

A MODEL OF REMOTE TEACHING AND LEARNING UNDER EMERGENCY AND SUSTAINED CRISIS CONDITIONS: A DESCRIPTION OF NOVEL DISTANCE EDUCATION CONTEXTS AND MANIFESTATIONS

Dr. William H. STEWART

ORCID: 0000-0002-8227-849X
Department of International Affairs
Hankuk University of Foreign Studies
Seoul, REPUBLIC OF KOREA

Dr. Patrick R. LOWENTHAL

ORCID: 0000-0002-9318-1909
Department of Educational Technology
Boise State University
Boise, USA

David J. RICHTER

ORCID: 0000-0001-5413-6710
College of Technology
Purdue University Northwest
Hammond, USA

Received: 22/03/2022 **Accepted:** 31/08/2022

ABSTRACT

Humans have been learning at a distance for millennia. Modern information and communications technology has enabled formal distance education to be conducted online, though significant variation exists in purpose, course format, delivery methods, etc. Under duress of COVID-19, educators and students alike have been forced to engage in their courses remotely. These courses, however, are not equivalent to formal distance education and to date have broadly been referred to as Emergency Remote Teaching (ERT). Nevertheless, ERT courses are no longer unexpected and have become plannable; many are being sustained indefinitely due to the prolonged nature of the pandemic. Despite this paradox, current ERT literature typically conceptualizes the ongoing practice monolithically. This conceptual paper discusses key differences between formal distance education, emergency remote teaching, and the evolving practice of Sustained Remote Teaching (SRT). We suggest a descriptive contextual model as a research analytic for discussion in the field of distance education.

Keywords: Distance education, COVID-19, emergency remote teaching, sustained remote teaching, distance learning.

INTRODUCTION

With social distancing as the primary countermeasure against spreading and contracting the novel coronavirus from the start of the COVID-19 pandemic, Emergency Remote Teaching (ERT) has been a lifeline all over the world for schools, educators, and students. This previously obscure subset of distance education became (and has been) the primary tool/method of choice for maintaining educational continuity throughout the pandemic (Hodges et al., 2020) for the billions of students and millions of educators whose schools/campuses have closed their classrooms (UNESCO, n.d.). Nevertheless, the rush to enable educational continuity in this manner has also included difficulties and significant negative outcomes (Hodges et al.,

2020; Stewart, 2021; Williamson et al., 2020). Educators, most without formal or extensive experience in distance education, have been tasked with teaching remotely without the necessary support, requisite training, or technological skills and expertise (Gyampoh et al., 2020). These remote teaching and learning experiences are, understandably, new for large portions of the population (Stewart & Lowenthal, 2021, Stewart et al., 2022). As a result, many educators have instinctually relied on trying to recreate familiar face-to-face teaching methods in virtual/distance learning environments (Bozkurt et al., 2020; Chatziralli et al., 2020; Van Heuvelen et al., 2020). This practice, however, typically translates poorly to distance learning settings (Simonson, 1999). In simpler terms, the proverbial cart has been put before the horse though this is not the first time that such a paradox has emerged in distance education.

In the 1990s, many universities sought to capture the emerging online distance education market and tasked educators to work without any particular distance education background, training, or support (Shattuck, 2021). Unsurprisingly, stakeholders brought up numerous concerns about the quality of education under these circumstances, and both distance education learning outcomes and perceptions of online courses were mixed (Bach et al., 2006; Blair & Monske, 2003). Even to this day, perceptions and beliefs that online courses are inferior to their face-to-face counterparts persist (Protopsaltis & Baum, 2019) despite decades of empirical research providing evidence to the contrary when course conditions (e.g., proper course design, experienced faculty, student support, etc.) are equivalent (see Hastings & Tracey, 2005; Jhang et al., 2007; Johnson et al., 2000; Means et al., 2014; Schlesselman, 2020; Shattuck, 2021; Yen et al., 2018). These views also persist despite the practice of formal distance education being more than 200 years old (Bower & Hardy, 2004; Casey, 2008). Even prior to COVID-19, millions of students annually chose to take courses online (Allen et al., 2016; Seaman et al., 2018; Stewart, 2019). While the context and motivations to offer courses online in the 1990s and its consequent mistakes (and growing pains) and the current COVID-19 pandemic are clearly different, the lessons that went unlearned then are continuing to go unlearned now (Shattuck, 2021).

Although the conditions educators and students worldwide are working under are far from normal (Stewart, 2021), they are making reactionary (versus proactive) decisions in response to the pandemic. More problematic is that from administrators, educators, and students to parents, policy makers, and politicians, there is an unfortunate conflation of formal distance education with the phenomenon of ERT (Hodges et al., 2020; Shattuck, 2021; Williamson et al., 2020). For example, the factors traditionally associated with online course retention/attrition (e.g., traditional vs. non-traditional students, generational status, prior online course experience, socio-economic status, etc. - see Aragon & Johnson, 2008; Dumais et al., 2013; Hachey et al., 2012, 2013; Kauffman, 2015; Liu et al., 2009; Packham et al., 2004; Roblyer & Davis, 2008; Xu & Jaggars, 2013) will not necessarily manifest the same way in response to and throughout the pandemic (Wladis et al., 2021). Further, multiple terms have emerged to refer to this phenomenon, ranging from Emergency Remote Teaching (ERT) (Hodges et al., 2020), Emergency Remote Learning (ERL) (Doornbos, 2020), Emergency Remote Teaching Environment (ERTE) (Whittle et al., 2020), and even Emergency Remote Teaching and Learning (ERTL) (Shin & Hickey, 2020). The multiplicity of terms, combined with a lack of a theoretical or descriptive framework, also compounds the difficulty of investigating a phenomenon occurring and evolving in real-time. In this paper, we present and discuss key differences between formal distance education and ERT, in addition to describing a third distinct yet related practice: Sustained Remote Teaching (SRT).

Education and Learning at a Distance

Learning at a distance is described as when learners are separated by time and/or space from an instructional source (Bower & Hardy, 2004). In this sense, learning at a distance occurs daily to varying degrees through books, newspapers, television, music, street signs, etc. Further, learning at a distance has been occurring for millennia through media such as architecture, pottery, imagery/paintings, music/songs, clay tablets, oral traditions and narratives, and other written texts that illustrate, describe, or comprise a historical record (Westera, 2015). Heydenrych and Prinsloo (2010) have even argued that distance education dates back at least 40,000 years with cave paintings serving as some of the earliest examples of instructional information transmitted over both time and space. There is debate, however, whether this kind of incidental and/or

informal learning (which clearly can and does occur at a distance) is the same as education (Means et al., 2014); education is typically considered to be a far more systematic and structured learning experience (Gunawardena & McLissac, 2013; Means et al., 2014). This type of conflation has similarly been made in more recent educational technology literature discussing distance education, e-learning, and other modern manifestations of informal, self-driven internet-based learning (Guri-Rosenblit, 2005; Lowenthal et al., 2009; Means et al., 2014). Today, distance education generally refers to an organization offering a standardized course of study and credentials upon completion (e.g., diploma, degree and/or certificate programs) in a non-residential manner (Gunawardena & McLissac, 2013).

Formal Distance Education

Formal distance education dates back to the development of the printing press and ability to mass produce instructional/learning materials, which were then sent and delivered between instructors and students by postal correspondence over trains and rail networks (Bower & Hardy, 2004; Casey, 2008; Lee, 2017; Peters, 1994). Since that time, distance education (and learning) has evolved with each new technological advancement, including radio, TV, computer networking, satellite broadcasting, the internet, and sophisticated computer applications (such as globally networked virtual worlds) (Casey, 2008; Harasim, 2000; Moore & Kearsley, 2012). As a result, there are nearly an infinite number of variations of distance education today (Lowenthal et al., 2009). This had led some to argue for a medium-agnostic understanding of distance education such as the United States Distance Learning Association's description of distance education as "the acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of learning at a distance" (Bower & Hardy, 2004, p. 5). In the literature, we find that three key traits consistently characterize distance education: a) geographical and temporal separation between learners and educators; b) two-way communication between them; and c) ultimately a medium to connect each other across time and space (Garrison & Shale, 1987; Holmberg, 1986; Keegan, 1988; Perraton, 1988; Rumble, 1989; Schlosser & Anderson, 1994). Nevertheless, despite calls for taking a medium-agnostic understanding of distance education, online distance education—largely due to its growth—has dominated the way people have thought about distance education for the past two decades. However, during this time, no single type of online distance education course has ever really existed.

Online Distance Course Modes

Linda Harasim (1986) is often attributed with teaching the first online course. However, by 2000, Harasim (2000) tried to differentiate between adjunct, mixed, and totally online courses. Later, the Online Learning Consortium made similar distinctions between web facilitated, blended/hybrid, fully online courses, which are based on an arbitrary range of activities that occur on and/or offline (see Allen et al., 2016). With greater access to computers and digital technologies, K-12 schools developed variations of blended learning courses (i.e., rotation, flex, self-blend, enhanced virtual), differentiated by when, where, and how they occur (Horn & Staker, 2014; Sethy, 2008). Thus, the lines between residential/distance, home/school, and virtual/digital environments have become increasingly blurred (Sethy, 2008). In the case of ERT, novel/uncommon modes of distance courses (such as the mandatory synchronous viewing of pre-recorded lectures) have been documented in emerging literature (Stewart & Lowenthal, 2021, 2022). Nevertheless, distance education course modes are still absent of numerous important characteristics that are both situational and contextual (Lowenthal et al., 2009). ERT, for example, is situated in a crisis and bound to the involuntary nature of teaching and learning remotely (Hodges et al., 2020). This is not normally the case in formal distance education.

Course Contexts

Distance education is not a monolithic practice and speaking singularly about distance courses is highly problematic (Lowenthal et al., 2009; Means et al., 2014). While there are an infinite number of possible features that can define an online course; research in particular has shown that certain features influence learning outcomes, making certain ones more relevant than others (Means et al., 2014). Further, there are

often numerous stated and unstated assumptions about courses that can exacerbate the inherent difficulties with learning at a distance. For example, Means et al. (2014) noted that “online pedagogies assume a level of independence, motivation, and self-regulation on the part of learners” (p. 140), in addition to the assumption of “skilled” technology use. Distance education is often marketed and sold as flexible, any time, any place learning yet the reality is often far more rigid (Selwyn, 2011) or complex (Veletsianos & Houlden, 2019). When classrooms are comprised of students and educators from different socio-cultural backgrounds, there is often an “underlying tendency to colonize and import dominant paradigms into contexts that are either unfriendly to those paradigms or that can be harmed by those solutions” on the part of educators (Gunawardena & LaPointe, 2008, p. 52) or to alienate or other those that might differ (Phirangee & Malec, 2017). In the case of distance education, technologies imported from one particular context are not value neutral (Bali & Meier, 2014; Feenberg, 2003) and can amplify such pre-existing biases (Gunawardena & LaPointe, 2008). While distance education is often a local or regional enterprise (Allen et al., 2016; Seaman et al., 2018), it can become vastly more complicated in international and transnational contexts. For example, ERT forced many international students into remote learning in residence (e.g., Stewart & Lowenthal, 2021; Stewart et al., 2022), in addition to requiring students to stay home due to lock downs and trying to attend their courses from abroad (Perets et al., 2020). All of this illustrates that the landscape of distance education is ultimately one that is far more varied than a cursory glance reveals, but it is one which is often not acknowledged (Lowenthal et al., 2009). Both Lowenthal et al. (2009) and Means et al. (2014) identified numerous characteristics that can manifest in distance courses in terms of context. These are illustrated below in Figure 1. While there are numerous overlapping items between these two contextual models, crisis/pandemic contexts are absent since such conditions would not normally have been considered in relation to distance education. Moreover, this is not a research condition that would intentionally be created, thus performance and practice in these contexts do not have reference points for analysis. Nevertheless, the circumstances of COVID-19 highlight the lack of planning for courses delivered at a distance in an emergency, as well as the lack of support structures, facilitator expertise, etc., to name but a few examples of novel contexts and their manifestations (Stewart, 2021).

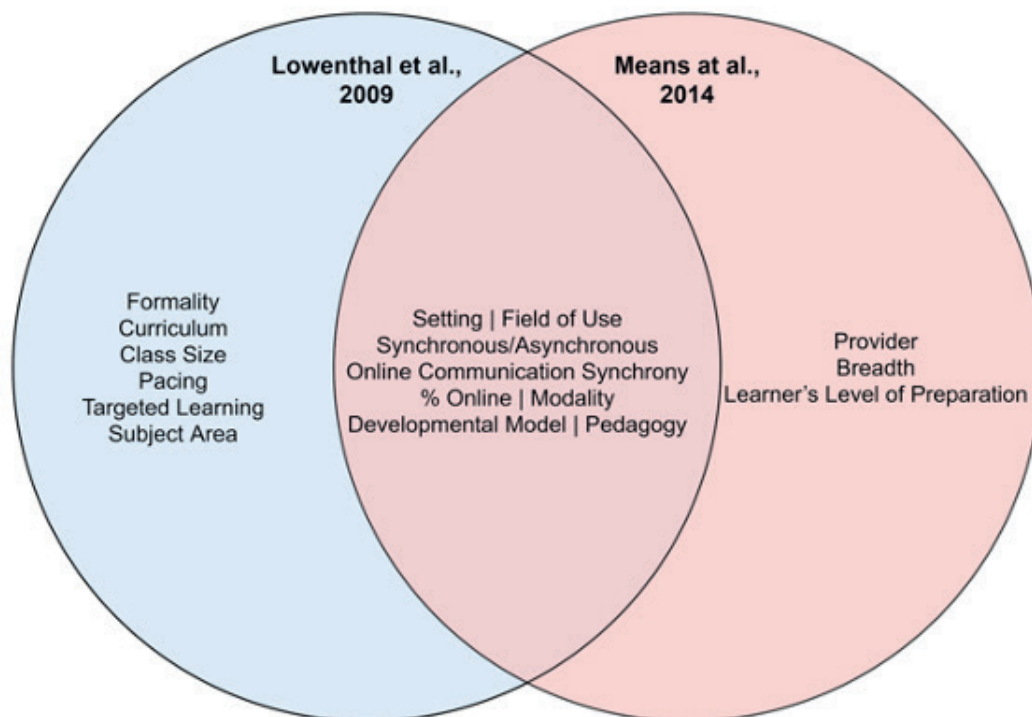


Figure 1. Online Learning Context Scholarship

DIFFERENTIATING REMOTE TEACHING UNDER CRISIS CONDITIONS

Emergency Remote Teaching (ERT)

When compared to the characteristics of formal distance education, ERT is without question a form of distance education, however, there are numerous key differences distinguishing ERT from formal distance (and residential) education (Hodges et al., 2020). First, ERT is meant to be temporary as it is directly related to an emergency or crisis event. Second, as a result of being situated in an emergency or crisis context, ERT courses are unplanned, under-developed, under-supported, rapidly delivered, and likely of lower quality (Doornbos, 2020; Hodges et al., 2020; Whittle et al., 2020; Williamson et al., 2020). To date, studies have shown that ERT is often viewed as a major shock to students, educators, and schools (Jyoti et al., 2021; Peters et al., 2020; Rapanta et al., 2020). Third, as a crisis response, ERT courses are involuntary and the educators (and institutions) facilitating ERT courses often overwhelmingly lack distance education teaching/learning experience and related technological expertise. While formal distance education and ERT are clearly different, teaching at a distance and teaching in person are also not identical to one another.

Prior research has shown that teaching at a distance is different from teaching in a formal face-to-face classroom (Palloff & Pratt, 1999; Ragan, 1999; Salmon, 2003); this difference has been similarly experienced/reported throughout the pandemic (Buttler et al., 2021; Gyampoh et al., 2020). Experiences with ERT by both educators and students have often been reported as negative (Bond, 2021; Bond et al., 2021; Stewart, 2021). For example, students have often reported not knowing assignment requirements (Alqurshi, 2020; Buttler et al., 2021). Teaching strategies have also often copied face-to-face instructional practices that have tended to result in feelings of isolation in a distance learning setting (Bozkurt et al., 2020; Buttler et al., 2021; Chatziralli et al., 2020; Van Heuvelen et al., 2020). Interaction with peers and educators has been largely absent (Alqurshi, 2020; Buttler et al., 2021; Stewart & Lowenthal, 2021; Stewart et al., 2022). Students have been taking full course loads (i.e., five to six courses) online (Stewart & Lowenthal, 2022) and both educators and students have found themselves sitting for six to eight hours a day in front of computers or mobile devices (Jyoti et al., 2021; Sundarasan et al., 2020). Makeshift learning spaces can be uncomfortable or easily prone to distractions (Budhrani et al., 2021; Sepulveda-Escobar & Morrison, 2020). Working adults, whether educators or students, have also had to take on additional or prolonged care-giving roles during stay-at-home orders (Budhrani et al., 2021; Sethi et al., 2020). Further complicating matters, however, is the fact that the temporary nature of ERT has extended beyond a single academic semester for the vast majority of the world. Thus, the courses being conducted after the onset of the pandemic can, in fact, be planned for and educators and schools do have some degree of experience in facilitating a certain type of online course. Thus, Stewart et al. (2022) argued that the current courses being conducted should be differentiated as Sustained Remote Teaching (SRT).

Sustained Remote Teaching (SRT)

The enduring nature of the COVID-19 pandemic now raises more questions for distance education/remote teaching under these circumstances as the practice of ERT continues. More than a billion students and millions of educators have experience with remote teaching and learning (see UNESCO, n.d.). Schools and universities are continuing to deliver instruction remotely with many institutions continuing to prioritize health and safety via social distancing throughout 2021 (Jandric et al., 2021; Schlesselman, 2020; Stewart et al., 2022), and this practice is likely to remain into the first academic semester of 2022. However, the original ERT crutch that the world relied upon should evolve into a more deliberate systematic practice that takes this shifting context into account (Shim & Lee, 2020). Given the enduring nature of the pandemic and the repeated extensions of ERT, it is not, arguably, appropriate to characterize subsequent courses as “emergency” remote teaching when they can, in fact, be planned for. The transition is not sudden, unexpected, or temporary; the delivery context has changed and thus it is no longer ERT. However, these courses still do not coincide with the characteristics of formal distance education (Stewart et al., 2022). For example, Jandric et al. (2021) noted how images of educators’ remote workspaces changed from the onset of the pandemic and their working environments one year later. They saw a shift away from chaotic and ill-prepared ERT-based working conditions to more dedicated and sophisticated distance teaching preparation and organization. In short, a shift in remote education praxis emerged from one that was done in haste to one that was planned for in advance.

Given the continued reliance on remote teaching, many students' first experiences with higher education have coincided with the onset of the pandemic and ERT (i.e., first semester/year students). In other cases, SRT may be the only (or dominant) mode of operation for the entire length of shorter programs (e.g., master's programs, graduate certificates) depending on course loads and scheduling. Despite these rather obvious differences between both formal distance education and ERT, the mistake of conflating either of these practices with SRT continues; certain lessons are still going unlearned (Shattuck, 2021). Thus, given the shifting contexts of the pandemic, it becomes crucially important to recognize both obvious and subtle differences in praxis so that balanced approaches and standards of teaching and learning can be achieved (Alqurshi, 2020; Jandric et al., 2021; Schlesselman, 2020; Shim & Lee, 2020; Stewart et al., 2022).

CONTEXTUALIZING REMOTE TEACHING UNDER CRISIS CONDITIONS

While the differences between formal distance education and emergency remote teaching are fairly large, the characteristics differentiating emergency remote teaching and sustained remote teaching are far subtler and paradoxical in certain ways (Apostolidou, 2020; Stewart, 2021). Nevertheless, recognizing the differences across these three distinct practices is key to understanding the evolution of ERT when crises are not quickly overcome. We provide a summary of these key contexts and their characteristics under distance education, ERT, and SRT. They are presented (in no particular order) in Table 1 and discussed in detail below. Further, the differences (and similarities) between these novel contexts across formal distance education (FDE), ERT, and SRT are illustrated in Figure 2.

Table 1. Key Distinct Remote Teaching Practices and Context Manifestations

Crisis Contexts	Formal Distance Education (FDE)	Emergency Remote Teaching (ERT)	Sustained Remote Teaching (SRT)
Delivery Medium	Text-based Postal Delivery, Online Delivery	Exclusively Delivered Online	Exclusively Delivered Online
Delivery Purpose	Permanent Replacement of Residential Education	Temporary Replacement of Residential Education	Indefinite Replacement of Residential Education
Delivery Readiness and Capacity	Planned Delivery and Pre-existing Capacity	Unplanned Delivery and Limited/No Capacity	Plannable Delivery and Limited/Some Capacity
Stakeholder Volition	Voluntary Participation	Involuntary Participation	Involuntary Participation
Program Duration	Entire Program conducted Remotely	Program Temporarily conducted Remotely	Program Indefinitely conducted Remotely
Student Course Loads	Small to Medium	Medium to Full	Medium to Full
Prior Teacher and Student Experience	Formal Distance Education Training and Credentials	No Prior Distance Teaching/Learning Experience	Crisis-based Remote Teaching/Learning Experience
Dominant Course Modality	Asynchronous Mode Dominant	Synchronous Mode Dominant	Synchronous Mode Dominant
Course Development	Formal Iterative Development Process	Emergency Transition Process	Informal Temporary Development Process
Delivery Tools and Platforms	Centralized and Standardized Tools and Platforms	Random and Non-standardized Tools and Platforms	Pre-determined but Non-standardized Tools and Platforms

Delivery Medium

The delivery of modern, formal distance education courses is overwhelmingly done through digital platforms that are hosted online (Moore & Kearsley, 2012). Nevertheless, formal distance courses in various parts of the world are still delivered via print materials and postal service where modern internet-related information and communications technology is inadequate or non-existent (Simonson et al., 2012). By contrast, the extant literature describing the delivery medium for ERT and SRT courses has been characterized as being exclusively online across K-12 (Bond, 2021) and higher education (Bond et al., 2021; Stewart, 2021).

Delivery Purpose

The purpose of ERT is very different from that of formal distance education; it is a sudden but temporary practice meant to maintain education through a crisis (Hodges et al., 2020; Jandric et al., 2020; Williamson et al., 2020). While ERT has become a prevalent worldwide experience as a result of the COVID-19 pandemic (UNESCO, n.d.), it is not the first time that ERT has in fact been implemented. For example, ERT was used to enable and maintain girls' access to education in Afghanistan due to Taliban attacks on international and all-girl schools in the late 1990s (Davies & Bentrovato, 2011). Nevertheless, because the implementation is sudden, the quality of courses delivered in this manner have numerous (and significant) shortcomings ranging from curriculum design to technological problems to name but two examples (see Alqurshi, 2020; Bozkurt et al., 2020; Chatziralli et al., 2020; Gao, 2020; Kapasia et al., 2020; Rahiem, 2020; Stewart et al., 2022; Sundarasan et al., 2020; Van Heuvelen et al., 2020). Where this practice starts to diverge from the emergency nature is when courses are continually delivered in this manner after the onset of an emergency and resumption of semi-normal course operations (Jandric et al., 2021; Schlesselman, 2020; Stewart et al., 2022).

Institutional Readiness and Capacity

Since the use of ERT is sudden, it comes as no surprise that institutions were generally not prepared for implementation. While this is understandable, there is a variability in institutional readiness that has been documented in studies to date. In Saudi Arabia, for example, Abdulrahim and Mabrouk (2020) found that student learning outcomes actually improved compared to previous semesters, though this was due in part to having both resilient instructors, a robust ICT infrastructure, and subject matter (i.e., humanities) that were not considered difficult to facilitate online on short notice. This was similarly the case for computer science students in the United Kingdom who experienced little disruption due to the digital nature of the work involved (Crick et al., 2020). Most institutions, however, lacked the readiness or capacity to easily facilitate ERT (MacIntyre et al., 2020; Osman, 2020; Peters et al., 2020). Nevertheless, when this practice continues beyond a single semester, a certain degree of institutional readiness and capacity exists (Jandric et al., 2021; Schlesselman, 2020; Stewart et al., 2022).

Stakeholder Volition

In general, institutions decide to offer distance education programs and create dedicated support structures and systems (Means et al., 2014). Students similarly decide to enroll in distance courses of their own volition. While there are instances when student enrollment in a distance course can be considered involuntary to a certain degree (e.g., the lack of face-to-face course offerings or inaccessibility by time/place) (Selwyn, 2011), the overall context is one where distance education is predominantly voluntary. ERT and SRT, by contrast, are involuntary by schools, educators, and students alike (Hodges et al., 2020). Under normal distance education conditions, Means et al. (2014) noted that some of the students who would benefit the most from distance education can be the most ill-suited for the practice in terms of intrinsic motivation and self-directedness. However, under extraordinary crisis conditions, involuntary online learning is paradoxical; student suitability for distance learning has likely not been an immediate concern (Apostolidou, 2020; Perez, 2021; Stewart, 2021).

Program Duration

While traditional campus students often complement their in-person face-to-face course loads with an online course or two (see Allen et al., 2016), the vast majority of their courses are conducted and completed in residence. With the introduction of ERT, entire course loads of residential and face-to-face programs were (and still are) being conducted remotely (Stewart & Lowenthal, 2022; Stewart et al., 2022). For students in short programs (i.e., certificates, master's degrees), ERT and SRT may coincide with the completion of an entire program. This likelihood has only increased as many colleges and universities around the world continue to operate courses remotely as a health and safety measure (Jyoti et al., 2021). Yet, these courses are not equivalent to formal distance education programs that were designed to be delivered online from start to finish. The quality of ERT may not necessarily improve even as it evolves into SRT (Jandric et al., 2021; Schlesselman, 2020; Stewart et al., 2022).

Student Course Loads

It is not uncommon for residential programs to allow students to take online courses to complement regular semester residential course loads (Allen et al., 2016; Seaman et al., 2018). It is uncommon, however, for students in residential programs to conduct their entire course loads online as experienced with ERT and SRT courses (Seaman et al., 2018; Stewart & Lowenthal, 2022; Stewart et al., 2022). One result of this has been an even more sedentary experience in front of a computer or mobile device in makeshift learning spaces for six to eight hours per day for educators and students alike (Sepulveda-Escobar & Morrison, 2020; Sundarasan et al., 2020). Stewart et al. (2022) also noticed that ERT course loads lightened semester over semester among exchange students at a university in Korea, suggesting that students were adapting to the increased workloads of their remote courses. In other countries, such as the United States, regulations for international students had to be modified due to visa stipulations that previously only allowed them to take a single online course per semester (Lim, 2021; Martel, 2020). International students, however, are more prone to difficulties in digital learning environments (Habib et al., 2014), in addition to related mental health issues due to more isolation which can be compounded in online learning environments (Erichsen & Bolliger, 2011). This is potentially highly problematic due to having entire course loads online for certain student populations under already adverse conditions (Stewart & Lowenthal, 2021; Stewart et al., 2022).

Prior Teacher/Student Experience

Face-to-face and online teaching are different (Palloff & Pratt, 1999; Ragan, 1999; Salmon, 2003). Thus, it is no surprise that the lack of experience by educators and students with teaching and learning online has resulted in sub-par learning conditions and outcomes (Ulla & Perales, 2021). However, at the same time when enrolling in online courses voluntarily, course success as well as student retention/attrition are closely linked to prior online course experience and student GPA (Aragon & Johnson, 2008; Dumais et al., 2013; Hachey et al., 2012, 2013; Kauffman, 2015; Liu et al., 2009; Packham et al., 2004; Roblyer & Davis, 2008; Xu & Jaggars, 2013). Under the duress of ERT and SRT, some scholars (see Azorin, 2020; Saito, 2021) are now concerned with the potentially significantly increased attrition rates as many students who would not otherwise be candidates for formal distance education programs had no other option outside of taking a leave of absence for an indefinite period of time. Attrition rates and gap years are occurring in addition to the learning losses occurring as a result of pandemic educational conditions (Ardington et al., 2021; Azevedo et al., 2021; Kaffenberger, 2021; Khomera, 2020).

Dominant Course Modality

There is no single type of course modality for face-to-face or online courses, though there is more variety when courses are delivered online (Lowenthal et al., 2009; Stewart & Lowenthal, 2021). Often non-

traditional adult students are attracted to courses that are delivered asynchronously to flexibly accommodate work and family responsibilities (Selwyn, 2011). Even when courses are designated as being 100% online or totally asynchronous, there can be some obligatory/voluntary synchronous components such as office hours or group discussions. However, studies on ERT have largely documented that course modality has been overwhelming synchronous or, has at the very least, relied disproportionately on synchronous course activities such as live lectures (see Iglesias-Prads et al., 2021; Jandric' et al., 2020; Mohammed et al., 2020; Perets et al., 2020; Shamir-Inbal & Blau, 2021; Shim & Lee, 2020; Stewart & Lowenthal, 2021; Stewart et al., 2022). The dominance of one mode over others is a reflection of the pandemic where a simple solution (i.e., synchronous remote teaching, live lectures) mimicking traditional face-to-face teaching practices was the most practical for an emergency (Stewart & Lowenthal, 2022). The effectiveness of this pragmatic solution, however, is questionable (Simonson, 1999), especially when sustained over multiple consecutive semesters (Jandric et al., 2021; Schlesselman, 2020; Stewart et al., 2022). Students and educators often described fatigue and discomfort (Bedenlier et al., 2021) from extended synchronous video sessions as the de facto course mode of operation.

Course Development

Formal online courses generally can take anywhere from six to nine months to develop, which is often done in conjunction with an instructional designer (Lowenthal et al., 2009; Means et al., 2014; Stewart & Lowenthal, 2021). ERT courses by contrast were “converted” within days of schools being closed. While this rapid transition is logical and courses could not be properly developed given the health and safety constraints of the pandemic, iteration and development of distance education courses is possible when extending beyond a single academic semester. Thus, while emergency transitions were expected during the Spring of 2020 and which resulted in unplanned and undeveloped ERT courses, subsequent semesters (i.e., Summer 2020, Fall 2020, Spring 2021, Fall 2021, etc.), can, in fact, see some degree of development. Remote delivery is anticipated, and courses can be prepared for, iterated upon, and modified given both prior experience and foreknowledge of the delivery conditions. These differences contrast sustained practice with one born out of emergency.

Delivery Tools and Platforms

Formal distance education programs typically have courses delivered through a standard course management system (CMS) and use a set of common tools designed to meet the needs or features of a particular curriculum and students (Lane, 2009; Means et al., 2014). The educational process, then, can be facilitated more efficiently and the resources and tools that students or educators have access to (and have expertise and experience with) is known; standardization allows for more effective support and integration. In the case of ERT, this type of centralized/standardized process was lacking for many. Educators turned to using various educational and non-educational tools such as Facebook, numerous video conferencing services like Zoom or WebEx, and other platforms such as blogs, wikis, etc. (Moghadam & Shamshi, 2021). Given the sudden transition, tools could be used superficially (Chang, 2020), which is a pre-existing problem in distance education more generally (Lane, 2009). The effect on students, however, is one where numerous different tools might have been needed for each of students' courses in order to accomplish the same tasks in worst case scenarios (Stewart & Lowenthal, 2021; Stewart et al., 2022). While students and teachers could perceive these tools both positively (Amin & Sundari, 2020) and negatively (Chang, 2020), the results were often simply frustrating, overwhelming, or stressful (Chang, 2020; Shamir-Inbal & Blau, 2021; Stewart, 2021). It could also be a source of trepidation for educators when forced to work differently at a moment's notice and being evaluated on their teaching performance (Choi et al., 2021). While these practices may have simplified over time as ERT has transitioned into SRT and faculty and students have gained more experience and comfort, there is no clear consensus in scholarship to date.

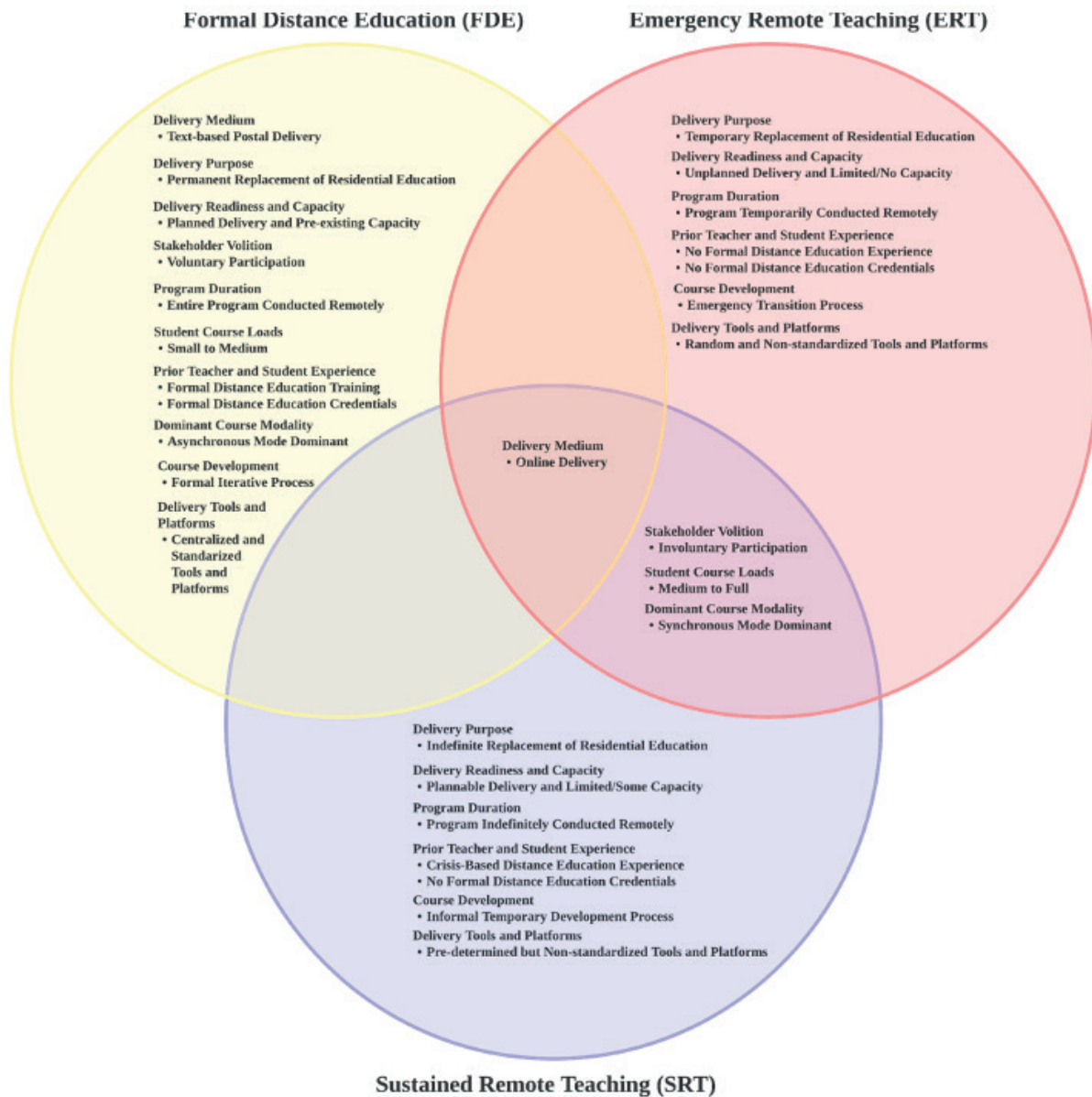


Figure 2. Emergency and Crisis Contexts: Similarities and Differences among FDE, ERT, and SRT

DISCUSSION AND CONCLUSION

The COVID-19 pandemic has exposed the absence of crucial technological and pedagogical skill sets in modern education for the vast majority of institutions and their educators. Further, the emergence of (and reliance on) ERT has highlighted certain contextual limits in our understanding of not only distance education, but the phenomenon of ERT as well. The extraordinary circumstances of a global disease pandemic and the sudden change in normal educational delivery conditions is an impetus to rethink previous (perhaps unquestioned) assumptions of the praxis. While this is not the first time such a revision has occurred (i.e., 40,000-year-old cave paintings as potentially asynchronous instruction) or the first-time educators have been asked to teach remotely without experience or expertise (as seen in the 1990s), it is the first involuntary global exercise in distance education in history to date, and likely not the last.

While many institutions, educators, and students were no doubt hopeful that ERT would be short-lived, the complexities of (and differences in) the human and governmental responses to the pandemic have forced the hands of many institutions and educators to sustain the practice; remote teaching and learning continue to be necessary as a health and safety measure. This raises numerous issues and questions about remote teaching under crisis conditions when crises are not short- but long-term. Further, certain practices that have emerged as

dominant teaching/learning methodologies (e.g., synchronous meetings/lectures) are likely to not only continue, but become increasingly commonplace in both formal face-to-face and asynchronous online courses moving forward. This, we posit, is due in large part due to faculty experience and comfort with ERT and SRT as a result of its implementation over a nearly three-year period of crisis situated teaching. The lines between formal distance education, traditional residential education, and ERT/SRT are likely going to become even more blurred.

Further, given increasingly globalized teaching and increasing numbers of international students enrolled at universities worldwide who relied on remote teaching and learning due to travel restrictions and/or inability to enter the host-countries where their universities were located, distance programs may likely remain as additional revenue sources once the pandemic subsides. Nevertheless, administrators, faculty, and students require the commensurate support and infrastructure for these programs to be both qualitatively and financially successful, not just providing the limited enterprise that ERT/SRT have been. Integrating distance education programs and practices into mainstream educational programs (from teacher-training programs to ongoing professional development) would benefit all university stakeholders.

The introduction of COVID-19 vaccines, accessible PCR and rapid antigen testing, improved public health and safety measures, and treatments for the disease have started to reduce the scale of SRT at schools around the world. This outcome, however, is highly variable and is not uniform across all countries and/or regions. Thus, SRT is likely a necessary educational delivery method for many at present due to the now endemic nature of the SARS-CoV2 virus, and lack of uniform herd immunity across the globe. Despite this reality, much of the literature to date has focused in large part on the transitions to ERT and initial remote teaching manifestations; there are only hints at what involuntary remote teaching and learning look like when COVID-19 continues to be widely prevalent, impeding or limiting face-to-face instruction. Given this lack of refinement in current ERT scholarship, we must be cautious in how the practice is conceptualized and consequently used as a research analytic. Thus, in this paper, we present several novel contextual characteristics to differentiate not only formal distance education with ERT, but to also delineate it from SRT. Further, this list is not meant to be exhaustive since it is impossible to completely capture a moving landscape. Nevertheless, this list of key novel contexts (and manifestations of these contexts) is intended to be a starting point for analytical consistency since many of the ways that crisis-based remote teaching and learning are being spoken about are simply inadequate.

Thus, we hope to move towards a model of describing and better understanding the contextual manifestations of remote teaching and learning under emergency and sustained crisis conditions not only for present challenges, but for future ERT/SRT scenarios (e.g., natural disasters, social and political unrest, wars, disease epidemics and pandemics, etc.) if, and likely when, they occur again. The descriptive model we provide offers a conceptual framework to systematically ground empirical research in this domain. The lessons we learn now can prepare us for more effective educational delivery under duress of future crises both short and long.

BIODATA and CONTACT ADDRESSES of AUTHORS



Dr. William H. STEWART, EdD, is the Inbound Exchange Student Program Manager at Hankuk University of Foreign Studies. In this role, he coordinates all aspects of inbound exchange administration and programming. He specializes in transnational and international education, particularly where these fields intersect with distance education. His research focuses on student motivations for, and experiences with distance education in cross-border settings with a focus on the Korean context. He earned a doctorate in Educational Technology from Boise State University in 2019 with a focus on transnational distance education. To date he has authored nearly 20 peer-reviewed journal publications.

William H. STEWART

Office of International Affairs

Address: Hankuk University of Foreign Studies, 107 Imun-ro Dongdaemun-gu, 02450, Seoul, Korea

Phone: + 82-2-2173-2062

E-mail: wstewart@hufs.ac.kr



Patrick R. LOWENTHAL, PhD, is a Professor in the Department of Educational Technology at Boise State University where he teaches masters and doctoral students in fully online graduate programs. Prior to joining the faculty full time in 2013, he spent two years as an Instructional Designer in the Educational Technology Department at Boise State University. He specializes in designing and developing online learning environments. As a researcher, he focuses on how people communicate using emerging technologies—with a specific focus on issues of presence, identity, and community—in online learning environments. During the past few years, he has given keynotes, presentations, and/or workshops on topics such as “Revisiting Presence and Community in the Online Classroom”, “Quality Online Courses”, “Moving Beyond Two Posts a Week and Three Replies: Thinking Differently About Threaded Discussions. Center for Teaching and Learning”, and “Getting Graphic About Infographics: Strategies for Incorporating Visuals in the Classroom”.

Patrick R. LOWENTHAL

Department of Educational Technology

Address: Boise State University, 1910 W. University Drive, 83725, Boise, United States of America

Phone: +1 (208) 426-1966

E-mail: patricklowenthal@boisestate.edu



David J. RICHTER, MS, earned his Bachelor’s Degree in Computer Science at Kempten University in 2019. He was also an International Masters Student who majored in Computer Information Technology at Purdue University Northwest. His research mainly focused on Deep Reinforcement Learning and Artificial Intelligence. He also taught classes as a Teaching Assistant in the Fields of Programming, Design and Networking. He also has an interest in international education and has supported international students while working in the University’s International Office.

David J. RICHTER

Computer Information Technology, College of Technology

Address: Purdue Northwest University, 2200 169th Street, 46323, Hammond, United States of America

Phone: +1 (219) 989-2082

E-mail: djrichte@pnw.edu

REFERENCES

- Abdulrahim, H., & Mabrouk, F. (2020). COVID-19 and the digital transformation of Saudi higher education. *Asian Journal of Distance Education*, 15, 291–306. <http://www.asianjde.org/ojs/index.php/AsianJDE/article/view/468>
- Allen, I. E., Seaman, J., Poulin, R., & Straut, T. T. (2016). Online report card: Tracking online education in the United States. *Babson Survey Research Group*. <http://onlinelearningsurvey.com/reports/onlinereportcard.pdf>
- Alqurshi, A. (2020). Investigating the impact of COVID-19 lockdown on pharmaceutical education in Saudi Arabia—A call for a remote teaching contingency strategy. *Saudi Pharmaceutical Journal*, 28, 1075–1083. <https://doi.org/10.1016/j.jsps.2020.07.008>
- Amin, F. M., & Sundari, H. (2020). EFL students’ preferences on digital platforms during emergency remote teaching: Video conference, LMS, or messenger application?. *Studies in English Language and Education*, 7, 362–378. <https://doi.org/10.24815/siele.v7i2.16929>
- Apostolidou, A. (2020, October). On the paradoxes of teaching digital anthropology online: Reflexive pedagogy and the challenges of involuntary online learning. In *EDEN Conference Proceedings* (pp. 376–386). <https://doi.org/10.38069/edenconf-2020-rw-0041>

- Aragon, S. R., & Johnson, E. S. (2008). Factors influencing completion and noncompletion of community college online courses. *American Journal of Distance Education*, 22, 146–158. <https://doi.org/10.1080/08923640802239962>
- Ardington, C., Wills, G., & Kotze, J. (2021). COVID-19 learning losses: Early grade reading in South Africa. *International Journal of Educational Development*, 86, 102480. <https://doi.org/10.1016/j.ijedudev.2021.102480>
- Azevedo, J. P., Hasan, A., Goldemberg, D., Geven, K., & Iqbal, S. A. (2021). Simulating the potential impacts of COVID-19 school closures on schooling and learning outcomes: A set of global estimates. *The World Bank Research Observer*, 36, 1–40. <https://doi.org/10.1093/wbro/lkab003>
- Azarin, C. (2020). Beyond COVID-19 supernova. Is another education coming? *Journal of Professional Capital and Community*, 5, 381–390. <https://doi.org/10.1108/JPCCC-05-2020-0019>
- Bach, S., Haynes, P., & Smith, J. L. (2006). *Online learning and teaching in higher education*. McGraw-Hill Education.
- Bali, M., & Meier, B. (2014, March 4). An affinity for asynchronous learning. *Hybrid Pedagogy*. <https://hybridpedagogy.org/affinity-asynchronous-learning/>
- Bedenlier, S., Wunder, I., Gläser-Zikuda, M., Kammerl, R., Kopp, B., Ziegler, A., & Händel, M. (2021). Generation invisible?. Higher education students' (non)use of webcams in synchronous online learning. *International Journal of Educational Research Open*, 2, 100068. <https://doi.org/10.1016/j.ijedro.2021.100068>
- Blair, K. L., & Monske, E. A. (2003). Cui bono?: Revisiting the promises and perils of online learning. *Computers and Composition*, 20, 441–453. <https://doi.org/10.1016/j.compcom.2003.08.016>
- Bond, M. (2021). Schools and emergency remote education during the COVID-19 pandemic: A living rapid systematic review. *Asian Journal of Distance Education*, 15, 191–247. <http://www.asianjde.com/ojs/index.php/AsianJDE/article/view/517>
- Bond, M., Bedenlier, S., Marin, V. I., & Händel, M. (2021). Emergency remote teaching in higher education: Mapping the first global online semester. *International Journal of Educational Technology in Higher Education*, 18, 1–24. <https://doi.org/10.1186/s41239-021-00282-x>
- Bower, B. L., & Hardy, K. P. (2004). From correspondence to cyberspace: Changes and challenges in distance education. *New Directions for Community Colleges*, 2004, 5–12. <https://doi.org/10.1002/cc.169>
- Bozkurt, A., Jung, I., Xiao, J., Vladimirsch, V., Schuwer, R., Egorov, G., ... & Rodes, V. (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, 1–126. <http://www.asianjde.org/ojs/index.php/AsianJDE/article/view/462>
- Budhrani, K., Martin, F., Malabanan, O., & Espiritu, J. L. (2021). How did parents balance it all? Work-from-home parents' engagement in academic and support roles during remote learning. *Journal of Online Learning Research*, 7, 153–184. <https://www.learntechlib.org/p/218909/>
- Buttler, T., George, D., & Bruggemann, K. (2021). Student input on the effectiveness of the shift to emergency remote teaching due to the COVID crisis: Structural equation modeling creates a more complete picture. *International Journal of Educational Research Open*, 2, 100036. <https://doi.org/10.1016/j.ijedro.2021.100036>
- Casey, D. M. (2008). A journey to legitimacy: The historical development of distance education through technology. *TechTrends*, 52, 45–51. <https://doi.org/10.1007/s11528-008-0135-z>
- Chang, Y. (2020). Teacher reflection on emergency remote teaching during the Coronavirus pandemic in a multicultural EAP classroom in South Korea. *Multimedia-Assisted Language Learning*, 23, 235–257. http://kmjournal.bada.cc/wp-content/uploads/2020/09/23_3_s01.pdf
- Chatziralli, I., Ventura, C. V., Touhami, S., Reynolds, R., Nassisi, M., Weinberg, T., ... & Yuan, M. (2020). Transforming ophthalmic education into virtual learning during COVID-19 pandemic: A global perspective. *Eye*, 35, 1459–1466. <https://doi.org/10.1038/s41433-020-1080-0>

- Choi, H., Chung, S. Y., & Ko, J. (2021). Rethinking teacher education policy in ICT: Lessons from Emergency Remote Teaching (ERT) during the COVID-19 pandemic period in Korea. *Sustainability*, *13*, 5480. <https://doi.org/10.3390/su13105480>
- Crick, T., Knight, C., Watermeyer, R., & Goodall, J. (2020, September). The impact of COVID-19 and “Emergency Remote Teaching” on the UK computer science education community. In *United Kingdom & Ireland Computing Education Research Conference* (pp. 31–37). <https://doi.org/10.1145/3416465.3416472>
- Davies, L., & Bentrovato, D. (2011). Understanding education’s role in fragility; Synthesis of four situational analyses of education and fragility: Afghanistan, Bosnia and Herzegovina, Cambodia, Liberia. *International Institute for Educational Planning*. <https://unesdoc.unesco.org/ark:/48223/pf0000191504>
- Doornbos, L. (2020). Emergency remote learning: Seeing, understanding and disrupting racism. *Journal of International Social Studies*, *10*, 76–89. <https://iajiss.org/index.php/iajiss/article/view/559>
- Dumais, S. A., Rizzuto, T. E., Cleary, J., & Dowden, L. (2013). Stressors and supports for adult online learners: Comparing first-and continuing-generation college students. *American Journal of Distance Education*, *27*, 100–110. <https://doi.org/10.1080/08923647.2013.783265>
- Erichsen, E. A., & Bolliger, D. U. (2011). Towards understanding international graduate student isolation in traditional and online environments. *Educational Technology Research and Development*, *59*, 309–326. <https://doi.org/10.1007/s11423-010-9161-6>
- Feenberg, A. (2003). Modernity theory and technology studies: Reflections on bridging the gap. In T. J. Misa, P. Brey, & A. Feenberg (Eds.), *Modernity and technology* (pp. 73–104). MIT Press.
- Gao, X. (2020). Australian students’ perceptions of the challenges and strategies for learning Chinese characters in emergency online teaching. *International Journal of Chinese Language Teaching*, *1*, 83–98. <https://doi.org/10.46451/ijclt.2020.06.04>
- Garrison, D. R., & Shale, D. (1987). Mapping the boundaries of distance education: Problems in defining the field. *American Journal of Distance Education*, *1*, 7–13. <https://doi.org/10.1080/08923648709526567>
- Gunawardena, C. N., & LaPointe, D. (2008). Social and cultural diversity in distance education. In T. Evans, M. Haughey, & D. Murphy (Eds.), *International handbook of distance education* (pp. 51–70). Emerald.
- Gunawardena, C. N., & McIsaac, M. S. (2013). Distance education. In J. M. Spector, M. D. Merrill, J. Ellen, & M. J. Bishop (Eds.), *Handbook of research on educational communications and technology* (pp. 361–401). Routledge.
- Guri-Rosenblit, S. (2005). ‘Distance education’ and ‘e-learning’: Not the same thing. *Higher Education*, *49*, 467–493. <https://doi.org/10.1007/s10734-004-0040-0>
- Gyampoh, A. O., Ayitey, H. K., Fosu-Ayarkwah, C., Ntow, S. A., Akossah, J., Gavor, M., & Vlachopoulos, D. (2020). Tutor perception on personal and institutional preparedness for online teaching-learning during the COVID-19 crisis: The case of Ghanaian colleges of education. *African Educational Research Journal*, *8*, 511–518. <http://doi.org/10.30918/AERJ.83.20.088>
- Habib, L., Johannesen, M., & Ogrim, L. (2014). Experiences and challenges of international students in technology-rich learning environments. *Journal Of Educational Technology and Society*, *17*, 196–206. <https://www.jstor.org/stable/jeductechsoci.17.2.196>
- Hachey, A. C., Wladis, C. W., & Conway, K. M. (2012). Is the second time the charm? Investigating trends in online re-enrollment, retention and success. *Journal of Educators Online*, *9*, 1–25. <http://files.eric.ed.gov/fulltext/EJ972049.pdf>
- Hachey, A. C., Wladis, C. W., & Conway, K. M. (2013). Balancing retention and access in online courses: Restricting enrollment ... Is it worth the cost? *Journal of College Student Retention: Research, Theory and Practice*, *15*, 9–36. <http://doi.org/10.2190/CS.15.1.b>

- Harasim, L. (1986). Educational applications of computer conferencing. *International Journal of E-Learning & Distance Education*, 1, 59-70. <http://www.ijede.ca/index.php/jde/article/view/305/765>
- Harasim, L. (2000). Shift happens: Online education as a new paradigm in learning. *The Internet and Higher Education*, 3, 41–61. [https://doi.org/10.1016/S1096-7516\(00\)00032-4](https://doi.org/10.1016/S1096-7516(00)00032-4)
- Hastings, N. B., & Tracey, M. W. (2005). Does media affect learning: Where are we now?. *TechTrends*, 49, 28–30. <https://doi.org/10.1007/BF02773968>
- Heydenrych, J. F., & Prinsloo, P. (2010). Revisiting the five generations of distance education: Quo vadis?. *Progressio*, 32, 5–26. <https://hdl.handle.net/10520/EJC88840>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). 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>
- Holmberg, B. (1986). *Growth and structure of distance education*. Croom Helm.
- Horn, M. B., & Staker, H. (2014). Blended learning in the K-12 education sector. In A. G. Picciano, C. Dziuban, & C. R. Graham (Eds.), *Blended learning: Research perspectives* (pp. 287–303). Routledge.
- Iglesias-Pradas, S., Hernandez-Garcia, A., Chaparro-Pelaez, J., & Prieto, J. L. (2021). Emergency remote teaching and students' academic performance in higher education during the COVID-19 pandemic: A case study. *Computers in Human Behavior*, 119, 106713. <https://doi.org/10.1016/j.chb.2021.106713>
- Jahng, N., Krug, D., & Zhang, Z. (2007). Student achievement in online distance education compared to face-to-face education. *European Journal of Open, Distance and E-Learning*, 10. <https://core.ac.uk/download/pdf/24065525.pdf>
- Jandric, P., Bozkurt, A., McKee, M., & Hayes, S. (2021). Teaching in the age of Covid-19-A longitudinal study. *Postdigital Science and Education*, 1–28. <https://doi.org/10.1007/s42438-021-00252-6>
- Jandric, P., Hayes, D., Truelove, I., Levinson, P., Mayo, P., Ryberg, T., ... & Jackson, L. (2020). Teaching in the age of COVID-19. *Postdigital Science and Education*, 2, 1069–1230. <https://doi.org/10.1007/s42438-020-00169-6>
- Johnson, S. D., Aragon, S. R. & Shaik, N. (2000). Comparative analysis of learner satisfaction and learning outcomes in online and face-to-face learning environments. *Journal of Interactive Learning Research*, 11, 29–49. <https://www.learntechlib.org/primary/p/8371/>
- Jyoti, G., Kumari, R., & Sharma, K. (2021) Perception of undergraduate nursing students regarding online learning during COVID-19 second wave. *International Journal of Science and Research*, 10, 756–762. <http://doi.org/10.21275/MR21517164704>
- Kaffenberger, M. (2021). Modelling the long-run learning impact of the Covid-19 learning shock: Actions to (more than) mitigate loss. *International Journal of Educational Development*, 81, 102326. <https://doi.org/10.1016/j.ijedudev.2020.102326>
- Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R., ... & Chouhan, P. (2020). Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India. *Children and Youth Services Review*, 116, 105194. <https://doi.org/10.1016/j.childyouth.2020.105194>
- Kauffman, H. (2015). A review of predictive factors of student success in and satisfaction with online learning. *Research in Learning Technology*, 23. <http://dx.doi.org/10.3402/rlt.v23.26507>
- Keegan, D. (1988). Concepts: Problems in defining the field of distance education. *American Journal of Distance Education*, 2, 4–11. <https://doi.org/10.1080/08923648809526619>
- Khomera, S. W. (2020). China's internationalized higher education during COVID-19: Collective student autoethnography. *Postdigital Science and Education*, 2, 968–988. <https://doi.org/10.1007/s42438-020-00128-1>

- Lane, L. M. (2009). Insidious pedagogy: How course management systems affect teaching. *First Monday*, 14. <https://firstmonday.org/ojs/index.php/fm/article/download/2530/2303>
- Lee, K. (2017). Rethinking the accessibility of online higher education: A historical review. *The Internet and Higher Education*, 33, 15–23. <https://doi.org/10.1016/j.iheduc.2017.01.001>
- Lim, D. (2021). Travel bans and COVID-19. *Ethics & Global Politics*, 14, 55–64. <https://doi.org/10.1080/16544951.2021.1926086>
- Liu, S. Y., Gomez, J., & Yen, C. J. (2009). Community college online course retention and final grade: Predictability of social presence. *Journal of Interactive Online Learning*, 8, 165–182. <https://core.ac.uk/download/pdf/217287835.pdf>
- Lowenthal, P. R., Wilson, B., & Parrish, P. (2009). Context matters: A description and typology of the online learning landscape. In M. Simonson (Ed.), *32nd Annual proceedings: Selected research and development papers presented at the annual convention of the Association for Educational Communications and Technology*. AECT.
- MacIntyre, P. D., Gregersen, T., & Mercer, S. (2020). Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. *System*, 94, 102352. <https://doi.org/10.1016/j.system.2020.102352>
- Martel, M. (2020). COVID-19 effects on US higher education campuses. From emergency response to planning for future student mobility. *Institute of International Education*. <https://bit.ly/2zVxewC>
- Means, B., Bakia, M., & Murphy, R. (2014). *Learning online: What research tells us about whether, when and how*. Routledge.
- Moghadam, M., & Shamsi, H. (2021). Exploring learners' attitude toward Facebook as a medium of learners' engagement during Covid-19 Quarantine. *Open Praxis*, 13, 103–116. <http://doi.org/10.5944/openpraxis.13.1.1163>
- Mohammed, A. O., Khidhir, B. A., Nazeer, A., & Vijayan, V. J. (2020). Emergency remote teaching during Coronavirus pandemic: The current trend and future directive at Middle East College Oman. *Innovative Infrastructure Solutions*, 5, 1–11. <https://doi.org/10.1007/s41062-020-00326-7>
- Moore, M. G., & Kearsley, G. (2012). *Distance education: A systems view of online learning*. Wadsworth Cengage Learning.
- Osman, M. E. (2020). Global impact of COVID-19 on education systems: The emergency remote teaching at Sultan Qaboos University. *Journal of Education for Teaching*, 46, 463–471. <https://doi.org/10.1080/02607476.2020.1802583>
- Packham, G., Jones, P., Miller, C., & Thomas, B. (2004). E-learning and retention: Key factors influencing student withdrawal. *Education+ Training*, 46, 335–342. <http://doi.org/10.1108/00400910410555240>
- Palloff, R. N., & Pratt, K. (1999). *Building learning communities in cyberspace*. Jossey-Bass.
- Perets, E. A., Chabeda, D., Gong, A. Z., Huang, X., Fung, T. S., Ng, K. Y., ... & Yan, E. C. (2020). Impact of the emergency transition to remote teaching on student engagement in a non-STEM undergraduate chemistry course in the time of COVID-19. *Journal of Chemical Education*, 97, 2439–2447. <https://doi.org/10.1021/acs.jchemed.0c00879>
- Perez, M. A. (2021). A writing module to sustain L2 learner motivation during a year of involuntary distance learning. *Journal of Kobe Shoin Women's University*, 2, 49–66. <http://doi.org/10.14946/00002255>
- Perraton, H. (1988). A theory for distance education. In D. Sewart, D. Keegan, & B. Holmberg (Eds.), *Distance education: International perspectives* (pp. 34–45). Routledge.
- Peters, M. A., Wang, H., Ogunniran, M. O., Huang, Y., Green, B., Chunga, J. O., ... & Khomera, S. W. (2020). China's internationalized higher education during COVID-19: Collective student autoethnography. *Postdigital Science and Education*. <https://doi.org/10.1007/s42438-020-00128-1>

- Peters, O. (1994). *Otto Peters on distance education: The industrialization of teaching and learning*. Routledge.
- Phirangee, K., & Malec, A. (2017). Othering in online learning: An examination of social presence, identity, and sense of community. *Distance Education*, 38, 160–172. <https://doi.org/10.1080/01587919.2017.1322457>
- Protopsaltis, S., & Baum, S. (2019). Does online education live up to its promise? A look at the evidence and implications for federal policy. *Center for Educational Policy Evaluation*. <https://jesperbalslev.dk/wp-content/uploads/2020/09/OnlineEd.pdf>
- Ragan, L. (1999). Good teaching is good teaching: An emerging set of guiding principles and practices for the design and development of distance education. *CAUSE/EFFECT*, 22. <https://www.educause.edu/ir/library/html/cem/cem99/cem9915.html>
- Rahiem, M. D. (2020). The emergency remote learning experience of university students in Indonesia amidst the COVID-19 crisis. *International Journal of Learning, Teaching and Educational Research*, 19, 1–26. <https://doi.org/10.26803/ijlter.19.6.1>
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science and Education*, 2, 923–945. <https://doi.org/10.1007/s42438-020-00155-y>
- Roblyer, M. D., & Davis, L. (2008). Predicting success for virtual school students: Putting research-based models into practice. *Online Journal of Distance Learning Administration*, 11. <http://www.westga.edu/~distance/ojdla/winter114/roblyer114.html>
- Rumble, G. (1989). Concept: On defining distance education. *American Journal of Distance Education*, 3, 8–21. <https://doi.org/10.1080/08923648909526660>
- Saito, E. (2021). Collateral damage in education: Implications for the time of COVID-19. *Discourse: Studies in the Cultural Politics of Education*, 1–16. <https://doi.org/10.1080/01596306.2021.1953443>
- Salmon, G. (2003). *E-moderating: The key to teaching and learning online (2nd ed.)*. Taylor & Francis.
- Schlesselman, L. S. (2020). Perspective from a teaching and learning center during emergency remote teaching. *American Journal of Pharmaceutical Education*, 84, 1043–1044. <https://www.ajpe.org/content/ajpe/84/8/ajpe8142.full.pdf>
- Schlosser, C. A., & Anderson, M. L. (1994). *Distance education: Review of the literature*. AECT.
- Seaman, J. E., Allen, I. E., & Seaman, J. (2018). Grade increase: Tracking distance education in the United States. *Babson Survey Research Group*. <https://files.eric.ed.gov/fulltext/ED580852.pdf>
- Selwyn, N. (2011). ‘Finding an appropriate fit for me’: Examining the (in) flexibilities of international distance learning. *International Journal of Lifelong Education*, 30, 367–383. <https://doi.org/10.1080/02601370.2011.570873>
- Sepulveda-Escobar, P., & Morrison, A. (2020). Online teaching placement during the COVID-19 pandemic in Chile: Challenges and opportunities. *European Journal of Teacher Education*, 43, 587–607. <https://doi.org/10.1080/02619768.2020.1820981>
- Sethi, B. A., Sethi, A., Ali, S., & Aamir, H. S. (2020). Impact of coronavirus disease (COVID-19) pandemic on health professionals. *Pakistan Journal of Medical Sciences*, 36. <https://doi.org/10.12669/pjms.36.COVID19-S4.2779>
- Sethy, S. S. (2008). Distance education in the age of globalization: An overwhelming desire towards blended learning. *Turkish Online Journal of Distance Education*, 9, 29–44. <https://dergipark.org.tr/en/pub/tojde/issue/16917/176517>
- Shamir-Inbal, T., & Blau, I. (2021). Facilitating emergency remote K-12 teaching in computing-enhanced virtual learning environments during COVID-19: Pandemic-blessing or curse?. *Journal of Educational Computing Research*, 1–29. <http://doi.org/10.1177/0735633121992781>

- Shattuck, K. (2021). Editorial: Lessons not learned. *American Journal of Distance Education*, 35, 169–169. <https://doi.org/10.1080/08923647.2021.1969842>
- Shim, T. E., & Lee, S. Y. (2020). College students' experience of emergency remote teaching due to COVID-19. *Children and Youth Services Review*, 119, 105578. <https://doi.org/10.1016/j.chilyouth.2020.105578>
- Shin, M., & Hickey, K. (2020). Needs a little TLC: Examining college students' emergency remote teaching and learning experiences during COVID-19. *Journal of Further and Higher Education*, 45, 973–986. <https://doi.org/10.1080/0309877X.2020.1847261>
- Simonson, M. (1999). Equivalency theory and distance education. *TechTrends*, 43, 5–8. <https://doi.org/10.1007/BF02818157>
- Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2012). *Teaching and learning at a distance: Foundations of distance education* (5th ed.) Pearson.
- Stewart, W. H. (2021). A global crash-course in teaching and learning online: A thematic review of empirical Emergency Remote Teaching (ERT) studies in higher education during Year 1 of COVID-19. *Open Praxis*, 13, 89–102. <http://doi.org/10.5944/openpraxis.13.1.1177>
- Stewart, W. H., & Lowenthal, P. R. (2021). Experiences and perceptions of exchange students learning online during the COVID-19 pandemic in the Republic of Korea: An exploratory descriptive study. *Asian Journal of Distance Education*, 16, 119–140. <https://doi.org/10.5281/zenodo.4782878>
- Stewart, W. H., Baek, Y., & Lowenthal, P. R. (2022). From Emergency Remote Teaching (ERT) to Sustained Remote Teaching (SRT): A comparative semester analysis of exchange students' experiences and perceptions of learning online during COVID-19. *Online Learning*, 26, 170–197. <http://dx.doi.org/10.24059/olj.v26i2.2661>
- Stewart, W. H., & Lowenthal, P. R. (2022). Distance education under duress: A case study of exchange students' experiences with online learning during the COVID-19 pandemic in the Republic of Korea. *Journal of Research on Technology in Education*, 54, S273–S287. <http://doi.org/10.1080/15391523.2021.1891996>
- Sundarasan, S., Chinna, K., Kamaludin, K., Nurunnabi, M., Baloch, G. M., Khoshaim, H. B., ... & Sukayt, A. (2020). Psychological impact of COVID-19 and lockdown among university students in Malaysia: Implications and policy recommendations. *International Journal of Environmental Research and Public Health*, 17, 6206. <https://doi.org/10.3390/ijerph17176206>
- Ulla, M. B., & Perales, W. F. (2021). Emergency Remote Teaching during COVID19: The role of teachers' online Community of Practice (CoP) in times of crisis. *Journal of Interactive Media in Education*, 9, 1–11. <http://doi.org/10.5334/jime.617>
- UNESCO (n.d.). Education: From disruption to recovery. UNESCO. <https://en.unesco.org/covid19/educationresponse>
- Van Heuvelen, K. M., Daub, G. W., & Ryswyk, H. V. (2020). Emergency remote instruction during the COVID-19 pandemic reshapes collaborative learning in general chemistry. *Journal of Chemical Education*, 97, 2884–2888. <https://doi.org/10.1021/acs.jchemed.0c00691>
- Veletsianos, G., & Houlden, S. (2019). An analysis of flexible learning and flexibility over the last 40 years of Distance Education. *Distance Education*, 40, 454–468. <https://doi.org/10.1080/01587919.2019.1681893>
- Westera, W. (2015). Reframing the role of educational media technologies. *Quarterly Review of Distance Education*, 16, 19–32. <https://core.ac.uk/download/pdf/55538834.pdf>
- Whittle, C., Tiwari, S., Yan, S., & Williams, J. (2020). Emergency remote teaching environment: A conceptual framework for responsive online teaching in crises. *Information and Learning Sciences*, 121, 311–319. <https://doi.org/10.1108/ILS-04-2020-0099>

- Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45, 107–114. <https://doi.org/10.1080/17439884.2020.1761641>
- Wladis, C., Hachey, A. C., & Conway, K. M. (2021, September). Differences in academic resiliency when the pandemic forced courses online: Was prior online coursetaking protective?. In *EDEN Conference Proceedings* (pp. 312–321). <https://doi.org/10.38069/edenconf-2021-ac0030>
- Xu, D., & Jaggars, S. S. (2013). Adaptability to online learning: Differences across types of students and academic subject areas. CCRC Working Paper No. 54. Community College Research Center, Columbia University. <http://ccrc.tc.columbia.edu/media/k2/attachments/adaptability-to-online-learning.pdf>
- Yen, S. C., Lo, Y., Lee, A., & Enriquez, J. (2018). Learning online, offline, and in-between: Comparing student academic outcomes and course satisfaction in face-to-face, online, and blended teaching modalities. *Education and Information Technologies*, 23, 2141–2153. <https://doi.org/10.1007/s10639-018-9707-5>