Should Teachers be Trained in Emergency Remote Teaching? Lessons Learned from the COVID-19 Pandemic

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In the midst of the COVID-19 outbreak, many educators across the country and around the world scrambled to shift their practice from in-person to remote teaching within a matter of days. This global pandemic exposed a significant gap in teacher preparation and training for emergency remote teaching, including teaching with technology to ensure continuity of learning for students at a distance. To learn more about educators' experiences during this crisis, we designed and distributed an online survey that received 325 responses from K-12 educators between April 4 and May 10, 2020. In this article, we share initial insights from the survey and provide recommendations for how to better prepare and support educators for teaching remotely in times of need.

RATIONALE

To ensure continuity of learning for any situation and to support learners across spatial and temporal boundaries, educators need to be "fluent users of technology; creative and collaborative problem solvers; and adaptive, socially aware experts throughout their careers" (U.S. Department of Education Office of Educational Technology [OET], 2016, p. 34). The ability to

use technology to teach learners at distance has been especially important in times of emergency, such as natural disasters (Joshi et al., 2018; Rush et al., 2016) and extreme violence (Ramadan, 2017). Yet, while the use of technology for in-person, distance, and remote teaching has been happening since the early 1980's (U.S. Department of Education, 1996), the widespread closing of schools due to the 2020 COVID-19 outbreak seemed to shock the educational community, with many teachers scrambling to figure out how to shift their pedagogy to "emergency remote teaching" (Hodges et al., 2020, para. 5). What can we learn from educators navigating this global pandemic and how can we better train and support educators so they are ready to design quality learning experiences for any situation?

PROCESS

For this study, we distributed an online survey (see Appendix Table A1) via social media channels and local Massachusetts school districts to collect data from educators regarding their experiences shifting to emergency remote teaching. Between April 3 and May 10, a total of 325 K-12 educators filled out the survey. Most participants reported teaching in public schools (*n*=260; 80%), with some teaching in independent/private schools (*n*=46; 14%) or charter schools (*n*=19; 6%). Their years of teaching experience ranged from 1-38, with an average of 16. Participants reported teaching in Pre-K (*n*=7; 2%), elementary schools (*n*=121; 37%), middle schools (*n*=67; 21%), high schools (*n*=89; 27%), or some other combination of schools such as K-8 or 6-12 grades (*n*=42; 13%). More than half of the participants (*n*=185; 57%) reported teaching in suburban schools, while 93 (28%) were in urban schools and 47 (15%) were in rural schools. The vast majority of participants were located in the United States (*n* =295; 91%). The remaining participants were located around the world (e.g., Egypt, Hong Kong, Canada, Italy, Spain, China).

To analyze the dataset, we generated descriptive statistics for the quantitative items and engaged in a thematic analysis (Braun & Clarke, 2006) of one open-ended question. We conducted member checking of our interpretation of the data with four educators. While we recognize that convenience sampling may limit the generalization of our findings, the data yielded initial insights that might be helpful in guiding the design of in-service and pre-service teacher learning experiences.

RESULTS

While many participants reported that, prior to January 2020, they had never tried remote teaching (n=208; 68%), online teaching (n=185; 66%), or blended teaching (n=155; 55%), almost one-third of the participants indicated they had at least some experience with remote or online teaching and nearly one-half of the participants had some experience with blended teaching. Yet, participants expressed facing, on average, 4.89 different challenges during the shift to emergency remote teaching (ERT) (see Table 1). Given these challenges, participants reported engaging in, on average, 4.90 different learning experiences to support their move to remote teaching (see Table 2). Overall, participants felt overwhelmed and unprepared to use online or remote teaching strategies and tools and they struggled to adapt their pedagogy to fluctuating situations, such as students' unreliable Internet access, changing personal needs, and unclear or shifting educational or governmental directives. Participants reported needing significant support with shifting their practice and, as a result, mainly relied on informal, self-directed learning with their professional learning networks for assistance.

Table 1

Q64 - Which of the challenges did you face when you were first asked to shift your instruction to emergency remote teaching by your educational institution? (n=325)

Challenge	Total (n)	Percent
Feeling overwhelmed with all the online learning resources and tools available	198	61%
Lack of quality Internet access (for students)	173	53%
Lack of knowledge about online/remote teaching strategies	168	52%
Prioritization of personal needs (e.g., elder care, parenting, homeschooling)	162	50%
Lack of knowledge about online/remote teaching tools	143	44%
Lack of knowledge about online/remote communication tools	140	43%
Prioritization of personal health/well-being	124	38%
Lack of communication between students and parents	117	36%
Educational/governmental directives that restricted/prohibited remote teaching	95	29%
Lack of knowledge about online/remote communication strategies (to communicate with students/parents/guardians)	86	26%
Lack of support from administrators	53	16%
Lack of quality Internet access (for the participant)	32	10%

Table 2

Q67 - What ways did you prepare yourself for the shift to remote teaching?
Check all that apply. (*n*=325)

Challenge	Total (*n*)	Percent
Asked colleagues for help/ideas/resources	222	68%
Conducted internet searches	206	63%
Read comments by other educators on social media posts	177	54%
Read social media posts	168	52%
Reviewed resources provided by my district	167	51%
Reviewed resources provided by outside organizations (e.g., PBS, ISTE, KQED, Common Sense Media)	146	45%
Attended virtual webinars	127	39%
Attended virtual office hours with professional staff (e.g. technology coaches, district IT professionals)	104	32%
Read books or articles	85	26%
Asked for help/ideas/resources on social media	79	24%
Asked administrators for help/ideas/resources	75	23%

When asked to comment on whether educators should be trained in emergency remote teaching (ERT), opinions varied. Out of the 256 recorded comments, 169 (66%) agreed that educators should have more training, 47 (18%) disagreed, and 15 (6%) were unsure. Regardless of participants' sentiments, many felt that educators need more training in teaching with technology, including using technology for blended and online formats (see Appendix Tables A2 & A3). A number of participants noted that had they been better prepared to design technology-rich learning experiences and spent more time using technology in their classes prior to the pandemic, it would have been easier to ensure continuity of learning for students at a distance and it would have significantly reduced the stress of transitioning to ERT for themselves, their students, and their students' parents/families. In terms of training, some participants expressed concern about the effectiveness of a one-time professional development (PD) training for ERT and noted that engaging in social, learner-centered activities, like self-directed learning, ongoing practice, conversations with mentors/coaches, and collaborating with colleagues would be the most helpful way to adapt their practice in the current situation.

IMPLICATIONS

The COVID-19 outbreak exposed a significant variation in educators' readiness to use technology to support learners at a distance. While teachers who used technology frequently in their practice, including for blended learning, reported an easier transition to ERT for themselves and their students, most educators seemed to be learning online and remote teaching strategies and tools while teaching online or remotely (aka "building the plane while flying it").

For decades, scholars have pointed out that educators have been "ill-prepared to teach with technology" (Foulger et al., 2017, p. 418) and this study showed that the lack of preparation, training, and support the participants had for designing quality instruction with technology created additional stressors and barriers to teaching and learning remotely in times of need. Based on the findings from our study, we offer the following recommendations for teacher education programs: 1) infuse the entire curriculum with program-wide and program-deep high quality and quantity technology experiences (Foulger et al., 2017; Trust, 2017; OET, n.d.); 2) provide teachers with the opportunity to develop K-12 online and blended teaching competencies so that they are prepared to teach in different formats, settings, and situations (Archambault & Kennedy, 2014; Graham, Borup, Pulham & Larsen, 2019; OET, 2016; Pulham & Graham, 2018; Zweig & Stafford, 2016); and 3) encourage educators to cultivate digitally-enhanced professional learning networks to support their ongoing learning and growth related to teaching with technology (Trust et al., 2016).

Additionally for providers of in-service teacher training and support, we recommend creating "unstructured professional development (e.g., mentoring or online forums)" (Zweig & Stafford, 2016, p. 411) and socially-connected, learner-centered activities that allow educators to develop knowledge and skills to help them teach with technology in any format or situation, including online, remote, or blended settings (see Trust & Zinn's 2020 Preparing for Remote/Online Teaching in the Fall PD choice board slides as an example; https://bit.ly/teachingPDparty). In particular, participants in our study struggled to find, evaluate, and curate digital tools for teaching and communicating with students at a distance. Participants also struggled with supporting student engagement and perseverance, and this connects with findings related to K-12 online teaching (Zweig & Stafford, 2016). Therefore, we recommend that teacher educators explore current literature, including initial results from the *Journal of Technology in Teacher Education's* COVID-19 special issue as well as research related to blended

and online teacher competencies, to identify professional learning topics for supporting teachers' ongoing learning and growth.

FUTURE RESEARCH

While this study illuminated some of the challenges teachers faced in the early days of teaching during the COVID-19 pandemic, additional research is needed to provide better support, preparation, and professional development for educators. For instance, scholars might consider evaluating how educators used technology for ERT. Did educators try to replicate their in-person teaching strategies with digital tools (e.g., Zoom, Google Meet) or did they design authentic, technology-rich learning activities with new digital tools and apps? What is the relationship between educators' online and blended teaching competencies (Pulham & Graham, 2018) and the quality of their teaching with technology during ERT? Did teachers with students in low-income communities limit their use of technology due to access issues? If so, how did this affect the digital divide (Warschauer, 2007)? Studies on educators' use of technology during ERT could illuminate ways to improve teaching and learning with technology for all students.

Finally, additional studies are needed regarding the difference in ERT and blended or online teaching. In emergency settings, students may experience trauma (Burde et al., 2017), lack typical services provided by schools (e.g., meals, IEP providers and supports), and lack electrical power, access to technology, or reliable Internet (Rush et al., 2016). These factors can significantly impact an educators' ability to support learners with technology. Exploring the difference between ERT, blended teaching, and online teaching may help scholars and teacher educators identify professional learning topics that can improve teachers' feelings of preparedness for teaching in any situation moving forward.

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APPENDIX

Table A1

Survey Protocol

Demographic Data
Years in education, type of educational institution (public K-12, charter K-12, private K-12, community college, university), type of school community (rural, suburban, urban), teaching location (country and state), subject and grade level taught, percent of students eligible for free or reduced cost lunches

Experience Shifting to ERT
Prior to January, how much experience did you have with: 1) Remote teaching, 2) Online teaching, and 3) Blended teaching: 　　　　No experience 　　　　A little experience (tried this format at least once, such as for a snow day) 　　　　Some experience (tried this format for multiple days/weeks) 　　　　A good amount of experience (taught at least one course fully in this format) 　　　　Significant experience (taught multiple courses in this format) Which of the challenges did you face when you were first asked to shift your instruction to emergency remote teaching by your educational institution? (*see Table 1*) What ways did you prepare yourself for the shift to remote teaching? (*see Table 2*) Which digital tools/apps did you start using (or used more) as a result of emergency remote teaching?*

Lessons Learned & Advice for Educators
What were the 3 biggest challenges you faced once you started emergency remote teaching?* What were the 3-5 most important things you learned from the emergency remote teaching experience?* What recommendations and advice do you have for teachers who are asked to do emergency remote teaching in the future?* Should educators be trained in emergency remote teaching (e.g., in teacher preparation programs or professional development workshops)? Why or why not?

*Note: Data from this question were not reported in this paper.

Table A2

Reasons for Training in Emergency Remote Teaching

Common Sentiment	Example
If teachers were trained ahead of time, the shift would have been less stressful, chaotic, and "messy."	"This was never expected and if there was training in place we would not have to start from scratch. Many are scrambling, stressed, and overwhelmed. This is too much."
Educators need to learn how to use technology in their practice.	"Yes, but the first step needs to be teaching teachers how to use and integrate technology in their normal teaching. It will not work well if teachers need to learn basic technology integration skills once remote learning starts."
Use of technology and blended/online teaching practices prior to the pandemic would have made it easier for parents and students to transition during the pandemic.	"I think if teachers had been required to use these technologies ahead of time, even minimally, both they, the students, and the parents would have been better prepared."
Emergencies like this may happen again.	"This kind of thing could happen any time, we're probably lucky that we've made it as long as we have without it happening, and even if it never happens again it is better to be prepared than to have people's physical and mental health affected by a necessity of this magnitude."
Teachers need to be trained in online teaching because students will likely experience online learning at some point in their education.	"Teachers should be trained, at least on the basics of online instruction and assessment tools, as online learning will, and should, be a routine part of every student's learning experience."
It can be helpful for teaching students who may not be able to attend school for a certain reason.	"Absolutely. This is, to my mind, a remarkable opportunity for us to look at how we can enable a more equitable pedagogy for disabled students/students with disabilities who cannot physically attend school."

Table A3

Reasons Against Training in Emergency Remote Teaching

Common Sentiment	Example
This is a unique situation that may not ever happen again.	"This seems like a once in a lifetime situation. There's nothing like being in the live classroom."
It would be better to prepare teachers for quality instructional practices, like blended learning, so they can teach in any situation.	"No because this is a very unique situation that will hopefully not happen again for a long time. A better course of action would be to do a blended learning model that can move online easier in the event of an emergency because that's good teaching in person as well."
It would be more useful to focus professional development (PD) on teaching with technology.	"I don't know that teachers need to be explicitly taught about emergency remote teaching. Instead, having some real focus on online learning tools so that educators can choose to implement some in their in-person teaching and will have the knowledge if there is an emergency need would be helpful."
PD (in general) isn't helpful.	"PD tends to be outdated and useless. Without constant practice, nothing you learn matters."
Formal training is not an effective way to learn.	"The most productive work comes from collaborating with colleagues and just trying to figure stuff out on your own. A formal training on this would be outdated the moment it was completed."
It would be more effective for administrators, coaches, or leaders to be trained for emergency situations in education.	"No, not for general educators. This is a pandemic that happens once a generation or less. I would instead recommend having a specialist who is trained who works with teachers when the need arises."
It's too late now. Teachers already figured out how to make it work.	"Maybe..too late now. Self-training is how it went."