



# Understanding Pandemic Pedagogy: Differences Between Emergency Remote, Remote, and Online Teaching

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Michael K. Barbour  
Charles Hodges  
Torrey Trust

Randy LaBonte  
Stephanie Moore  
Aaron Bond

Kevin Kelly  
Barb Lockee  
Phil Hill



The image on the front cover was a combination of an image owned by one of the authors and the other was an image from Flickr that was attributed to PhotosForClass.com available at:

<https://www.flickr.com/photos/51035597898@N01/544654854/>

Much of the content of this report is revised with permission of the authors the following articles and blog entries:

- The Difference Between Emergency Remote Teaching and Online Learning  
Educause Review  
<https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Revised Outlook for Higher Ed's Online Response to COVID-19  
PhilOnEdTech  
<https://philonedtech.com/revised-outlook-for-higher-eds-online-response-to-covid-19/>
- Traversing the Edge of Chaos: Phase 1 and 2 preparations for post COVID-19 world  
PhilOnEdTech  
<https://philonedtech.com/traversing-the-edge-of-chaos-phase-1-and-2-preparations-for-post-covid-19-world/>
- Traversing the Edge of Chaos: Phase 3 and 4 preparations for post COVID-19 world  
PhilOnEdTech  
<https://philonedtech.com/traversing-the-edge-of-chaos-phase-3-and-4-preparations-for-post-covid-19-world/>
- Planning for Resilience, Not Resistance  
PhilOnEdTech  
<https://philonedtech.com/planning-for-resilience-not-resistance/>

As such, each of these authors has been included as a co-author of this publication.

Finally, this report has been written in conjunction with the Canadian eLearning Network and their series of emergency remote teaching reports.



Canadian eLearning Network – <https://canelearn.net>

## Foreward

It is a privilege to write the foreword for this important report about K-12 online learning in Canada. Earlier this year I worked with a group of scholars to author the *EDUCAUSE Review* article, “The Difference Between Emergency Remote Teaching and Online Learning” (Hodges et al., 2020). In just the brief time since that article was published, it has been cited often and shared widely. The article was written with online learning in higher education in mind, but many of the points in it are equally valid in a K-12 context. The current report draws heavily from our article and several others to make important points about K-12 online learning.

Online learning is by no means a new concept. The field has existed for decades as an area of research and practice with millions of students around the world benefiting from the affordances of online learning before the pandemic. Yet K-12 online learning was definitely a smaller percentage of K-12 learning than what most consider the “traditional” delivery mode of education. The COVID-19 pandemic has brought K-12 online learning into the forefront as a main mode of education around the globe.

While the knowledge and tools to handle K-12 online learning are readily available, the various infrastructures and policies needed to make the switch to online learning smoothly were not ready for COVID-19. Unfortunately, the sudden move to, and reliance on, online learning has highlighted issues of concern such as the need for better high-speed internet access for the world’s population, teacher workloads, teacher preparation for designing, developing, and facilitating online learning, and societal structures for supporting learning online from home. There is a great danger that K-12 online learning will suffer major setbacks in public and political acceptance because of the negative experiences many are having during the pandemic. Therefore, it is essential that distinctions be made widely to the public and policymakers that what most learners (and their families and caregivers) are experiencing is not K-12 online learning but is instead emergency remote teaching, a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances.

Evidence is presented in this report that K-12 online learning should not be under indictment. The skills and knowledge are readily available to prepare for K-12 online learning at scale. It is clear from this report, and our lived experience in 2020, that much more attention is needed toward teacher preparation, infrastructure, education policy, and society to be able to maintain instructional continuity during a crisis. This report includes well-grounded recommendations for how schools can be better prepared to maintain instructional continuity via online learning in the future as necessitated by pandemic, natural disaster, or other crises. The report should get serious attention, and subsequent action.

Charles B. Hodges, Ph.D.  
Professor of Instructional Technology  
Georgia Southern University

## Executive Summary

In the spring of 2020, the term ‘emergency remote teaching’ began to emerge to describe what was occurring in education at all levels, despite the more commonly used term “online learning” dominating media descriptions of the instruction offered to students forced to remain at home. Hodges et al. (2020) described emergency remote teaching as an attempt not “to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis” (¶ 13).

As the new school year began, most education jurisdictions across Canada offered some combination of face-to-face, hybrid, and/or online instruction for students, including pre-existing online learning programs. Yet both designed and established online learning programs and the remote teaching offered by classroom teachers were still described by many as “online learning”, ignoring the clear differences between both instructional methods.

This report is a collection of revised works from other scholars, primarily focused on the higher education context, adapted for the K-12 sector. These works include a recent article that was published in *EDUCAUSE Review* entitled “The Difference Between Emergency Remote Teaching and Online Learning” (Hodges et al., 2020); as well as a number of blog entries from PhilOnEdTech blog (Hill, 2020; Kelly, 2020a, 2020b; Moore & Hill, 2020). Throughout the report, we have attempted to identify each of the sections that relied upon these sources.

Soon the COVID-19 threat will diminish, yet when it does we should not simply abandon remote teaching and return to our prior classroom-only practices without ensuring that we preserve the lessons of 2020 for future public health and safety issues. For example, in recent years school campuses have been closed due to natural disasters such as wildfires, hurricanes, earthquakes, and the polar vortex (Baytiyeh, 2018; Mackey et al., 2012; Samson, 2020; Watkins, 2005). As such, the possible need for remote teaching – in both emergency situations and more planned contexts – must become part of a teacher’s skill set.

This report argues the importance of avoiding equating emergency remote teaching with online learning. It is clear from most schools and teacher’s experience with emergency remote teaching that much more planning and deliberate attention be provided to teacher preparation, infrastructure, education policy, and resources to be able to maintain quality instructional continuity during a crisis. This report offers recommendations for how schools can be better prepared for future crises that incorporate both home-based and school-based learning opportunities mediated through online learning environments. While it is clear that schools remain a good place for children to be supported in their emotional growth and learning, with proper planning and good communication, homes and communities outside of school walls can be as well.

## Introduction<sup>1</sup>

During the spring of 2020, schools all across Canada simply opted to cancel all face-to-face instruction and mandated that teachers move their courses online to help prevent the spread of the virus that causes COVID-19. As the new school year began, most schools had some combination of face-to-face, hybrid, and/or online instruction in place for students. As the 2020-21 school year has progressed, threat of COVID-19 has continued and schools are still facing decisions about how to continue teaching and learning while keeping their teachers, staff, and students safe from a public health emergency that continues to shift and also is still not well understood. However, the uncertainty has highlighted the reality that shifting instruction to be at a distance from the student(s) is not ‘pivoting’ to simply change the medium.

Moving instruction online can enable the flexibility of teaching and learning anywhere, anytime, but the speed with which this shift to online instruction has happened over the spring and fall is unprecedented and staggering. In some cases, Ministry, district, and school support personnel and teams were available to help teachers learn about and implement online learning. In normal times, these teams – when present – typically support a small pool of teachers interested in teaching online. In the present situation, these individuals and teams have not been able to offer the same level of support to all teachers in such a narrow preparation window. Too frequently, teachers have felt like instructional MacGyvers, having to improvise quick solutions in less-than-ideal circumstances. No matter how clever a solution might be—and some very clever solutions have emerged—many teachers have understandably found this process stressful.

Unfortunately, the temptation to label everything that is not classroom-based learning as online learning (or some generic synonym) in these circumstances is prevalent. For example, this past spring the Canadian Broadcast Corporation (CBC) published a news article entitled “For These Families, Online Learning Just Isn't Making the Grade,” where they compared the quality of instruction being provided only weeks after schools transitioned to remote settings with what several students were receiving prior to the pandemic-induced school closure (Cotnam, 2020). The use of terms like online learning and virtual schooling have continued to be used by the CBC throughout the summer (e.g., “What Fully-Online Learning Will Look Like For Ontario Students Who Stay Home This Fall”) and into the fall (e.g., “Virtual Schools Have Faced A Steep Learning Curve, But Parents Still Want In As COVID-19 Cases Rise”) (Crawley, 2020; Wong, 2020). These examples aren’t designed to single out the CBC, as news organizations owned by Bell Media, Postmedia Network Canada Corporation, Shaw Media – pretty much all other Canadian media organizations – have followed this pattern.

This labeling of the teaching methods used when students are not attending in schools as online learning is highly problematic. First and foremost, the politics of any such debate must be acknowledged. “Online learning” will become a politicized term that can take on any number of meanings depending on the argument someone wants to advance. This was evidenced recently with the public discourse that occurred around the government’s e-learning proposals in Ontario throughout 2019 (see Barbour & LaBonte, 2019), which illustrated that online learning carries a stigma of being lower quality than face-to-face learning – despite research showing otherwise (Chingos & Schwerdt, 2014; Hughes et al., 2015; Means et al. 2010; Stallings et al., 2016).

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<sup>1</sup> This section is a revised version of Hodges et al. (2020).

These hurried moves to online instruction by so many schools at once could seal the perception of online learning as a weak option, when in truth few, if any, making the transition to online teaching under these circumstances – both during the spring and now into the fall – will truly be designing to take full advantage of the affordances and possibilities of the online format.

Researchers in educational technology, specifically in the subdiscipline of online and distance learning, have carefully defined terms over the years to distinguish between the highly variable design solutions that have been developed and implemented: distance learning, distributed learning, blended learning, online learning, mobile learning, and others (Barbour & LaBonte, 2015; Irvine, 2020). Yet an understanding of the important differences has mostly not diffused beyond the insular world of educational technology and instructional design researchers and professionals. These realities have led many within the field to adopt the term *emergency remote teaching* to describe the type of instruction that was delivered during these pressing circumstances that occurred during the spring 2020. Many active members of the academic community hotly debated the terminology in social media, and “emergency remote teaching” emerged as a common alternative term used by online education researchers and professional practitioners to draw a clear contrast with what many of us know as high-quality online education. These same communities have taken to using the term *remote teaching* for what has been occurring thus far during the fall 2020. Again, to clearly differentiate it from high-quality online education.

Some readers may take issue with the use of the term “teaching” over choices such as “learning” or “instruction.” Rather than debating all of the details of those concepts, we selected “teaching” because of its simple definitions – “the act, practice, or profession of a teacher”<sup>2</sup> and “the concerted sharing of knowledge and experience” (Olo et al., 2020, p. 23) – along with the fact that the first tasks undertaken during emergency changes in delivery mode are those of a teacher.

### **K-12 Response to the Pandemic<sup>3</sup>**

As Canada began diagnosing its first cases of COVID-19, Canada’s Chief Public Health Officer, Dr. Theresa Tam, urged Canadian communities to “prepare for stronger public health measures to contain the spread of the new coronavirus, including closures of schools” (Vogel, 2020, ¶ Mar. 3). Two days later, New Brunswick was the first of the 13 provinces and territories to close their schools across the province. Within 10 days all K-12 schools across Canada were closed. However, by April 21, 2020 all of Canada had moved forward with emergency remote teaching for their K-12 learners for the remainder of the school year. As the 2020-21 school year has begun, what has become clear is that it is unlike the beginning of any normal school year. In most jurisdictions schools have continued to offer a remote delivery option. Additionally, even for the schools that have started the fall with some face-to-face learning, the prospects of a second wave of COVID-19 means that school may need to be ready for another rapid transition to fully remote teaching.

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<sup>2</sup> See the entry for “Teaching” in the Merriam-Webster Unabridged Dictionary at <https://www.merriam-webster.com/dictionary/teaching>

<sup>3</sup> This section is a revised version of Hill (2020) and Kelly (2020a).

One way to conceptualize the current situation, as well as what may lie ahead is to consider this transition in terms of phases.

## Multiple Phases of Education Response to COVID-19

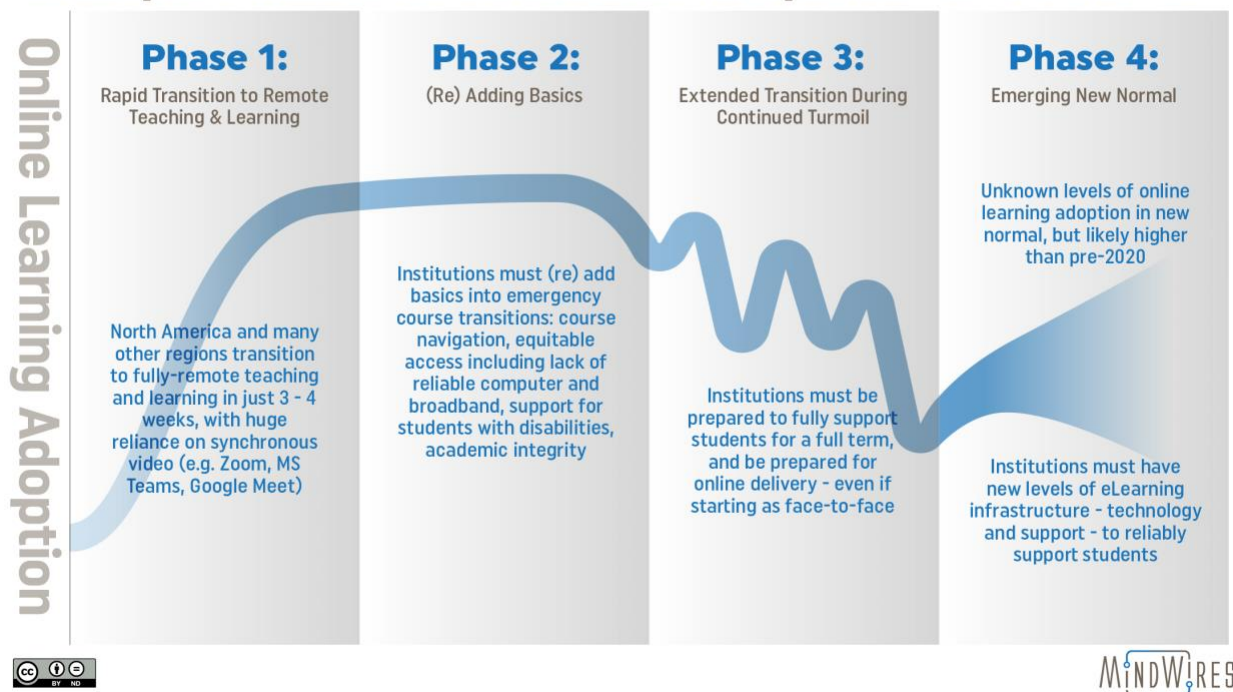


Figure 1. Four phases of educational response to COVID-19 in terms of remote and online learning adoption.<sup>4</sup>

**Phase 1: Rapid Transition to Remote Teaching and Learning.** Institutions making an all hands on deck movement to remote delivery, often relying on synchronous video, with massive changes in just four weeks. Educators do whatever they can to have some educational presence for all classes online. Commenters have rightly pointed out that students' and educators' health and safety are more important than worrying about quality course design or even equitable access. Think of this phase as 'Put everything on Zoom and worry about details later.' Substitute *Microsoft Teams* or *Webex* or *Collaborate* for *Zoom*, as so many teachers opt for the comfort of synchronous video discussions to replace the face-to-face experience.

**Phase 2: (Re) Adding Basics.** Institutions must (re)add basics into emergency course transitions: course navigation, equitable access addressing lack of reliable computer and broadband, support for students with disabilities, academic integrity. During this phase it is no longer acceptable to ignore issues of equitable access and course design. Schools must start to more fully address the question of quality of emergency online delivery of courses, as well as true contingency planning.

<sup>4</sup> This graphic was originally designed with a higher education audience in mind and has been revised by its creator for a K-12 context. You can view the original image at <https://philonedtech.com/revised-outlook-for-higher-eds-online-response-to-covid-19/>

**Phase 3: Extended Transition During Continued Turmoil.** Schools must be prepared to support students for a full term, and be prepared for online delivery – even if starting as face-to-face. During this phase, districts put plans in place to determine the mode of instruction based on the current realities of the pandemic. These plans should include adequate professional learning for teachers to ensure they have the skills and pedagogical knowledge to be able to implement the different instructional plans effectively.

**Phase 4: Emerging New Normal.** This phase will have unknown levels of online learning adoption, but it is likely that it will be higher than pre-COVID-19 days. Schools must have new levels of online learning infrastructure – technology and support – to reliably support students. Essentially, the investment in various tools and infrastructure that schools have made during the pandemic can continue to be used post-pandemic. Additionally, as teachers and students become more comfortable with learning using these tools, the chance that they will continue to use them post-pandemic increases significantly.

There are still a lot of unknowns about the COVID-19 pandemic itself, certainly including education’s ability to weather the storm. However, most would agree that we’ve never before seen such a dramatic shift in the education landscape in such a short time period. It will be important to continue to monitor the potential positive and negative impact that such a dramatic shift brings.

### **Effective Online Education<sup>5</sup>**

Online education, including online teaching and learning, has been studied for decades. Numerous research studies, theories, models, standards, and evaluation criteria focus on quality online learning, online teaching, and online course design. What we know from research is that effective online learning results from careful instructional design and planning, using a systematic model for design and development (Branch & Dousay, 2015). The design process and the careful consideration of different design decisions have an impact on the quality of the instruction. And it is this careful design process that is absent in most cases in these emergency shifts.

One of the most comprehensive summaries of research on online learning comes from the book *Learning Online: What Research Tells Us about Whether, When and How* (Means et al., 2014). The authors identify nine dimensions, each of which has numerous options, highlighting the complexity of the design and decision-making process. The nine dimensions are modality, pacing, student-teacher ratio, pedagogy, teacher role online, student role online, online communication synchrony, role of online assessments, and source of feedback (see Figure 2).

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<sup>5</sup> This section is a revised version of Hodges et al. (2020).



<b>Modality</b>	Fully online Blended (over 50% online) Blended (25-50% online) Web-enabled FTF	<b>Instructor Role Online</b>	Active instruction online Small presence online None
<b>Pacing</b>	Self-paced (open entry, open exit) Class-paced Class-paced with some self-paced	<b>Student Role Online</b>	Listen or read Complete problems or answer questions Explore simulation and resources Collaborate with peers
<b>Student-Instructor Ratio</b>	≤ 35 to 1 36-99 to 1 100-999 to 1 ≥ 1,000 to 1	<b>Online communication synchrony</b>	Asynchronous Only Synchronous Only Some blend of both
<b>Pedagogy</b>	Expository Practice Exploratory Collaborative	<b>Source of feedback</b>	Automated Teacher Peers
<b>Role of online assessments</b>	Determine if student is ready for new content Tell system how to support the student (adaptive instruction) Provide student or teacher with information about learning state Input to grade Identify students at risk of failure		

*Means, Bakia & Murphy (2014)*

*Figure 2. Online learning design options (moderating variables)*

Within each of these dimensions, there are options. Complicating matters, not all of the options are equally effective. For example, decisions around class size will greatly constrain what strategies you can use. Practice and feedback, for example, are well established in the literature, but it's harder to implement this as class size grows, eventually reaching a point where it's just not possible for a teacher to provide quality feedback. In the case of synchrony, what you choose will really depend on your learners' characteristics and what best meets their needs (e.g., self-directed learners generally require more flexibility, so asynchronous is usually best, perhaps with optional synchronous sessions, whereas learners who lack those independent learning skills – often children and adolescents – may benefit from the structure of required synchronous sessions).

Research on types of interaction—which includes student–content, student–student, and student–teacher – is one of the more robust bodies of research in online learning. In short, it shows that the presence of each of these types of interaction, when meaningfully integrated, increases the learning outcomes (Bernard et al., 2009). Thus, careful planning for online learning includes not just identifying the content to cover but also carefully tending to how you're going to support different types of interactions that are important to the learning process. This approach recognizes learning as both a social and a cognitive process, not merely a matter of information transmission.

Those who have built online programs over the years will attest that effective online learning aims to be a learning community and supports learners not just instructionally but with co-curricular engagement and other social supports. Consider how much infrastructure exists around face-to-face education that supports student success: library resources, guidance and career counselling services, a school nurse and/or other health services, and so on. Face-to-face education isn't successful because lecturing is good. Lectures are one instructional aspect of an overall ecosystem specifically designed to support learners with formal, informal, and social resources. Ultimately, effective online education requires an investment in an ecosystem of learner supports, which take time to identify and build. Relative to other options, simple online

content delivery can be quick and inexpensive, but confusing that with robust online education is akin to confusing lectures with the totality of face-to-face teaching.

Typical planning, preparation, and development time for a fully online course is three to six months before the course is delivered (although it can often be a full school year). Teachers are usually more comfortable teaching online by the second or third iteration of their online courses. It will be impossible for every teacher to suddenly become an expert in online teaching and learning in this current situation in which lead times range from a single day to a few weeks. While there are resources to which teachers can turn for assistance, the scale of change currently being required in many schools will stress the systems that provide those resources and most likely surpass their capacities. Let's face it: many of the online learning experiences that teachers will be able to offer their students will not be fully featured or necessarily well planned, and there's a high probability for suboptimal implementation. We need to recognize that everyone will be doing the best they can, trying to take just the essentials with them as they make a mad dash during the emergency. Thus, the distinction is important between the normal, everyday type of effective online instruction and that which we are doing in a hurry with bare minimum resources and scant time: emergency remote teaching.

### **Emergency Remote Teaching<sup>6</sup>**

In contrast to experiences that are planned from the beginning and designed to be online, emergency remote teaching is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered primarily face-to-face and that will return to that format once the crisis or emergency has abated. The primary objective in these circumstances is not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis. When we understand emergency remote teaching in this manner, we can start to divorce it from "online learning." There are many examples of responding to school and university closures in a time of crisis by implementing models such as mobile learning, radio, blended learning, or other solutions that are contextually more feasible. For example, places like Nebraska and New Zealand were able to fall back on using the postal mail system to provide paper-based packets developed for a correspondence model of education that had over a century of experience in delivering learning at a distance (German, 2020). Another examples was the Los Angeles Unified School District, who before the decision was even made to close any schools in March, announced a plan with PBS SoCal/KCET to be able to pull educational programming from the network's library that would be broadcast throughout the school day to help provide access to instruction for students (Kohli & Blume, 2020).

What becomes apparent as we examine examples of educational planning in crises is that these situations require creative problem solving. We have to be able to think outside standard boxes to generate various possible solutions that help meet the new needs for our learners and communities. In some cases, it might even help us generate some new solutions to intractable problems, such as equal access to digital learning technology and broadband internet such that home, community, and school learning spaces in rural and remote locations have identical

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<sup>6</sup> This section is a revised version of Hodges et al. (2020).

affordances as urban communities. Thus, it may be tempting to think about emergency remote teaching as a bare-bones approach to standard instruction. In reality, it is a way of thinking about delivery modes, methods, and media, specifically as they map to rapidly changing needs and limitations in resources, such as teachers support and training (for an explanation of method, media, and mode in online learning see Head, Lockee, & Oliver, 2002).

In the present situation, the district and school support teams that are usually available to help teachers learn about and implement online learning will not be able to offer the same level of support to all teachers who need it. Teacher support teams play a critical role in the learning experiences of students by helping teachers develop face-to-face or online learning experiences. Current support models often include full-course design support, professional development opportunities, content development, learning management system training and support, and multimedia creation in partnership with teachers. Teachers who seek support typically have varying levels of digital fluency. The shift to emergency remote teaching requires that teachers take more control of the course design, development, and implementation process. With the expectation of rapid development of online teaching and learning events and the large number of teachers in need of support, professional development initiatives and support teams must find ways to meet the school's need to provide instructional continuity while helping teachers develop skills to work and teach in an online environment. As such, schools must rethink the way instructional support units do their work, at least during this crisis.

The rapid approach necessary for emergency remote teaching may diminish the quality of the courses delivered. A full-course development project can take months when done properly. The need to “just get it online” is in direct contradiction to the time and effort normally dedicated to developing a quality course. Online courses created in this way should not be mistaken for long-term solutions but accepted as a temporary solution to an immediate problem. Especially concerning is the degree to which the accessibility of learning materials might not be addressed during emergency remote teaching. This is but one reason that universal design for learning should be part of all discussions around teaching and learning. Universal design for learning principles focus on the design of learning environments that are flexible, inclusive, and student-centered to ensure that all students can access and learn from the course materials, activities, and assignments.<sup>7</sup>

## **Remote Teaching**

If emergency remote teaching can be described as an all hands on deck movement to remote delivery, with massive changes in a short period of time followed by the addition of some of the basic supports that learners require, then remote teaching can be described as true contingency planning for remote or distance delivery of instruction based on the realities of the pandemic at a given point in time. If we consider the four phases outlined by Hill (2020) and Kelly (2020a):

Phase 1: Rapid Transition to Remote Teaching and Learning.

Phase 2: (Re)adding the Basics.

Phase 3: Extended Transition During Continued Turmoil.

Phase 4: Emerging New Normal.

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<sup>7</sup> For more information, see <https://www.learningdesigned.org/> or <http://www.cast.org/impact/universal-design-for-learning-udl>

Emergency remote teaching is what occurs during phase one and continues into phase two as visualized in Figure 1. At some point in phase two (i.e., as the instructional model begins to normalize and planning begins to occur), emergency remote teaching transitions into simply remote teaching, which continues into phase three. Once the pandemic (i.e., the crisis) has ceased, then schools and districts can return to face-to-face teaching in the classroom and/or planned online learning.

Essentially, the distinction between emergency remote teaching and simply remote teaching should have been the difference between what occurred in the spring of 2020 (i.e., when schools made the transition in a matter of days) and what could or should have occurred in the fall of 2020 (i.e., when schools had the full summer to plan and could use the lessons from the spring to be ready to re-open for the new school year). For example, distance and online learning has regularly been suggested for much of the past decade as an option to maintain instructional time during short term school closures such as snow days (Haugen, 2015; Hua et al., 2017; Milman, 2014; Morones, 2014; Swetlik et al., 2015). Many have also called for schools, districts, and systems to engage in planning for instructional continuity through distance and online learning to address longer school closures for the past decade. Barbour (2010) illustrated the planning required for remote teaching when he wrote:

in Singapore online and blended learning was so pervasive that teaching in online and virtual environments was a required course in their teacher education programs and schools are annually closed for week-long periods to prepare the K-12 system for pandemic or natural disaster forced closures. (p. 310).

In fact, the use of distance learning to address issues of instructional continuity during a pandemic is not a new concept. McCracken (2020) described how during the Spanish flu pandemic the telephone – a technology only 40 years old at the time – was being used for high school students in Long Beach. According to the author, “the fact that California students were using it as an educational device was so novel that it made the papers” (para. 2). Another example was the polio epidemic in New Zealand in 1948, which closed all of that country’s schools (Te Kura, 2018). At the time the Correspondence School – now *Te Aho o Te Kura Pounamu* – used traditional correspondence education to send lessons to every household, as well as using educational radio to broadcast lessons during the first semester of the school year.

More recently, Barbour et al. (2011) reported that following high levels of absenteeism during the H1N1 influenza pandemic of 2009, a number of private schools in Bolivia developed their own virtual classrooms and trained teachers on how to teach in that environment. The report specifically noted that this trend did not translate within the public school system as it had in places like Hong Kong and Singapore. With respect to Hong Kong, Alpert (2011) described how online learning helped facilitate continued access to instruction in 2003 when schools had to close due to the SARS outbreak. While the SARS closure was consistent with the emergency remote teaching we have seen in North America with the current COVID-19 pandemic, following the outbreak school began to implement planning for a more formal use of online learning for future school disruptions. This planning was evident during the H1N1 outbreak in 2008, when

remote teaching allowed approximately 560,000 to continue learning during that pandemic-induced school closure (Latchem and Jung, 2009).

Extended school closures due to pandemics have not been the only potential source of guidance. For example, a school or district could use the lessons learned in a case described by Mackey et al. (2012), who outlined “the immediate post-earthquake challenges of redesigning courses using different blends of face-to-face and online activities to meet the needs of on-campus, regional campus, and distance pre-service teacher education students” (p. 122), to plan for remote teaching. Rush et al. (2016) described many of the aspects that schools should plan for in case they found themselves in the position of having to transition to remote teaching to “sustaining school operations when a disaster makes school buildings inaccessible or inoperable for an extended period of time” (p. 188). The list of topics included issues surrounding connectivity, device distribution, teacher preparation, instructional modalities, content creation/curation, etc.. While only published in April of this year, using interviews and focus groups conducted in 2017 and 2018, Schwartz et al. (2020) described the lessons learned following the 2017 hurricane season on how distance learning could be used as “a way to continue instruction in emergencies and can support social distancing” (p. 2). Simply put, the potential to use distance and online mediums to transition remote teaching to ensure continuity of learning in both the short-term and long-term has been a key strategy, and one that researchers have studied.

It is important to underscore that these more recent examples have all occurred in the last 15-18 years, and most of the literature describing those examples were published in past decade. The major difference between emergency remote teaching and remote teaching is what has happened during COVID-19 and what could have happened had schools, districts, and systems made preparations for this possibility based on these recent examples.

### **Guidance for K-12 School and District Leaders<sup>8</sup>**

While there were historical examples and published literature that had outlined some of the planning that could have occurred, as has been detailed in the *Documenting Triage: Detailing the Response of Provinces and Territories to Emergency Remote Teaching, A Fall Like No Other: Between Basics and Preparing for an Extended Transition During Turmoil*, and *Stories from the Field: Voices of K-12 Stakeholders During Pandemic* reports from the Canadian eLearning Network (Barbour & LaBonte, 2020; Nagle, LaBonte, et al., 2020; Nagle, Barbour, et al., 2020), most provincial and territorial governments were unprepared to transition to an online setting during the emergency remote teaching that occurred during spring 2020 (and continued in fall 2020). The following sections provide guidance for the necessary planning and preparation that should happen. Suggestions are grouped by phase and tailored for various stakeholder groups.

#### **Phases 1 and 2**

During the spring 2020, all K-12 teachers were forced to adopt some form of remote instruction. Some teachers adopted a hybrid or fully online course delivery method to help students successfully reach the required learning outcomes and educational standards. However, some teachers and students simply gave up. While teachers sent emails out to students and offered

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<sup>8</sup> This section is a revised version of Kelly (2020a, 2020b).

worksheets in the spring, many were holding on for classroom teaching to return. The policies around grading that many Ministries of Education and/or school districts adopted in many instances encouraged this behavior (e.g., if a Ministry of Education decided that performance in the remote setting did not count towards the student's grade or student's grades could not decrease, it often encouraged apathy around maintaining continuity of learning). Either way, this shift to emergency remote teaching also amplified many of the existing challenges related to technology and education. Both teachers and students, from urban and rural schools alike, have contended with technological issues (e.g., sharing a limited number of devices while isolating with your family), ethical issues (e.g., *Zoom* privacy), and personal issues (e.g., taking care of loved ones or not being able to do so) as they emerged. As a result, schools and districts scrambled to develop solutions to support teachers and students using new technologies and/or new teaching or learning methods. Moreover, in the early phases they also had to find ways to make in-person student services and resources easier to access remotely.

Due to widespread transmission and increases of COVID-19 cases around the globe, teachers may need to use remote teaching or variations of hybrid formats through the end of spring 2021, and possibly for any summer 2021 courses as well. Schools and districts that do not have adequate staffing to support all of the teachers equally should create communities of practice to foster peer-to-peer mentoring and direct teachers to begin curating and using free resources offered by third-party organizations (e.g., the asynchronous course content offered through the Western Canadian Learning Network<sup>9</sup> or the resources provided by LEARN's *Educator Toolbox*<sup>10</sup>). This report offers a few practical strategies for schools to start shifting their approach from reactive to proactive.

### Suggestions for policymakers

- ***Legislation should be developed to require educational institutions to develop a digital learning framework and policies***, including stronger K-12 curriculum for digital, networked, and open literacy, executive leadership specializing in online and open learning, certification for expertise, and digital learning chair positions to create new faculty positions at every post-secondary institution as a means to provide expert advice plus also the means to create and teach in programs that produce qualified personnel to support educational institutions. (Bozkurt et al., 2020, p. 91 – emphasis added)
- Furthermore, ***a digital learning framework and related policies should address web accessibility, access to infrastructure (technology and internet for learners), professional learning, and ways to evaluate practices*** [in districts] and between [districts] for equity as all learners... should have equal chances to learn well and to be supported. (pp. 91-92 – emphasis added)
- An investment in research faculty and research grants to collect data is necessary [to] know what is happening. Current anecdotal or case-based data is not sufficient. [There is a] need to collect descriptive data to know the status quo and more applied research to inform us of the weaknesses and strengths, so we can reach our fullest potential in this new normal. ***Policies must be informed by evidence***. (p. 92 – emphasis added)

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<sup>9</sup> See <https://wcln.ca/> to access this project.

<sup>10</sup> See <https://www.learnquebec.ca/elementary> and <https://www.learnquebec.ca/secondary> for examples of these English language resources.

## Suggestions for school administrators and lead teachers

- ***Adopt a “beginner’s mind” approach when helping teachers and students.*** It’s easy to forget what people don’t know when they first start teaching or learning remotely. A large number of K-12 online resource sites have been created and almost all do a good job of providing a lot of information and lesson activities that can be used online. However, teachers new to remote teaching likely do not know what to do and where to start when faced with long lists of resource links. The best place to start is ask teachers to imagine themselves in their student’s place and experience. From there focus on what are the first and most important actions that teachers first do with students – getting to know them and building social and emotional connections. Then ask them to explore one district-supported technology tool that will help them accomplish that. By focusing first on relationship and the engagement process, last on collecting assignments and curricular work, a stronger bond can be made to support student engagement in assigned work remotely.
- ***Identify unnecessary barriers to learning.*** Teachers new to the online experience may have a hard time coming up with new methods better suited to the digital environment to achieve what they did in their traditional classroom. For example, some teachers began delivering full-length lectures and lessons via videoconference tools like *Zoom* with no activities or breaks, just as they would in a classroom. Those teachers may not be aware of challenges related to learning in general (e.g., working memory, cognitive load, selective attention) and to learning equity (e.g., availability during normal class time, adequate internet connectivity). Lengthy live videoconference sessions do not take into account whether students have access to a device during that time, or a quiet space to engage with an online class. Practices like these present equity challenges for students without technology, internet, printers, or the ability to leave to find access in another location. Here’s one strategy to make sure we identify and address these cases. Since we often only hear from teachers who ask for help, survey ALL teachers to determine how they are sharing content, facilitating interactivity, and assessing learning. Reach out to those who unintentionally may be creating barriers for students and brainstorm together ways they might accomplish their goals.
- ***Take the time to test the learning experience on mobile devices.*** A number of students and even some teachers are going through the remote teaching and learning experience on a smartphone or other mobile device. However, some online activities in *Google Classroom*, *Microsoft Teams*, and even some learning management system experiences (e.g., *Brightspace*, *Moodle*, etc.) may not work as well on a mobile device, or behave differently when using a mobile browser or mobile app. Schools and districts need to show teachers how to test the mobile learner experience – even if it’s just through a web-based mobile device emulator.
- ***Work with district disability staff to support students who need accommodations.*** Schools and districts are scrambling to make remote classes accessible (e.g., captioning videos and purchasing new licenses for tools to check the accessibility of course content). Students who face less visible learning challenges may not be considered. For example, clicking the quiz settings checkbox to “display one quiz question per page” supports students who have a hard time staying focused.

## Suggestions for district administrators

- ***Expand and formalize teacher peer mentoring.*** Now that we're moving from a few courses or teachers to the entire education program being online, school leaders need to create open conversations about online teaching and learning. District leaders should continue to build out, institutionalize, and formalize peer mentor networks as a regular support structure for all teachers.
- ***Support teacher as well as student health and wellness.*** Recent surveys of teacher health and wellbeing found that “anxiety” was the most common emotion, followed by “stressed” and “overwhelmed” for teachers (Bintliff, 2020; Kurtz, 2020a, 2020b, 2020c; Will, 2020). On a personal level, this impacts health and relationships; on a professional level, this impacts attention, performance and decision-making. How are we supporting the less visible, emotional needs of teachers, in addition to the training needs? Are we fostering a growth mindset for the faculty who have become learners as they adopt new technologies and teaching practices?
- ***Restructuring district... leadership to create a new role that specializes in online and open learning to be filled by a person with appropriate expertise in the area. There should certainly be professional learning*** in the area of tools, but beyond that, the focus should be on privacy and consent, intellectual property (Creative Commons, copyright, fair dealing, public domain), an understanding of pedagogy for different modalities (synchronous, asynchronous, multi-access learning, face-to-face), critical assessment practices, compassion-based teaching practices, online learning communities, and equity and inclusion. (Bozkurt et al., 2020, p. 92 – emphasis added)

## Suggestions for teachers

- ***Teach with compassion...*** Take risks with new approaches and be flexible to support learner needs with the assessment... Support peer-to-peer connections and collaboration in various modalities that exist and not the modalities you prefer personally. (p. 92 – emphasis added)

## Suggestions for parents and students

- ***Have compassion for [your teachers] and peers...*** Take initiative to connect with others and to initiate self-design projects if helpful. Focus on keeping a routine, self-care strategies, and to learn how to advocate for their needs. (p. 92 – emphasis added)

## Phases 3 and 4

It is not clear when the world collectively will manage COVID-19 well enough to enter a “new normal.” Further, it is possible that schools may face another global pandemic in the future. Accordingly, it becomes critical for schools and districts to do several things simultaneously – 1) continue to improve the current teaching and learning experience, 2) prepare for the eventual post-COVID future, and 3) maintain a state of readiness for future school closures requiring rapid shifts to remote teaching and learning. However, teachers and students who now feel that



they are just “trying to get to the finish line” in 2021, should not be made to feel they have also unwillingly entered “a race to the starting line” of a future, post-COVID education system.

Schools and districts should plan for multiple scenarios moving forward. These scenarios may entail a) staying online for an entire term, b) starting online with the possibility of shifting back to the classroom at some point, c) starting in-person with the very real possibility of shifting to remote again, or d) something else. Leading into the first half of 2021, schools and districts must continue to move from “emergency remote teaching” to more thoughtfully prepared online learning experiences. Below are a few ideas to do so.

## **Supporting teachers, students, and parents**

### **Instructional design**

- ***Help teachers get down to basics.*** Using approaches like the backward design model (Wiggins & McTighe, 2005), schools and districts can help teachers narrow down their class to the “must know” information and skills. The shift to remote class forced some teachers to rethink what students absolutely need to take away, or pare down the course to address only what students need to succeed in subsequent courses while meeting only core curriculum outcomes. To provide maximum flexibility, this should become standard practice for the foreseeable future.
- ***Consider “hybrid flexible” course design to support “remote flexible” courses.*** Brian Beatty’s (2019) hybrid flexible or HyFlex course format offers a “remote flexible” model. It would mean designing a course that could easily shift from classroom to online and back again. Much like the principles and practices related to Universal Design for Learning (Rose, 2000; Rose & Meyer, 2002), HyFlex course design involves providing multiple pathways for students to engage with the content and each other, and multiple pathways to demonstrate evidence of learning. Having said that, it is also important to recognize that HyFlex course design is a considerable amount of work for the teacher (Mason, 2020), and does require specific training and support for the teacher (EDUCAUSE, 2020).<sup>11</sup>

### **Communication**

- ***Communication with students and parents should be transparent, empathetic, proactive, and consistent.*** Once students and their parents learn that they may be learning remotely again (or still) in the near future, they may decide not to return. Communication at the class and school levels should let students and parents know what is being done to support them and how the school is improving the learning experience, and how they can support learning at home, including ensuring there are regular health breaks, comfortable learning environment without distractions, etc.
- ***Access to school data and information about class expectations and progress should be provided to both student and parents.*** Online data and information should be clear, concise, and frequently updated.

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<sup>11</sup> This HyFlex Teaching resource is a useful guide for some of the important considerations with HyFlex Teaching (Trust, 2020) – <https://torreytrust.com/projects/>

## Formats

- ***Focus on asynchronous, low bandwidth activities.*** Equity issues will not go away and could get worse. In some cases, families isolating together are sharing one or two computers among several working adults and/or K-16 learners. Besides adequate internet connectivity, which affects a number of students in both rural and urban areas, variable home-based factors (and others) signify that there will be students who are not able to join class *Zoom* sessions at specific times or to complete assigned activities in a timely manner.
- ***Provide flexibility in how students can turn in assignments.*** Taking classes by smartphone makes it hard to write papers in *Microsoft Word*, so allow students to submit in whatever format they can. For example, *Google Docs* are possible on a smartphone, but not easy. Also consider videos or other ways for students to convey ideas with the tools that they have. To support students who have severe technology challenges, teachers can create a free *Google Voice* phone number and allow students to read aloud their handwritten work (e.g., essays, reports) as a voicemail message. This flexibility also points to the relevance of evidence-based learning.
- ***Keep large group sessions to a minimum – focus on the individual and small groups.*** Many students may not perform well in large groups, particularly in online environments. Teachers should plan how they'll support individual students and connect with them one-on-one or in smaller groups. Schools should consider using enrollment caps, soliciting parent volunteers, or increasing staff to accommodate more frequent and meaningful connections among students and with the teacher.

## Support

- Some students manage the transition to remote learning quickly, or have had previous experience taking online courses. Consider encouraging these ***students to be peer mentors and/or provide supplemental support for other students***. Have students who have taken online courses before answer peer questions that come up in help forums.
- The pandemic is casting a harsh light on issues of privilege and equity, and many marginalized students could disappear from the system without considerable effort to provide them with extra support. ***Schools and districts need to take advantage of any government and community supports they can find or create to address these clear and persistent equity issues*** for accessing learning remotely.
- ***Schools need to point to or construct comprehensive orientations to remote and online learning*** to guide students and parents in how to identify needs and how to be more successful. For example, ask students to take an online learning readiness survey and plan to address gaps, or describe how to create a quiet place to work when isolating with others. Also, guide students through how to navigate the online learning environment once they're online and how to advocate for themselves when issues arise. These orientations should address the needs of disproportionately impacted student groups in particular as well.

## Organizational considerations

Implications for school and district administrators include program-level and institution-level actions that support student learning as we move from “remote” to “online.” Here are a few examples.

### Budget, infrastructure, and resource allocation

- ***Map out and budget for a more robust online learning ecosystem.*** Schools, districts and provincial systems have added a variety of tools beyond the learning management systems to support temporary remote learning. Many of these adoptions were done extremely quickly, some without a typical Request for Proposals process. Some were offered by the vendor to help during the COVID-19 crisis, others were purchased at scale for multiple schools to use. Now is the time to start thinking about what happens next, when many of the emergency contracts end. Whenever possible, districts should still leverage economies of scale, but this next round of renewals and adoptions should include thoughtful conversations focused on critical questions like “Does this tool directly support students?” and “Does this service align with our mission, which includes learning equity?”
- ***Set up structures to reallocate resources more quickly.*** Many grocery stores have been able to keep up with demand for fresh produce because they were able to shift their allocation ratio. Typically, restaurants and other food service providers take a much larger percentage of produce. With so many restaurants, hotels and cruise ships closed temporarily, though, food suppliers have been able to reallocate that produce to grocery stores to meet the needs of more people eating at home while they isolate. School districts should be looking at resource allocation the same way. When schools are closed (or closed to students), what money is saved (e.g., low to no electricity use) and what staff members are underutilized? If enough staff are trained in advance, they can move to support teachers and students when class formats change overnight.

### Support (across programs or across the whole school)

- ***Take steps to make the remote or online learning experience more consistent across your program or school.*** While districts want to foster academic freedom, students are faced with having to do the same tasks three, four, five or more different ways. One family could have their children’s teachers using different technologies and platforms, or asking work to be submitted in different ways – email, some via web interfaces like *Dropbox*, and some even by text. Schools can work to make sure that students have a more consistent experience (e.g., they know how class environments are set up, the same basic rules apply to all classes). Similarly, districts can use templates or blueprints to give online courses a common navigation scheme, look and feel.
- ***Scale up (and possibly require) professional development.*** This will be controversial and no simple task, but districts should continue planning massive teacher professional development efforts for the foreseeable future. Students have accepted varying degrees of familiarity with remote teaching in 2020. However, if part or all of their courses continue

online, students will demand a different experience once their schools are beyond an “emergency transition.”

- Achieving scale: Schools and districts will need to determine how to upskill every teacher who needs it, and to work with unions to address adequate compensation.
- Format: Without knowing what stay at home orders or gathering limits will be like, districts should plan for this professional development to be virtual and both synchronous and asynchronous.
- Economies of scale: Rather than have every school reinvent the wheel, systems and consortia should draw expertise from member organizations and pay for development and delivery of online professional learning about online teaching. Rather than be tool-focused, sessions should show multiple methods to achieve pedagogical goals with online tools.

## Data collection

- ***Schools and districts should centralize data collection about their students’ needs*** and determine how to get that information to teachers. This means the school sends out one survey that asks students about their readiness for remote learning, rather than repeat where individual teachers send out their own surveys with different questions. This invites survey fatigue for students, and creates a set of incomplete pictures. (NOTE: A diverse group of people—including students—should create the survey so the data collection does not perpetuate inequities.)
- The ***data collection related to remote learning should become institutionalized so that it is part of a regular, perhaps annual, assessment***. This information should be used in ongoing planning efforts to inform teacher professional development and infrastructure expenditures so that there are no major surprises if there is a need to quickly switch to remote learning.
- In addition to identifying students’ technological and environmental needs (e.g., better connectivity, a quiet place to learn), ***teachers and administrators also need to collect student and parent feedback about what helps and hinders learning in the online environment***. For example, what are their concerns about connectedness, communication, technology, finances and self-care? These topics form a good start, and school districts can do an even more comprehensive job of collecting student feedback, locally and globally.

As schools and districts follow through with the suggested solutions, they must ensure that contingency plans do not become permanent plans. As educators reimagine education in the wake of COVID-19, they should not stop with small, just-in-time adjustments. The first program director of a U.S. Department of Education grant initiative, *Preparing Tomorrow’s Teachers to Use Technology*<sup>12</sup>, asked all of the first grant recipients a provocative question:

“If we didn’t have the classrooms of today, what would we create instead?”

It is incumbent on every school teacher and administrator to answer that question together.

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<sup>12</sup> See <https://www2.ed.gov/programs/teachtech/index.html> for more information about this program.

## Summary<sup>13</sup>

Technology studies across disciplines – educational technology, history of technology, socio-technical systems, and so on – have repeatedly demonstrated that the dichotomous choice of yes or no, on or off, adopt or reject is not in reality how technological designs and implementations play out. This false dichotomy robs us of options and agency. Rather than thinking about the rich ecosystem of possibilities that can be leveraged – and indeed have been leveraged in other places in other times of crisis – this approach dramatically and falsely limits options. Despite any vendor sales pitch, these modalities are not competing options. They have different affordances (and limitations/costs). Online learning can be a very effective system-level strategy for increasing access to education while maintaining quality or even while affording learning opportunities that aren't possible with location-bound education. It is more useful to think about modalities in terms of pros and cons, what they each afford that the others do not, and how best to leverage the full range of options to meet not a single problem or need but multi-faceted, dynamic problems and needs. In fact, what we are seeing emerge in most COVID-19 strategies is a phased relaxation of restrictions. All of this argues for a flexible approach – the opposite of one informed by short-sighted modality bias.

Everyone involved in this abrupt migration to remote teaching must realize that these crises and disasters also create disruptions to student, staff, and teachers lives, outside their association with the school. So all of this work must be done with the understanding that the move to remote teaching will likely not be the priority of all those involved. Teachers and administrators are urged to consider that students might not be able to attend to courses immediately. As a result, asynchronous activities might be more reasonable than synchronous ones in emergent situations.

However, as time passes the school system should be able to prepare for a transition from emergency remote teaching to simply remote teaching. However, it is important to underscore the fact that remote teaching is still temporary in nature, and those engaged in remote teaching still plan to return to classroom-based instruction. It is not the carefully planned distance and online learning traditionally experienced in the K-12 context. Interestingly, this was also highlighted in the final article of a special issue of *PS: Political Science & Politics* focused on various ways that discipline experienced the emergency remote learning transition in response to the COVID-19 pandemic.

By way of conclusion, I turn to the questions still to be asked about pandemic pedagogy and what lessons it might hold for teaching and learning. Although thought-provoking and productive for our present reality, the norm/exception logic embedded in analysis of pandemic pedagogy risks overemphasizing the emergency. In its least harmful form, attention to the emergency nostalgizes the norm; at worst, overemphasis of deficiencies in the emergency crowd out space in which those in the normal condition might be expressed. The tightrope to be walked in researching pandemic pedagogy is that careful examination is necessary but may blind our analysis to important elements.

Increasing the attention to the exceptionality of emergency e-learning, however, comes at a cost. Examining the deficiencies, inequalities, and barriers of emergency e-learning as

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<sup>13</sup> This section is a revised version of Moore and Hill (2020) and Hodges et al. (2020).

exceptional experiences obscures the deficiencies, inequalities, and barriers that exist in the normal arrangements of educational systems (Murphy 2020a). Despite specific attention being warranted to this exceptional experience of emergency e-learning, it is important that its difference from the normal condition not be overstated. The digital divide, racial inequality, policy coordination, and other issues are not limited to the case of COVID-19 responses. (Murphy, 2020b, pp. 20-21)

Hopefully the COVID-19 threat will soon be a memory. When it is, we should not simply return to our teaching and learning practices prior to the virus, forgetting about remote teaching. There likely will be future public health and safety concerns, and in recent years, campuses have been closed due to natural disasters such as wildfires, hurricanes, earthquakes, and the polar vortex (Baytiyeh, 2018; Mackey et al., 2012; Samson, 2020; Watkins, 2005). Thus, the possible need for remote teaching – in both emergency situations and more planned contexts – must become part of a teacher’s skill set, as well as professional development programming for any personnel involved in the instructional mission of colleges and universities.

The threat of COVID-19 has presented some unique challenges for schools. All parties involved – students, teachers, and staff – are 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. Although this situation is stressful, when it is over, schools will emerge with an opportunity to evaluate how well they were able to implement emergency remote teaching to maintain continuity of instruction. It is important to avoid the temptation to equate emergency remote teaching with online learning during those evaluations. With careful planning, officials at every campus can evaluate its efforts, allowing those involved to highlight strengths and identify weaknesses to be better prepared for future needs to implement remote teaching.

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