

4-30-2024

## Cascading Crises: Climate Change and K-12 Education

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### Recommended Citation

Ridenour, Matt (2024) "Cascading Crises: Climate Change and K-12 Education," *Northwest Journal of Teacher Education*: Vol. 19 : Iss. 1 , Article 1.

DOI: <https://doi.org/10.15760/nwjte.2024.19.1.1>

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## Cascading Crises: Climate Change and K-12 Education

### Abstract

In this special issue of the *Northwest Journal of Teacher Education*, Richard Sawyer and I (the co-editors) examine a few of these consequences of climate change on the field of education. Specifically, we focus on teacher educators' discussion of their work with their preservice students to understand and make a positive impact on climate justice education. All of the articles in this special issue take a realistic yet guardedly hopeful stance to the possibilities for climate justice.

### Keywords

Climate change, K-12 Education

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## Cascading Crises: Climate Change and K-12 Education

Matthew Ridenour

Lawrence et al. (2020) note that climate change is leading to "cascading crises across scales through vulnerability paths, creating secondary emergencies" (p.2). These secondary emergencies can be divided into two interrelated categories: threats to linked social systems (Walker et al., 2009) and threats to infrastructure (Bollinger and Dijkema, 2016). Otherwise stated, climate change is of significant consequence to both systems and structures, physical and metaphysical alike. No better example of this is the complex institution we call K-12 education.

The World Bank recently reported that, in the next three decades, climate change could lead to at least 1.4 million people fleeing their homes in Mexico and Central America, many of them heading north to the United States. Using a different projection model, Feng et al. (2010) concluded that climate change alone could drive 6.7 million people toward the Southern U.S. border from neighboring regions by 2080. These "environmental refugees" (Myers, 2002, p. 609) are likely to settle in places that are less affected by climate change, thus having a significant impact on infrastructure and support systems - most notably, schools. International and intercontinental migration will also be complicated by a more localized form of relocation as "individuals, groups and businesses experiencing cascading climate impacts within their town or city are likely to be faced with a binary decision: stay or move" (Lawrence et al., 2020, p.8). If they choose to stay, such groups will be forced to live with reduced levels of services in social, economic and educational sectors impacted by variables like sea level rise (SLR). With property taxes acting as the primary funding mechanism for public K-12 schools in the United States, districts located in areas of high SLR will experience budget shortfalls as homes are abandoned or claimed by the tides. For example, Shi and Varuzzo (2020) estimate that upwards of \$35 billion of property will be flooded along coastal Massachusetts if SLR reaches five feet, suggesting that municipalities such as Boston can expect to experience "reduced property tax revenues and rising expenditure needs within a compressed time frame" (p.5). While climate change related SLR will, therefore, significantly impact school funding, it is likely to exacerbate issues of historic underfunding and segregation in many districts as well.

The aforementioned cascading crises are also of significance in the realm of teacher preparation. Changing demographics and alterations to traditional patterns of human geography (Parrish et al., 2020; Baker et al., 2020), teacher shortages, funding disparities and budget limitations (Knight, 2017; Baker, 2014), not to mention a continued failure to address gaps in emerging 21st century literacies (eg., equity literacy, computer literacy) will all be of significance to the next generation of teachers. University programs must respond to these new and persistent challenges in thoughtful and proactive ways while remaining staunchly committed to high quality preparation that addresses climate change related inequities and other secondary emergencies.

In this special issue of the *Northwest Journal of Teacher Education*, Richard Sawyer, Maika Yeigh, and I (the co-editors) examine a few of these consequences of climate change on the field of education. Specifically, we focus on teacher educators' discussion of their work with their preservice students to understand and make a positive impact on climate justice education. All of the articles in this special issue take a realistic yet guardedly hopeful stance to the possibilities for climate justice.

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