Where Did We Go Wrong? An Exploration of the Failure to Prepare for Mass School Closure

Abstract. Why were schools simply unprepared for the mass closures induced by COVID-19? Why were educators ill equipped to be able to provide instruction in modalities other than the traditional classroom? Why did teacher education program fail to prepare pre-service teachers with the skills that would be needed in the Spring of 2020? While most scholars fail to realize this, but the literature in the field documented numerous instances of distance learning being used to provide continuity of learning in the face of disaster. Further, a variety of government agencies warned the field that this was a possibility and they needed to be prepared. Finally, national plans had been advising teacher education of the importance of online learning for over a decade. So where did we go wrong? This interactive panel will explore these questions.

Early in 2022, the *Journal of Technology and Teacher Education* issued a call for papers for a special issue entitled "A 2025 Vision for Technology and Teacher Education." In that call, the editors stated that:

Significant evidence exists of the impact of the COVID-19 pandemic (and other recent events) on teacher education. For instance, the pandemic highlighted problems and gaps in teacher preparation (i.e., online education), it showcased strengths in teacher educators' responding to a changing world (i.e., caring pedagogy), and it revealed opportunities for continued growth and evolution in the field. (Ferdig & Hartshorne, 2022, para 1)

Potential authors were asked to address one or more of three questions, one of which focused on concrete goals that teacher education programs could achieve by the year 2025 in order to address the issues raised by COVID-19 or other related events.

In response to that call, we collaborated with Rick Ferdig to recommend what we felt was achievable (Hodges et al., 2022). Over subsequent scholarly efforts, we have refined our recommendations to two goals and six objectives

- 1. Scholars need funded efforts to develop promising practices and frameworks that teacher education programs can use and be evaluated against.
 - a. Validated, research-based standards must be developed.
 - b. Metrics and instruments must be created or refined to further assess and support growth of preservice teachers knowledge, skills, and attitudes of teaching in K-12 online and blended learning.
- 2. Teacher education programs, specifically for online teaching, need to provide teachers with experience in designing, delivering, and facilitating instruction, as well as learning themselves online.
 - a. There must be sufficient course work to give pre-service teachers access to knowledge, skills, and attitudes related to K-12 online and blended learning.
 - b. Teacher candidates should have experiences as online learners.
 - c. Teacher education programs must include field experiences in online and blended learning.
 - d. Have accrediting bodies and state agencies require that all pre-service teachers have meaningful and useful preparation to deliver online and blended learning. (Barbour & Hodges, in press; Hodges & Barbour, accepted)

However, this situation begs the larger question of why there was a need for this special issue, and the specific suggestions that we offered in the first place?

This is a valid question to explore because there has been much more literature about the use of distance education to provide continuity of learning during school closures than most teacher education faculty are aware. For example, there were the 2003 school closures in Asia and in countries with high levels of migration to and from Asia due to SARS (Alpert, 2011; Borja, 2003). In 2008 there were additional closures in countries like Bolivia, Hong Kong, and Singapore due to H1N1 (Barbour, 2010; Barbour et al., 2011; Latchem & Jung, 2009). There have been school closures due to earthquakes (Baytiyeh, 2018; Mackey et al., 2012; Samson, 2020), as well as wildfires, flooding, hurricanes, polar vortexes, and other natural disasters (Jackson & Ahmed, 2020; Miller & Hui, 2022; Rush et al., 2016; Schwartz et al., 2020) - all of which are likely to be magnified due to human-induced climate change. Speaking of climate, distance learning has often been proposed as an alternative to school closures due to inclement weather (Ferdig, 2018; Gibson et al., 2008; Hawkins et al., 1996; Hua et al., 2017; Lamarre, 1999; Milman, 2014; Swetlik et al., 2015). Additionally, individual students often miss school due to individual health issues (Black et al., 2022; Fernandez et al., 2016; Thompson et al., 2012). And these citations simply reference scholarship from the past 30 years! It doesn't include examples popular media authors have found of telephone being used during the Spanish flu of 1919 or correspondence education and educational radio being used during the polio epidemic in New Zealand

in 1948 (German, 2020; McCracken, 2020). Given this history, some of which was quite recent, why were schools so unprepared?

However, it wasn't only the academic literature and popular media that provided warnings that educators needed to be prepared for extended school closures. There were many warnings from the US government. For example, the U.S. Department of Health and Human Services and the Centers For Disease Control And Prevention (2006) released a document entitled *Pandemic Flu: A Planning Guide For Educators* in which educators were advised, among other things, to create continuity of learning plans. A year later, the U.S. Department of Education (2007) released a *Basic Components of Pandemic Planning* document that cautioned school leaders that they needed to "plan for continuity of learning or instruction [by] considering alternate learning strategies [and] considering potential restructuring of school calendar" (p. 1). During the H1N1 pandemic, the Centers For Disease Control And Prevention (2010) indicated that "schools should plan now for ways to continue educating students who stay home through methods such as instructional telephone calls, homework packets, internet-based lessons, and other distance-based learning approaches" (para. 46). In conjunction the U.S. Department of Education (2010a) included more specific guidance for educators ranging from hard copy packets to online learning, including asking them to make sure that their plans addressed the following questions:

- 1. How will affected parties communicate during individual or prolonged absences or during school-wide dismissals?
- 2. How will students understand and access available academic resources and other supports from home?
- 3. What equipment and other resources are available or need to be acquired to enable school and district learning continuity plans?
- 4. What additional training or experience is required to prepare all parties to respond appropriately when needed? (p. 2)

The Department of Education (2014) updated this guidance four years later. In fact, the National Center for Education Statistics (2020) reported that "data from the 2017–18 SSOCS [School Survey on Crime and Safety]show a strong majority of the nation's schools have a written plan for certain emergency scenarios, such as natural disasters, active shooters, and bomb threats, but fewer than half have a written plan for a pandemic disease" (para. 1), and that 46% of those surveyed had heeded the guidance from these warnings and did have written plans in the event of a pandemic. Given these warnings, and the fact that almost half of schools claimed to have listened, why were schools so unprepared?

The repeated guidance from federal agencies in the U.S. were not the only bodies that advised the need for educators to be prepared for the kind of transition to remote learning demanded by COVID-19. As early as the '2010 National Education Technology Plan,' the U.S. Department of Education (2010b) advised teacher education programs that:

3.5 Develop a teaching force skilled in online instruction.

As online learning becomes an increasingly important part of our education system, we need to provide online and blended learning experiences that are more participatory and personalized and that embody best practices for engaging all students. This creates both the need and opportunity for educators who are skilled in instructional design and knowledgeable about emerging technologies. Crucial to filling this need while ensuring effective teaching are appropriate standards for online courses and teaching and a new way of approaching online teacher certification. (p. xix)

The '2017 National Education Technology Plan' included similar language (U.S. Department of Education (2017). Given these calls for teachers to be prepared to provide online instruction, why were educators so unprepared?

More importantly, the likelihood of mass school closures occurring again in the not-too-distant future remains uncertain, but cannot be entirely ruled out as a possibility. The emergence of new infectious diseases or virus variants that pose significant health risks to students, teachers, and the community at large. Severe hurricanes, earthquakes, wildfires, flooding, or other natural disasters could lead to the closure of schools for safety reasons, often with increased frequency and intensity of these events due to human-induced climate change. Unforeseen events such as political unrest or acts of violence may also prompt the need for temporary school closures to ensure the safety and well-being of students and staff. Given these realities, what can be done to ensure that history doesn't repeat itself once again?

This interactive panel will explore these issues from both American and international perspectives.

References

Alpert (2011). Online education in Hong Kong. In M. K. Barbour, L. Hasler Waters, & J. Hunt (Eds.), *Online and blended learning: Case studies from K-12 schools around the world* (pp. 37-59). International Association for K-12 Online Learning.

Barbour, M. (2010). Perspectives on E-Learning: Development and Challenges of K-12 Online Learning. In D. Gibson & B. Dodge (Eds.), *Proceedings of Teacher Education International Conference* (pp. 310-315). Association for the Advancement of Computing in Education. https://www.learntechlib.org/primary/p/33355/

Barbour, M. K., Hasler Waters, L., & Hunt, J. (2011) *Online and blended learning: Case studies from K-12 schools around the world*. International Association for K-12 Online Learning.

Barbour, M. K., & Hodges, C.B. (in press). Digital teacher education for a better future: Recommendations for teacher preparation for an online environment. *Proceedings of the annual meeting of the European Distance Education Network.*

Baytiyeh, H. (2018). Online learning during post-earthquake school closures. *Disaster Prevention and Management*, 27(2), 215-227.

Black, E. W., Ferdig, R. E., Fleetwood, A., & Thompson, L. A. (2022). Hospital homebound students and K-12 online schooling. *PLoS ONE*, *17*(3), e0264841. <u>https://doi.org/10.1371/journal.pone.0264841</u> Borja, R. R. (2003, May 21). Online learning fills void in nations coping with SARS. *Education Week*. <u>https://www.edweek.org/leadership/online-learning-fills-void-in-nations-coping-with-sars/2003/05</u>

Centers For Disease Control And Prevention. (2010). *Technical report for state and local public health officials and school administrators on CDC guidance for school (K-12) responses to influenza during the 2009-2010 school year*. https://www.cdc.gov/h1n1flu/schools/technicalreport.htm

Ferdig, R. E. (2018). Society, culture, and technology: Ten lessons for educators, developers, and digital scientists. Carnegie Mellon University, Educational Technology Center Press. https://www.learntechlib.org/primary/p/183591/ebook_183591.pdf

Ferdig, R., & Hartshorne, R. (2022). *Call for journal proposals: JTATE special issue: A 2025 vision for technology and teacher education*. Association for the Advancement of Computing in Education. https://site.aace.org/wp-content/uploads/2022/04/JTATE-Special-ISsue-30.2.docx

Fernandez, H., Ferdig, R. E., Thompson, L. A., Schottke, K., & Black, E. W. (2016). Students with special health care needs in K-12 virtual schools. *Journal of Educational Technology & Society*, *19*(1), 67-75. German, E. (2020, September 01). Distance learning has been part of American culture for 100 years. Why

can't we get it right? *GEN: Medium*. <u>https://gen.medium.com/distancelearning-has-been-part-of-american-</u> culture-for-almost-100-years-e3c001a05858

Gibson, M. L., Buche, M. W., & Waite, J. J. (2008). Technology support for the classroom: Technology alternatives to the traditional classroom. *Journal of International Technology and Information Management*, 17(1), 5.

Hawkins, J., Grimaldi, C., Baker, T., Dyer, P., Moeller, B., & Thompson, J. (1996). *Distance learning evaluation: Final report 1994-1995 Dutchess County, New York*. Center for Children and Technology. https://cct.edc.org/sites/cct.edc.org/files/publications/06_1996b.pdf

Hodges, C. B., & Barbour, M.K. (accepted). Pre-service teachers' preparation for teaching online: Past practices and future needs. In T. Martindale, T. B. Amankwatia, L. D. Cifuentes, & A. A. Piña (Eds.). *Handbook of Research in Online Learning*. Brill Publishing.

Hodges, C. B., Barbour, M. K., Ferdig, R. E. (2022). A 2025 vision for building access to K-12 online and blended learning in pre-service teacher education. *Journal of Technology and Teacher Education*, *30*(2), 201-2016. <u>https://www.learntechlib.org/primary/p/221153/</u>

Hua, D. M., Davison, C. B., & Kaja, S. (2017). Stakeholder response to virtual learning days in public school districts. *CTE Journal*, *5*(1), 20-33.

http://www.thectejournal.com/uploads/1/0/6/8/10686931/hua.pdf

Jackson, A. M., & Ahmed, F. (2020). Assessing characteristics of unplanned school closures that occurred in the United States in response to Hurricane Harvey in 2017. *Disaster Medicine and Public Health Preparedness, 14*(1), 125-129. <u>https://doi.org/10.1017/dmp.2019.159</u>

Lamarre, M. C. (1999). Le Plan d'Action de l'UIPES 1999-2001. *Promotion & Education*, 6(1), 38-41. https://doi.org/10.1177/102538239900600118

Latchem, C., & Jung, I. (2009). Distance and blended learning in Asia. Routledge.

Mackey, J., Gilmore, F., Dabner, N., Breeze, D., & Buckley, P. (2012). Blended learning for academic resilience in times of disaster or crisis. *Journal of Online Learning and Teaching*, 8(2), 122-135. https://jolt.merlot.org/vol8no2/mackey_0612.pdf

McCracken, H. (2020, July 21). Before Zoom and Coronavirus, How the telephone became the 20th century's most successful remote-learning technology for homebound students. *The 74*. <u>https://www.the74million.org/article/how-the-telephone-became-the-20th-centurysmost-successful-remote-learning-technology-for-homebound-students/</u>

Miller, R. K., & Hui, I. (2022). Impact of short school closures (1–5 days) on overall academic performance of schools in California. *Scientific Reports, 12*(1), 2079. <u>https://doi.org/10.1038/s41598-022-06050-9</u>

Milman, N. B. (2014). Snow days: Is distance education a solution in K-12 schools? *Distance Learning*, *11*(2), 45-48.

National Center for Education Statistics. (2020, April 6). *The prevalence of written plans for a pandemic disease scenario in public schools*. <u>https://nces.ed.gov/blogs/nces/post/the-prevalence-of-written-plans-for-a-pandemic-disease-scenario-in-public-schools</u>

Rush, S. C., Partridge, A., & Wheeler, J. (2016). Implementing emergency online schools on the fly as a means of responding to school closures after disaster strikes. *Journal of Educational Technology Systems*, 45(2), 188-201.

Samson, P. (2020). The coronavirus and class broadcasts. *EDUCAUSE Review*. https://er.educause.edu/blogs/2020/3/the-coronavirus-and-class-broadcasts

Schwartz, H. L., Ahmed, F., Leschitz, J. T., Uzicanin, A., & Uscher-Pines, L. (2020). *Opportunities and challenges in using online learning to maintain continuity of instruction in K–12 schools in emergencies*. Rand Corporation. <u>https://www.rand.org/pubs/working_papers/WRA235-1.html</u>

Swetlik, Z., Graves, T., Hua, D. M., & Davison, C. B. (2015). Virtual learning strategies for lost instructional time. *The CTE Journal*, *3*(2), 15-27.

https://www.thectejournal.com/uploads/1/0/6/8/10686931/swetlik.pdf

- Thompson, L. A., Ferdig, R., & Black, E. (2012). Online schools and children with special health and educational needs: Comparison with performance in traditional schools. *Journal of Medical Internet Research*, 14(3), e62.
- U.S. Department of Health and Human Services and the Centers For Disease Control And Prevention. (2006). Pandemic flu: A planning guide for educators.

https://www2.ed.gov/admins/lead/safety/emergencyplan/pandemic/planning-guide/planning-guide.pdf U.S. Department of Education. (2007). *Basic components of pandemic planning*.

https://www2.ed.gov/admins/lead/safety/emergencyplan/pandemic/planning-guide/basic.pdf

- U.S. Department of Education. (2010a). Preparing for the flu: Department of Education recommendations to ensure the continuity of learning for schools (K-12) during extended student absence or school dismissal. https://rems.ed.gov/docs/ed_continuityoflearning-schooldismissalsk-12.pdf
- U.S. Department of Education. (2010b). *Transforming American education: Learning powered by technology -National education technology plan 2010*. <u>https://files.eric.ed.gov/fulltext/ED512681.pdf</u>
- U.S. Department of Education. (2014). Preparing for infectious disease: Department of Education recommendations to ensure the continuity of teaching and learning for schools (K-12) during extended student absence or school dismissal.

https://rems.ed.gov/Docs/ED Recommendations to Ensure Continuity Teaching and Learning.pdf

U.S. Department of Education (2017). *Reimagining the role of technology in education: 2017 national education technology plan update*. <u>https://tech.ed.gov/files/2017/01/NETP17.pdf</u>