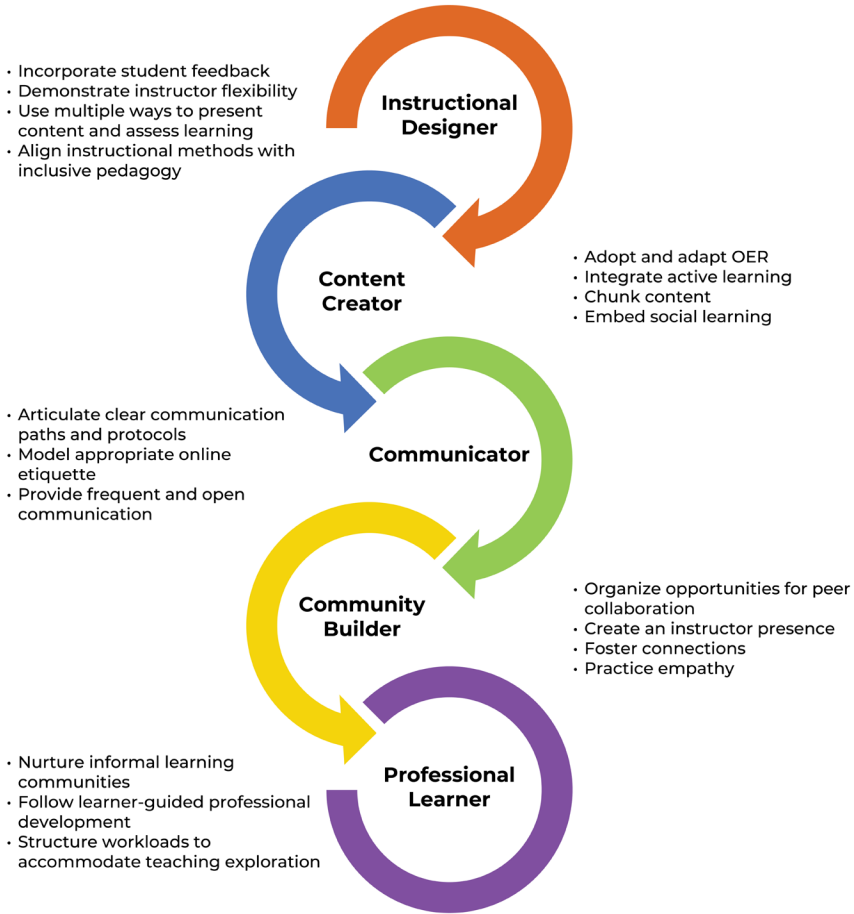


Figure 11.1. Roles of the online educator

Instructional Designer

Effective online learning arises from careful instructional design and planning using a systematic model for design and development (Hodges et al. 2020). Our participants were, for the most part, unfamiliar with teaching online, as 58% of respondents said they had little or inconsistent experience in implementing digital teaching tools. Respondents experienced instructional design challenges as basic as choosing between synchronous and asynchronous delivery, selecting learning management systems and online tools, and

designing assessments. Respondents mainly depended on previous experiences with online teaching and their overall aptitude for using technology in teaching.

In many cases, educators and their students experienced many of the same pressures and challenges during COVID-19. Awareness of shared mental health struggles and of numerous pressing challenges facing all university community members motivated instructors to respond more flexibly to student needs than had been their prior practice. As our participants demonstrated, designing instruction with flexibility in mind took many shapes and addressed many aspects of teaching.

Keaton and Gilbert (2020) observe that flexibility in teacher availability increases the likelihood that students will feel comfortable reaching out for clarification and support from their teachers. An example of instructors' increased flexibility in how students could engage with them is illustrated by this response: "For my regular 'office hours,' I stay after class to chat with students about course material, other topics in science, or life in general. I had more student engagement than in-person, which surprised me." Interviewee 7 noted a similar experience:

In both of the classes this year, the students could choose how they wanted to engage. . . . So in the first-year class . . . about half the class chose to come to Zoom at least once a week, and about half the class did most of the work asynchronously. That was probably the first big decision I made early on, and, absolutely, they were engaged.

Another form of instructional design flexibility involved late submission policies for coursework. Interviewee 3 noticed a shift in their personal perspective on assignment due dates:

I have become more aware of the students' needs and what's going on outside of the classroom for them. Not that I was ignorant about [this] before, but I think I didn't care as much as I think I do now. Students

commented on this at the end of the fall. They appreciated my willingness to be flexible to their situation and to make accommodations to change deadlines to assignments so that they were more manageable or different or that they could accomplish them with the limited resources they had.

Respondents' instructional design choices to introduce more flexibility were also realized through multiple ways of presenting content. Student response was overwhelmingly positive when lecture recordings of live classes were made available because it took pressure off students while note-taking or when absent from class. Instructors adjusted assessments to reduce stress for students in a variety of ways, including creating formative opportunities for students to ask clarifying questions, making tests open book, allowing assignments to be submitted in multiple formats, and extending the time given for online exams. For example, interviewee 9 described how they adjusted a final assignment to better meet students' needs:

I had a new [final] assignment. And it could be whatever [students] wanted. It could be a video, it could be a formal essay, it could be a slide deck. I had some people do photo essays. I had an Indigenous student do a song, drumming and singing for me. Somebody put together a 10-minute movie of their existence in their world and what they were looking forward to, what they were scared about. It was fascinating because they embraced it, and as one student said, "I started 12 weeks ago [asking myself] how the hell are we going to do this, and I left this course, going oh, that's how you do it."

A recurring theme in how participants spoke of their approaches to instructional design was greater awareness of the need to design instructional practices flexibly to accommodate students' contexts,

experiences, and challenges and empower students with agency in their learning.

Recommendations: Instructional Designer

To support instructors' instructional design efforts, we offer three recommendations: find pedagogical tools that usefully enhance instructional practice when appropriate, incorporate continuous student feedback mechanisms to inform instructional design decisions throughout a course, and align instructional methods with inclusive pedagogies that support maximum flexibility and responsiveness to student needs.

To make sense of their choices, participants needed to see exemplars of how to use tools effectively to meet design needs. One respondent found “examples of online course material in format (Moodle, YuJa, etc.) and in content (exams, quizzes, discussion forums, etc.) . . . [to be] more helpful to me than the theory.” Specific examples helped respondents gain confidence in adapting tools and resources to fit their own contexts. In addition, gathering student feedback regularly helped participants make timely instructional decisions and adjustments that benefited students' well-being and learning. Participants also mentioned numerous ways in which building flexibility and options into their teaching practices and assignments were effective in keeping students engaged and on track with their learning.

Content Creator

While closely linked to the role of the instructional designer, the role of the content creator focuses directly on the act of creating instructional materials such as videos, presentations, or learning activities. In the online teaching environment, content is a verb in the sense that great online courses are defined by the act of teaching which embeds course materials into learning interactions between students and the instructor (Henry and Meadows 2008). Creating content is challenging both in designing engaging and meaningful content and in the practical building of the materials.

Some respondents struggled with creating content when the technology failed, which forced them to re-record videos or edit content several times. Other faculty saw the value in rethinking how to present their materials. One respondent wrote,

Another highlight was that it forced me to prepare the slides completely (i.e., with every diagram pre-prepared). While this is also a disadvantage, since it reduces your ability to conduct interactive lectures and to improvise/respond to student reactions, it was also clearly an improvement. I'd been relying too much on my disciplinary knowledge to produce ad hoc lectures.

In some situations, online teaching experiences helped instructors to recognize the importance of diversifying their pedagogical practices. For example, many instructors began to create instructional content for their online classes after realizing that lecturing to a group of students online can be challenging for both teacher and learner. However, online courses should be more than just recorded lectures or prepared slides. According to Bates (2020a), the immense capabilities of the internet enable instructors to enjoy the freedom to create innovative content.

Scholars agree that classroom differentiation, interactivity, and multimodal methods promote learning participation and outcomes (Bao 2020; Zhao and Watterston 2021). Respondents described a broad range of content delivery from live lectures on Zoom to fully pre-recorded lectures and weekly meetings for Q&A. Many respondents said they incorporated a flipped-classroom design that required students to engage with course content prior to attending classes. Interviewee 9 noted that they reduced the number of class meetings to prevent Zoom fatigue and to give students a “mental health day” to destress from online learning. Destressing measures also benefited instructors who experienced stress, worries, and loneliness during the transition to online teaching (McLachlan 2020; Al Miskry et al. 2021).

It was clear that many faculty members were concerned with both the content they needed to present and their students' ability to manage online learning. As interviewee 2 put it, "What I basically had to identify was how to present the material in small manageable chunks." In addition to chunking materials, content should be created in such a way as to encourage student participation and offer opportunities for social learning. Adoption of tool-based technologies typically reflects a teacher's competency to innovate and design (Gao et al. 2019). Several comments from respondents illustrate their interest in innovative practices and appreciation for social learning: "It [shifting to online learning] has made me think about better ways for students to learn from each other," "Assessment of student learning is more open and adaptable," "I became more student centered," and "I have learned to make my classes more interactive."

Participants used a variety of criteria to select content creation tools, including tool familiarity, accessibility, ease of use, and compatibility with course scope or content, which resulted in a distinct heterogeneity of digital tools employed within the same educational setting. Online tools used by respondents to facilitate content delivery included Zoom and Microsoft Teams to present live lectures, YuJa to record lecture videos, and YuJa and YouTube to share lecture videos. Such tools are considered to be operational technologies rather than pedagogical technologies that emphasize student participation (Gao et al. 2019). Pedagogical technologies used by participants included tools to facilitate group work (e.g., OneNote, Etherpad, Hypothesis) or provide communication channels between educators and students or among students themselves (e.g., Microsoft Teams, Slack, Discord).

Some respondents said they adopted a variety of content creation tools, which suggests that their students were exposed to and required to use different types of technologies. In contrast, other respondents intentionally selected a small number of tools or chose tools bundled in one application, so their students had the least amount of technology to manage, thus reducing students' workload.

Through student opinion surveys, interviewee 3 found that “the consensus was: ‘Please, don’t make us learn one more tool.’” While creating content, limiting the number of technology tools ensures teaching is focused on content and educational activities rather than learning new technologies.

Recommendations: Content Creator

We offer three recommendations that aim to enhance educators’ content creation processes: explore open educational resources (OERs) when available and appropriate, limit the number of new content creation tools, and emphasize content that supports active learning whenever possible.

To alleviate the demands of creating content, institutions should encourage and provide supports for instructors interested in expanding their capacity to adopt and adapt OERs and embrace open pedagogical practices. Open pedagogy invites students to be part of the teaching process and participate in the co-creation of knowledge (BCcampus Open Education, n.d.), while OERs can reduce instructional preparation time and facilitate internal and external collaborations among instructors and institutions (McGreal 2017). We recommend limiting the number of content creation tools to ease the burden of mastering new learning technologies for instructors and students alike and striking a balance between synchronous and asynchronous elements in a course. We also recommend that instructors focus on creating content that integrates active learning opportunities for students to apply course knowledge, engage in collaboration and social learning with their peers, practice skills, and reflect on their individual progress.

Communicator

Anticipation of unsettling moments in course sessions and thoughtful planning for appropriate responses to students are useful trauma-informed teaching practices that can make a positive impact on every learner’s experience (Venet 2021). Many people affected by trauma, such as a world-wide pandemic, experience a disruption in their beliefs about the self, the world, and the future. When

world and daily events no longer feel safe or stable, predictability in educational experiences becomes very important. This is true not only in the context of a pandemic, but also in more normal times when other forms of trauma may arise.

Participants mentioned how they made their teaching more predictable through communication, for instance, by building routines and providing rationales for specific course decisions. Interviewee 14, who used to lecture exclusively prior to emergency online teaching, shared how much their students appreciated that they now prepared thorough lecture slides and divided weekly classes into regular lecture and discussion days. In other instances, participants noted that students welcomed visual announcements reminding them of important course dates.

Effective communication of expectations and student success supports seemed to be crucial for many students. Students appreciated live meetings before assessment due dates, online FAQ forums, and checklist or rubric documents, which offered guidance in their learning. Interviewee 6 highlighted that making the implicit explicit was critical for student success:

In terms of online courses, the assignment instructions and expectations had to be incredibly clear, so I reviewed all my grading rubrics for every single assignment. I would copy and paste it at the bottom of an assignment, so students could refer back to it, as well as read my comments. They could clearly see what an A looked like. If you did X, Y, and Z, you might get somewhere into the A category. It's not just up to me now, as the instructor and students are not just guessing here.

In a similar vein, instructors viewed predictability to be a key guiding principle, as many participants seemed to agree with interviewee 11 that “just making sure [students] knew what was going on at all times” was paramount. Interviewee 7 described why they strived whenever possible to avoid making changes during a course:

I tried not to make any changes part way through the course [having] learned that lesson many years ago. It's not fair to students, you can't suddenly start changing goalposts partway through the term. I didn't want to suddenly be introducing new technology or radically changing how the weeks were going . . . because they were having enough trouble keeping up with everything. As bad as I think the past year was for me, it was worse for them.

Limiting the strategies for communication is also important. The vast number of available online communication tools can be overwhelming for web-based learners and teachers alike. Course management tools like Moodle or D2L, web conferencing tools like Zoom, online presentation tools, and mind-mapping collaboration tools like Coggle provide a myriad of ways to communicate and collaborate online. As noted in the Content Creator section above, our participants learned that most students preferred to minimize the number of new tools they needed to use for their courses.

Our respondents also reported communication challenges such as “angry emails from students because I did not send a third reminder for an exam or quiz that was announced twice, indicated on the Moodle calendar, and included on the syllabus” and “more questions than normal despite my students telling me I provided them with enough information for their assignments which increased the amount of time I spent communicating with students.” Such challenges were perhaps linked to information overload and student uncertainty about where to find needed information and frustration when course requirements and tools varied across different courses.

Recommendations: Communicator

Our exploration of participants' communicator role during emergency online teaching yields two recommendations for instructors to address in their communications with students: establish clear course structures and protocols and provide predictability throughout the course.

Communicating clear course structures is foundational for online courses and can be aided by creating course tour videos. Maintaining a consistent and predictable experience for students not only within the course but, where possible, across courses, is important for learners (Lake 2016). Spending time at the beginning of the term to develop and reinforce communication protocols is also a key success factor for an effective online course. Instructors must articulate clear communication paths and protocols, including boundaries, for student-to-student, instructor-to-student, and student-to-instructor communications. Online educators need to regularly monitor students' access to technology and content, provide frequent and open communication to maintain predictability, and model appropriate online etiquette.

Community Builder

Community building is based on three pillars—engaging with students, stimulating interactions between students, and maintaining a positive classroom atmosphere (Trees and Jackson 2007)—all of which are fostered through connection and relationships. In university-level learning, a strong community positively impacts student success and satisfaction. Student involvement increases learning effectiveness, while students who feel alienated are more likely to withdraw from active participation (Myers et al. 2015). Students who develop feelings of community tend to show increased motivation and greater enjoyment of class (Kangas Dwyer et al. 2004).

Our participants' experiences reflected the inherent challenges of isolation in an online teaching environment. Participants mentioned dealing with feelings of disconnection with their students and often struggled to build a feeling of community and promote student engagement and participation. Approximately 70% of respondents reported a diminished sense of connection and lower student engagement. For many of them, fostering an engaging classroom climate became a priority. Interviewee 6 revealed that they “wanted to give [students] a chance, to relate to one another as humans, and I think that helped immensely.”

Interestingly, some instructors emphasized that digital technologies occasionally empowered communication in novel and unexpected ways, more effectively targeting more introverted students who would otherwise “never say a word in a large-enrollment class.” Interviewee 7 said, “Zoom chat gives me insight into my students and it gives them literally a voice in a space for conversation that we don’t get in an in-person class.” Other participants noted that the lack of physical presence on campus had a negative effect on their ability to communicate frequently with their colleagues, which significantly reduced opportunities to interact, exchange information, receive feedback on online teaching, and support one another emotionally.

Recommendations: Community Builder

To build a thriving online classroom learning community, we offer two recommendations: use a variety of teaching approaches and technologies and maintain instructor approachability.

A blend of traditional approaches and novel digital technologies can help build a stronger sense of community. Maximizing opportunities for students to interact with one another and with the educator through group and individual discussions, virtual office hours, and online tools for peer collaboration is key. As interviewee 6 noted, “One of the big shifts as we moved online was to incorporate a lot more class discussion so that students would feel engaged.” Being personable and approachable is also a strong asset and can take several forms depending on the instructor’s inclination. For example, using conventions of face-to-face encounters, such as greeting students by name in a video conference, sets a positive tone. Some instructors may wish to incorporate a personalized touch by sharing personal photos or class jokes, as interviewee 3 described. With intentional pedagogical interventions and consistent approachability, educators can act as community builders to reinforce student engagement and learning effectiveness.

Professional Learner

With fundamental changes continuing to impact the higher education landscape, educators need sufficient time and resources to expand their instructional abilities in response to increasingly digital times. Despite being experts in their own disciplines, many participants found the sudden migration to emergency online teaching during the pandemic far from smooth. Among other things, the abrupt shift revealed gaps in instructors' own digital skills, instructional infrastructure, and teaching development support.

After one year of teaching online in various formats, many participants in our study came to appreciate how networking and learning new technologies enhanced their ability to overcome a wide variety of new instructional challenges, like creating content with technology that sometimes failed and countering diminished student engagement in the entirely online learning environment. Participants also frequently mentioned a desire to integrate more blended learning into their post-pandemic teaching, provided that appropriate supports are in place. To be successful, however, digitally mediated teaching requires not only nurturing learning communities and equitable opportunities for professional development, but also institutional recognition of the time, personal investment, and imagination needed to develop innovative learning experiences (Orr, Williams, and Pennington 2009).

We learned that online collegial socialization and support through departmental conversations, active engagement in local teacher training cohorts, and interinstitutional communities assisted our participants in navigating the unique challenges of teaching online in socially distant times. Regarding the benefits of collegial connection, Bali and Caines (2018, 5) observe that “reflecting in community and dialogue help learners develop a metacognitive awareness of connections between theory, values and practice.” The value of such connections often motivated our participants to employ or adapt innovative teaching methods and technological tools to promote active student engagement and a more “participatory culture” (Cutajar 2019) rather than dry knowledge transmission.

Although the transition to remote learning occurred too quickly to allow instructors to properly prepare, pandemic-induced developments triggered a series of changes in academe and accelerated the adoption of innovative methods and digital technologies. Many participants said they made minor or significant modifications to their courses that sometimes involved experimenting with different implementations, such as introducing more flexibility in how students could engage with them and in late submission policies for coursework. Since the art of effective online teaching rarely flourishes without assistance from high-quality professional development, emerging theoretical frameworks and models can serve as valuable guidance in this journey (Gess-Newsome et al. 2003; Picciano 2017). While some participants relied exclusively on external sources for guidance in their journey of change, others also tapped into local institutional learning opportunities and collegial forums to inform their pedagogical choices.

Realizing that technologically mediated instruction calls for different or new skill sets, many respondents expressed a desire for guidance and sustainably supported institutional infrastructure. Some received “phenomenal” help from colleagues, while others relied on close working relationships with graduate teaching assistants or mentors to assist with timely decisions. The successes of participants who honed their online teaching abilities using resources within and beyond our institution align with the idea that productive professional development can indeed yield “a more transformative, sustained and equitable educational development experience, which respects individuals and better addresses their needs and goals, while doing so in supportive communal spaces” (Bali and Caines 2018, 4).

Recommendations: Professional Learner

As interviewee 4 observed, effective teaching “is not some sort of virus that will just pass from person to person and against which we can’t be inoculated,” but instead requires continuous professional development to help educators keep pace with ever-changing disciplinary and instructional landscapes. Moreover, since

educators have differing teaching practices and needs, learner-guided professional development (PD) empowers them to be actively involved in the selection, development, and implementation of their own PD. We offer two recommendations that may help to address our participants' desire for more sustainable faculty development: establish a reasonable balance between teaching loads and compensated time for professional development of teaching, and address systemic inequities and insufficiencies in institutional supports and incentives dedicated to the development of instructors' teaching practices and pedagogies.

As the development and implementation of new teaching practices and pedagogies require considerable time and effort, teaching loads must be equitably balanced with adequate time and resources to foster strong professional networks and rich opportunities for collegial sharing of ideas and experiences. Rebalanced workloads, commensurate compensation, and funding are especially important for educators holding precarious employment positions (Cutri and Mena 2020). Learning about new methods and technologies cannot be add-ons to existing workloads and requires adequate concrete support. Equally important are appropriate remedies to address systemic inequities and incentivize ongoing faculty development of teaching abilities. As interviewee 5 suggested, we should "revisit . . . our faculty support structures in a meaningful way . . . to support [all] folks [equally] as they try to become the teachers that they want to be and can be." Systematic attention to and adequate resourcing of teaching development programming and university-supported teaching technologies that enable accessible, equitable, and inclusive learning should be a priority for all educational institutions today and tomorrow.

Conclusion

What did we learn about our participants' experiences in navigating the unanticipated, swift transition to emergency online teaching during the first year of the COVID-19 pandemic? Despite the many undeniably taxing challenges they faced, most of our study

participants identified significant shifts in how they thought about or carried out their instructional activities that were, in the end, beneficial to their teaching. As interviewee 8 observed, “It’s been an incredible learning experience being online. . . . Switching it around from being something horrible to being something we can use in a positive way has been very difficult . . . but it’s also been tremendously useful.” Our participants discussed numerous adjustments and changes they introduced into their teaching practices and pedagogy, the latter constituting the first two of three key areas of desirable pedagogical transformation identified by Venet (2021).

The five roles that summarized our participants’ experiences teaching online during the pandemic were highlighted by the participants in different levels during their teaching. For example, the roles of instructional designer and content creator were more prevalent during the design and set-up of a course, while communicator and community builder became more of a focus as the course carried on. The role of professional learner was engaged in when instructors came across a circumstance that they did not have a ready solution for from their previous teaching experiences. During each course, one might engage in each of these roles with different intensity and focus. Though all roles are present in the instructor experience, not all of them are present equally at the same time nor are they present equally between instructors.

We learned that respondents who had used online elements in their pre-pandemic teaching seemed more open to online teaching and learning. In contrast, those with little prior experience in online teaching or online tool use or had primarily taught in settings with students physically present often preferred to return to in-person instruction. From this difference in instructors’ comfort level with online teaching, we infer the critical importance of Venet’s (2021) third key area needed for pedagogical transformation—policy, in the form of leadership-induced improvements in our educational system. Such institutional improvements must prioritize appropriate supports to assist instructors to enrich their practices and pedagogies,

with the ultimate goal of enabling all instructors to excel as educators in settings beyond in-person classrooms.

Institutional efforts to improve the quality of education are unlikely to succeed if introduced simply as add-ons to instructors' existing workloads, however. To bloom and thrive, pedagogical transformation requires strong policy-level supports in areas such as equitable compensation, collaboratively rebalanced workloads to accommodate instructors' professional development needs, adequate funding and infrastructure supports, and proper recognition and rewards within tenure and promotion processes for professional development and scholarship in teaching and learning. Effective teaching is not a skill set that is learned once and then applied thereafter with inevitably positive results. Our participants' experiences demonstrate that good teaching requires ongoing efforts to renew and expand teaching practices and to keep abreast of shifts in student needs and disciplinary and instructional landscapes.

Based on their personal experiences and assessments of student learning during the pandemic, many participants said they were considering retaining newly adopted strategies such as a partially or completely flipped classroom approach when on-campus teaching resumes. Others voiced a deeper appreciation of the need to foreground students' needs, concerns, and preferences in instructional design, content creation, communication, and community-building processes that may be more inclusive, flexible, and consistent than was perhaps the pre-pandemic norm. These are key practice- and pedagogy-based learnings that we believe will remain strongly relevant and applicable to post-pandemic teaching, no matter the setting or mode in which it occurs.

Online learning advocates (e.g., Bates 2020a, 2020b) share a conclusion reached by several participants that we will likely see a post-pandemic rise in blended forms of university learning. Interviewee 7 said, "I would not have thought that I would be the kind of person now saying, 'Online done well can be amazing.' . . . I want to move forward with blended options . . . because I now see the potential of online learning. It is not for everybody, but neither

is in-person teaching.” A silver lining of the pandemic was thus the chance to reflect on the purpose of university teaching and instructors’ roles within it. Many came to see their roles anew as inclusively and actively fostering agency in student learning rather than disseminating content, which in turn surfaced insights on aspects of their teaching that could benefit from more effective strategies and learning barriers that must be addressed.

Participants identified disconnection and a lack of community to be among the most significant barriers to teaching and learning online. Even in synchronous online teaching formats, instructors felt severely challenged to achieve adequate student engagement with course content and connectedness with and among students. Given the proven benefits of engagement and connection to learning effectiveness, educators need to mobilize a variety of methods such as adopting appropriate digital technologies, maintaining live personalized social interactions when possible, and drawing from inner empathy reserves (Meyers et al. 2019) to reach out to learners in compassionate and personally genuine ways in order to create a sense of community and to promote student engagement and participation in their virtual and on-campus classrooms.

Of the various repercussions of being forced to move to emergency online teaching with no advance preparation and inadequate supports, participants most often identified heightened stress and significantly increased workloads as the greatest barriers to effective teaching. And yet participants who tapped into professional and informal support networks for practical guidance, problem solving, and emotional support gained new confidence, skills, and knowledge and further developed their teaching practices. In this context, our participants’ experiences underline the importance of maintaining strong communities of professional practice in addition to the availability of well-provisioned, equitable institutional supports for professional development.

An overarching theme throughout our participants’ experiences is the fundamental need to protect and preserve the well-being of all campus community members, including instructors and students,

in order for optimal teaching and learning to occur. Exploring our participants' experiences of rapidly transitioning to online teaching yielded new understandings about instructional barriers, challenges, and learnings that bear thoughtful reconsideration of not only the role of university instructors, but just as importantly, their well-being and professional development needs. We recognize that a systematic evaluation of teaching supports, resources, and gaps is a large undertaking, but prospective gains would most likely far outweigh costs.

We hope this chapter will initiate fruitful discussion among administrators, educators, students, and support staff to articulate what effective support of a fully realized pedagogical transformation for an increasingly diverse student body looks like, and then to convert those articulations into action and perhaps further research.

References

- Al Miskry, Abdullah Seif Abdullah, Abdalla A.M. Hamid, and Abdel Hameed M. Darweesh. 2021. "The Impact of COVID-19 Pandemic on University Faculty, Staff, and Students and Coping Strategies Used During the Lockdown in the United Arab Emirates." *Frontiers in Psychology* 12 (3283). <https://doi.org/10.3389/fpsyg.2021.682757>.
- American Psychological Association (APA). 2020. "Stress in America™ 2020: A National Mental Health Crisis." APA, October 2020. <https://www.apa.org/news/press/releases/stress/2020/report-october>.
- Bali, Maha, and Autumm Caines. 2018. "A Call for Promoting Ownership, Equity, and Agency in Faculty Development Via Connected Learning." *International Journal of Educational Technology in Higher Education* 15 (46): 1–24. <https://doi.org/10.1186/s41239-018-0128-8>.
- Bao, Wei. 2020. "COVID-19 and Online Teaching in Higher Education: A Case Study of Peking University." *Human Behavior and Emerging Technologies* 2 (2): 113–15. <https://doi.org/10.1002/hbe2.191>.

- Bates, Tony. 2020a. "Research Reports on Covid-19 and Emergency Remote Learning/Online Learning." *Online Learning and Distance Education Resources* (blog), July 27, 2020. <https://www.tonybates.ca/2020/07/27/research-reports-on-covid-19-and-emergency-remote-learning-online-learning/>.
- Bates, Tony. 2020b. "10 Lessons for a Post-Pandemic World from Covid-19 for Canadian Universities and Colleges." *Online Learning and Distance Education Resources* (blog), November 5, 2020. <https://www.tonybates.ca/2020/11/05/10-lessons-for-a-post-pandemic-world-from-covid-19-for-canadian-universities-and-colleges/>.
- BCcampus Open Education. n.d. OpenEd (website). Accessed October 28, 2021. <https://open.bccampus.ca/what-is-open-education/>.
- Cutajar, Maria. 2019. "Teaching Using Digital Technologies: Transmission or Participation?" *Education Sciences* 9 (3): 226. <https://doi.org/10.3390/educsci9030226>.
- Cutri, Ramona Maile, and Juanjo Mena. 2020. "A Critical Reconceptualization of Faculty Readiness for Online Teaching." *Distance Education* 41 (3): 361–80. <https://doi.org/10.1080/01587919.2020.1763167>.
- Dodge, Rachel, Annette P. Daly, Jan Huyton, and Lalage D. Sanders. 2012. "The Challenge of Defining Wellbeing." *International Journal of Wellbeing* 2 (3): 222–35. <https://doi.org/10.5502/ijw.v2i3.4>.
- Gao, Perry P., Arvid Nagel, and Horst Biedermann. 2019. "Categorization of Educational Technologies as Related to Pedagogical Practices." In *Pedagogy in Basic and Higher Education: Current Developments and Challenges*, edited by Kirsi Tirri and Auli Toom, 167–84. London: IntechOpen. <https://www.intechopen.com/chapters/68730>.
- Gess-Newsome, Julie, J. Michael Blocher, Joëlle Clark, Jackie Menasco, and Elizabeth M. Willis. 2003. "Technology Infused Professional Development: A Framework for Development and Analysis." *Contemporary Issues in Technology and Teacher Education* 3 (3): 324–40. <https://www.learntechlib.org/primary/p/19910/>.

- Government of Canada. 2020. "About Mental Health." Last modified June 22, 2020. <https://www.canada.ca/en/public-health/services/about-mental-health.html>.
- Griffin, Gene. 2020. "Defining Trauma and a Trauma-Informed COVID-19 Response." *Psychological Trauma: Theory, Research, Practice, and Policy* 12 (S1): S279–80. <https://doi.org/10.1037/tra0000828>.
- Henry, Jim, and Jeff Meadows. 2008. "An Absolutely Riveting Online Course: Nine Principles for Excellence in Web-Based Teaching." *Canadian Journal of Learning and Technology* 34 (1). <https://cjltd.ca/index.php/cjlt/article/view/26431>.
- Hodges, Charles B., Stephanie Moore, Barbara B. Lockee, Torrey Trust, and M. Aaron Bond. 2020. "The Difference Between Emergency Remote Teaching and Online Learning." *Educause Review*, March 27, 2020. <http://hdl.handle.net/10919/104648>.
- Horesh, Danny, and Adam D. Brown. 2020. "Traumatic Stress in the Age of COVID-19: A Call to Close Critical Gaps and Adapt to New Realities." *Psychological Trauma: Theory, Research, Practice and Policy* 12 (4): 331–35. <https://doi.org/10.1037/tra0000592>.
- Howe, Deanna L., Keri L. Heitner, Andrea Dozier, and Seketha Silas. 2021. "Health Professions Faculty Experiences Teaching Online During the COVID-19 Pandemic." *ABNF Journal* 32 (1): 6–11.
- Kangas Dwyer, Karen, Shereen G. Bingham, Robert E. Carlson, Marshall Prisbell, Ana M. Cruz, and Dennis A. Fus. 2004. "Communication and Connectedness in the Classroom: Development of the Connected Classroom Climate Inventory." *Communication Research Reports* 21 (3): 264–72. <https://doi.org/10.1080/08824090409359988>.
- Keaton, Whitney, and Andrew Gilbert. 2020. "Successful Online Learning: What Does Learner Interaction with Peers, Instructors and Parents Look Like?" *Journal of Online Learning Research* 6 (2): 129–54. <https://files.eric.ed.gov/fulltext/EJ1273659.pdf>.

- Lake, Brendan. 2016. “9 Ways to Make Your Course Easier to Navigate” *Teach Online*, Arizona State University, April 22, 2016. <https://teachonline.asu.edu/2016/04/online-course-navigation/>.
- Marinoni, Giorgio, Hilligje van’t Land, and Trine Jensen. 2020. *The Impact of Covid-19 on Higher Education Around the World: IAU Global Survey Report*. Paris: International Association of Universities. https://www.iau-aiu.net/IMG/pdf/iau_covid19_and_he_survey_report_final_may_2020.pdf.
- McGreal, Rory. 2017. “Special Report on the Role of Open Educational Resources in Supporting the Sustainable Development Goal 4: Quality Education Challenges and Opportunities.” *International Review of Research in Open and Distributed Learning*, 18 (7): 292–305. <https://files.eric.ed.gov/fulltext/EJ1163203.pdf>.
- McLachlan, Elizabeth. 2020. “Coping with COVID-19: Loneliness.” Faculty of Education Wellness Initiative: Supporting a Focus on Health and Well-being. University of Lethbridge, May 2, 2020. <https://stories.ulethbridge.ca/coping-with-covid-loneliness>.
- Meyers, Sal, Katherine Rowell, Mary Wells, and Brian C. Smith. 2019. “Teacher Empathy: A Model of Empathy for Teaching for Student Success.” *College Teaching* 67 (3): 160–68. <https://doi.org/10.1080/87567555.2019.1579699>.
- Myers, Scott A., Zachary W. Goldman, Jordan Atkinson, Hannah Ball, Shannon T. Carton, Melissa F. Tindage, and Amena O. Anderson. 2015. “Student Civility in the College Classroom: Exploring Student Use and Effects of Classroom Citizenship Behavior.” *Communication Education* 65 (1): 64–82. <https://doi.org/10.1080/03634523.2015.1061197>.
- Navigator Inc. 2020. *OCUFA 2020 Study: COVID-19 and the Impact on University Life and Education*. Toronto, ON: Ontario Confederation of University Faculty Associations. <https://ocufa.on.ca/assets/OCUFA-2020-Faculty-Student-Survey-opt.pdf>.
- Ní Shé, Caitriona, Orna Farrell, James Brunton, Eamon Costello, Enda Donlon, Samantha Trevaskis, and Sinead Eccles. 2019. *Teaching Online Is Different: Critical Perspectives from the Literature*.

- Dublin, Ireland: Dublin City University. http://doras.dcu.ie/23890/1/13758_Text_V3.pdf.
- OECD. 2021. *The State of Higher Education: One Year into the COVID-19 Pandemic*. Paris: OECD Publishing. <https://doi.org/10.1787/83c41957-en>.
- Orr, Robert, Mitchell R. Williams, and Kevin Pennington. 2009. "Institutional Efforts to Support Faculty in Online Teaching." *Innovative Higher Education* 34 (4): 257–68. <https://doi.org/10.1007/s10755-009-9111-6>.
- Picciano, Anthony G. 2017. "Theories and Frameworks for Online Education: Seeking an Integrated Model." *Online Learning* 21 (3): 166–90. <https://doi.org/10.24059/olj.v21i3.1225>.
- Prideaux, Ed. 2021. "How to Heal the 'Mass Trauma' of Covid-19." *BBC Future*, February 3, 2021. <https://www.bbc.com/future/article/20210203-after-the-covid-19-pandemic-how-will-we-heal>.
- Rutherford, Teomara, Sarah Karamarkovich, Di Xu, Tamara Tate, Brian Sato, Rachel Baker, and Mark Warschauer. 2021. "Profiles of Instructor Responses to Emergency Distance Learning." *Online Learning* 25 (1): 86–114. <https://doi.org/10.24059/olj.v25i1.2472>.
- Trees, April R., and Michele H. Jackson. 2007. "The Learning Environment in Clicker Classrooms: Student Processes of Learning and Involvement in University-Level Courses Using Student Response Systems." *Learning, Media and Technology* 32 (1): 21–40. <https://doi.org/10.1080/17439880601141179>.
- University of Lethbridge. 2022. "Annual and Fall Term Indicators." Institutional Analysis. Accessed July 23, 2023. <https://www.ulethbridge.ca/analysis/view-facts>.
- Venet, Alex Shevrin. 2021. *Equity-Centered Trauma-Informed Education*. New York: W.W. Norton & Company.
- Watermeyer, Richard, Tom Crick, Cathryn Knight, and Janet Goodall. 2021. "COVID-19 and Digital Disruption in UK Universities: Afflictions and Affordances of Emergency Online

- Migration.” *Higher Education* 81 (3): 623–41. <https://doi.org/10.1007/s10734-020-00561-y>.
- Weilandt, Joerdis, Helen Connolly, and Adriana Monteiro Lima. 2019. “5 Critical Questions Around Online Teaching at the UofL.” *A Light on Teaching*, 2019–20: 2–6. http://www.uleth.ca/sites/default/files/2019/09/lightonteaching_2019-20_-_web.pdf.
- World Health Organization. 2020. “WHO Director-General’s Opening Remarks at the Media Briefing on COVID-19, 11 March 2020.” <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>.
- Zhao, Yong, and Jim Watterston. 2021. “The Changes We Need: Education Post COVID-19.” *Journal of Educational Change* 22 (1): 3–12. <https://doi.org/10.1007/s10833-021-09417-3>.

CHAPTER 12

Conclusion and a Call to Action

Nick Baker, *University of Windsor, Canada*

David J. Hornsby, *Carleton University, Canada*

Nancy K. Turner, *University of Saskatchewan, Canada*

The massive disruption caused by the COVID-19 pandemic forced instructors, students, and administrators alike to re-evaluate what was most important in the learning environment and what was critical to success in achieving learning goals across the curriculum. This volume has explored the lived experience of a diverse array of educators as they grappled with these challenges. That diversity extended into the range of methodological approaches they took to address the questions the pandemic raised for each of them as it challenged what they thought they knew about pedagogy and learning. The personal narratives of these educators reveal patterns of research and meaning-making that can and should be extended into post-pandemic SoTL work.

Authors in this volume addressed two key foci through the lens of openness and equity in online learning: student learning and faculty development. In supporting the former, instructors encountered challenges with learners who had limited access to digital resources, including reliable high-speed internet and even appropriate hardware. They struggled to maintain contact, community, and connection with learners who were forced to share network connections, devices, and physical space, raising questions of whether asynchronous or synchronous learning approaches were more equitable and effective in the situation. Instructors were faced with stark evidence that the digital divide was a reality that many face, and for some, this would be the first time they would be required to not only acknowledge the often invisible systemic inequity in access, but

also to try and anticipate its impact and account for it through their pedagogical approaches. Many of the authors in this volume were working with students whose first experience of higher education, including as the first in their family to experience it, was during the pandemic, compounding the challenges these students normally face in engaging and developing a sense of belonging in the institution. These issues were further complicated for international students who found themselves either suddenly trapped in a foreign country, or unable to reach their intended learning destination. In all these cases, pedagogies of compassion and care, along with flexibility and adaptability to the complex and evolving situation, were critical.

The experience of educators and academic developers tasked with implementing interventions at the program and institutional levels are also captured in the preceding pages by authors whose lived experience tells a rich story of the impact of these necessary actions on students and colleagues. Some authors were focused on looking ahead to a future informed by the experiences of navigating the pandemic, recognising that this future must be informed by equity and accessibility-focused practice, offering inclusive learning environments that acknowledge the messiness of the lives of modern students and the exclusion of many qualified students that a return to past practices would inevitably cause. Others focused on the challenges of building community and effectiveness in remote teams, imagining a world where remote and hybrid work is the norm and how to best utilise those approaches. All these authors had an eye towards the future and how lessons learned could be applied to a better future in a post-COVID world where higher education may finally start to address the systemic equity issues in practice that have previously disabled and excluded many people from accessing education. At least some of the answers for how that future is achieved lay in open and online education as practices that have a long history in equity-informed practice.

While the authors in this volume have demonstrated through lived experience and research that achieving the goals of online, open, and equitable higher education are entirely within our reach,

it remains to be seen whether the higher education community at large, and particularly their leadership, have the willingness to maintain and further the work that was started during the pandemic. Translating the laudable individual practices captured here to embedded and systemic cultural change is a challenge we put out to colleagues across the higher education sector. It may seem that an ethic of care and use of compassionate pedagogies should naturally be our approach to all education, but these values require nurturing and encouragement, with space to explore, support resources, and commitment as a community if they are to be sustained. The COVID-19 pandemic has dragged the world through the greatest disruption of the modern era, and as a result, compassion and change fatigue threaten our ability as a society to continuing doing work that, while important and valuable, is hard. We must consider though that continuing that work while not also battling a global pandemic should be a different, and hopefully more positive, experience.

Our collective call to action for higher education is to not lose the momentum we have gained in transforming one of the most resilient, and concomitantly change-resistant, institutions of humanity into a more inclusive and flexible space. This is necessary not only to preserve the academy's unique and privileged position in society, but also to serve an increasingly diverse student body that looks less and less like the notion of "traditional" learners. Beyond this, the ability to be flexible and nimble, responding positively to significant disruptions on a regular basis, is increasingly important in a world where resilience to multiple threats—from global pandemics, to climate change, artificial intelligence, and cybersecurity breaches—have become the norm. Education is critical to the global recovery from the pandemic, and many industries have learned how to do things differently that our students will now need to be able to navigate in their careers.

Insights from the authors in this volume contribute rich, multi-faceted evidence to a potential path forward towards a higher education system that critically uses the tools of online and open learning, but at its core seeks to provide equitable educational

opportunities for all learners. Whichever path we take, we urge our leaders to ensure that it is intentional (preferably transformative), and not a rudderless drift back towards the safe shores of the past, as we cannot ignore the reality that this past worked well only for a privileged few.

INDEX

#FeesMustFall 39, 43

A

access 4–8, 21, 25, 40, 41, 43–44,
45, 47, 184, 237, 272, 273
internet access 4, 5, 8, 15,
21, 25, 40, 44, 47, 48–
49, 52, 57, 88, 98–101,
129, 272
accessibility 5, 6, 9, 18, 29, 39,
40, 42, 98, 112, 116, 119,
120, 122, 123, 158, 226,
231, 234, 235, 254, 262,
273
accountability groups 133, 134,
139, 140, 143, 144
adult learners 194, 201–220
American Society for Training
and Development 182
anxiety 8, 103, 128, 137, 162,
167, 204, 211, 212, 217,
219, 228
artificial intelligence (AI) 7, 274
assessment (of learning) 3, 4–5,
7, 21, 22, 23, 29, 53, 55,
56, 78, 120, 122, 151, 230,
231–232, 247, 251, 254,
256
competency-based
assessment 62, 65, 67,
75, 78
asynchronous online learning
and teaching 3, 22, 42, 45,

50, 53, 77–79, 183, 184,
189–191, 194, 207, 209,
213, 214, 216, 248, 250,
255, 272

autoethnography 10–11, 12–14,
225

autonomy 2, 64–65, 67–68,
72–73, 75–79

B

belonging 26, 62–79, 149, 151,
169, 233, 241, 273

Biology Self-Efficacy Scale 67

blended learning 42, 64, 67,
179–195, 260

breakout rooms 66, 77, 88–90,
94–95, 96–97, 99, 101, 134,
192, 234–235

burnout 158, 162, 164, 167

C

Canadian Digital Learning
Research Association 182

capacity building 226, 230–233,
236, 239–240

CEGEP system (Quebec) 184,
185

collaboration 45, 94, 100–101,
129–130, 194, 255, 259

Community of Inquiry 185–186,
192, 207

compassionate teaching 118, 120,
235, 239, 265, 274

connectivity 45, 48–52, 57, 234
 cue logs 90–104

D

digital divide 4, 85, 86, 88, 89,
 90, 100, 102, 103, 104, 129,
 272
 digital equity 89
 digital equity and inequity 4, 5
 disability 3, 6, 8
 Discord 66, 78
 discussion board or forum 99,
 209, 216
 distraction 102, 136

E

eCampus Ontario 229, 236
 empathy 5, 77, 209, 215, 265
 equitable education, defined 2–3
 experiential learning 22, 87, 209–
 210, 213–216, 218–220

F

faculty development 204, 214,
 219, 224–242, 262
 first-generation students 127,
 129, 142, 143, 144
 Five Principles of Equity by
 Design 92–94, 96–99, 102,
 103, 104
 flexibility 120, 138, 237, 250–252

G

gamification 65

H

Hispanic-serving institution
 126–144

hybrid learning 154, 156, 182–
 183
 hyflex teaching 8–9

I

instructional design 249–252
 international students 5, 148–
 170, 273

K

knowledge transfer 90, 91, 94,
 100
 Kolb's cycle of experiential
 learning 213

L

learner-centered teaching 2, 18,
 20, 29, 180–181, 195, 248
 learner intake survey 136–137,
 141
 learning community 22, 77, 110,
 119, 188, 210, 216, 259,
 260
 learning management system
 (LMS) 44, 182, 250

M

mental health 21, 29, 118, 128,
 129, 152, 158, 160–164,
 166, 167, 247, 250
 Motivated Strategies for Learning
 Questionnaire (MSLQ) 64,
 67

N

Nova Scotia International Student
 Survey (NSIS) 149–152

O

open education 179–195
 open educational resources
 (OERs) 205, 255
 open pedagogy 255
 outreach 134–135, 140, 143, 144

P

pedagogical transformation 246,
 247, 263, 264, 266
 pedagogies of care 5
 pedagogies of kindness 235
 peer support 228, 235, 239
 plagiarism 55–56
 post-pandemic implications
 19–28, 274–275
 poverty activity 87–99

R

relationships in online learning
 2, 28–29, 156–159, 202,
 214–215
 remote emergency teaching 179,
 181
 remote online proctoring 7, 8
 Renaissance Foundry Model 85,
 91–92, 94–96, 99, 102–104

S

scholarly personal narrative
 10–14
 scholarship of teaching and
 learning (SoTL) 11–12,
 14–15, 27–28, 272
 Self-Determination Theory 64,
 66, 67, 77
 self-efficacy 63, 64, 67–68, 71,
 72, 75, 76, 77

student engagement 22, 25, 55,
 78, 102, 103–104, 129–130,
 132, 139, 258, 261, 265
 synchronous online learning and
 teaching 3, 42, 66, 77, 78,
 79, 88, 130–131, 137, 183,
 194, 207, 209, 210, 214,
 216–217, 238, 250, 255,
 265, 272

T

teaching and learning centres 3,
 23, 24, 181, 202, 203, 224
 teamwork 22, 62–79, 192
 technological support 210–212,
 224
 Transitioning to Online
 Teaching (TOT) program
 204–220
 trauma-informed practice 247,
 256

V

virtual classroom 3, 102, 230–233

W

well-being 21, 64, 148–170, 195,
 246–247, 252, 266
 work from home 117, 121, 132,
 165, 201, 228, 246
 workload 6, 141, 142, 157–158,
 166, 167, 203, 212, 246,
 255, 262, 264, 265