Bridging Worlds, Healing Scars: A Student-Teacher Journey Toward Climate-Just Education

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Our paper is a collaborative autoethnography exploring the intersection of environmental crises, personal experiences, and education through the narratives of two educators, Maha Shoaib and Sarah Kistner. Reflecting on the 2005 earthquake in Pakistan and the 2021 Texas Freeze, we explore how systemic inequities and inadequate preparedness exacerbate the impacts of disasters on marginalized communities, disproportionately disrupting educational systems. We argue for climate-just education as a restorative and healing approach, addressing inequities at the school, community, and individual levels. Climate-just education proposes a holistic framework for trauma-informed and climate-responsive education, emphasizing preparedness, mutual support, and the creation of open spaces for teachers and students to share, heal, and rebuild. At the individual level, practices such as the Butterfly Hug Technique, Emotional Freedom Technique (EFT), and Yoga Nidra are presented as tools for fostering self-healing and mutual healing among students and teachers. Concluding with a vision for climate-just education, we advocate for reimagining schools as transformative spaces that empower communities to adapt to and recover from environmental crises while fostering emotional resilience, equity, and sustainability.

Keywords: Climate-just education, trauma-informed teaching, collaborative autoethnography, healing-centered pedagogy, disaster preparedness.

Introduction

"Hello? Hello? Are you safe? Where are you? Please find shelter fast." These words became a haunting refrain for both of us—Maha Shoaib and Sarah Kistner—during separate moments of environmental crisis. Though we lived in different parts of the world—Maha in Pakistan during the catastrophic earthquakes in 2005 and Sarah in the United States during the devastating Texas freeze in 2021—these words echoed through our phones, our minds, and eventually, our lives. They marked moments of fear, displacement, and the beginning of a deeper, lifelong commitment to climate justice through education.

Our paths first crossed in Fall 2022 as first-year master's students in the International Education Policy program at the University of Maryland. Though our academic journeys diverged after that semester, we reunited in Fall 2024 as first-year PhD students enrolled in a course on International Higher Education. An assignment on autoethnography and applied contemplative inquiry offered a space to reconnect—not just intellectually, but

emotionally and spiritually. As we revisited the disasters that shaped our lives, we began to uncover a profound bond: a shared trauma and a shared calling.

The work and words of Bessel van der Kolk (2014) resonate deeply with us: "Trauma is not just an event that took place sometime in the past; it is the imprint left by that experience on mind, brain, and body" (p. 21). For both of us, the climate crises we experienced were not isolated incidents—they were deeply embodied traumas that continue to shape our sense of purpose and our approach to education. Our experiences compelled us to ask:

- How can educational systems serve as spaces for emotional and psychological healing in the aftermath of disasters?
- What transformations are needed for education to function not just as a site of knowledge, but as a force for climate justice and collective healing?
- How can collaborative autoethnography, as both method and process, support the personal and communal healing of trauma across different global contexts?

Despite the extensive research on climate education, practice still neglects the embodied realities of trauma, especially how teachers and students experience, remember, and heal from disasters. Current literature focuses on curricular innovations, pedagogical strategies, or systemic policy reforms. What is missing, however, are personal, affective, and embodied accounts of how climate trauma is lived and remembered, particularly within educational spaces. The emotional and psychological toll of environmental crises on learners and educators alike remains underexplored, especially through methodologies that center vulnerability and storytelling. There is a notable lack of research that brings together scholars from the Global South and Global North to reflect on shared yet asymmetrically experienced climate disruptions.

Our paper addresses these gaps by using collaborative autoethnography (Chang et al., 2016) as a method of inquiry and healing. As scholars from different geopolitical, cultural, and ecological contexts, we explore how climate trauma has impacted our personal and professional trajectories, and how education has both failed and supported us in navigating these experiences. Our approach offers a comparative lens that interrogates the relational and affective dimensions of climate trauma and justice, allowing us to reflect not only on our own stories but on the broader educational systems we inhabit and seek to transform.

By grounding our research in contemplative inquiry, lived experience, and critical reflection, we position this paper at the intersection of climate justice, trauma-informed education, and transnational solidarity. We contribute to reimagining educational spaces

as places of healing, transformation, and justice, particularly in a time when the climate crisis continues to reshape what it means to live, learn, and be human.

Education in the Wake of Disasters

The frequency and severity of disasters disrupt education. The Intergovernmental Panel on Climate Change (IPCC) (2021) underscores such events' growing unpredictability and severity. In the wake of these disasters, marginalized communities—already grappling with systemic inequalities and resource limitations—bear the brunt of the impact. Disasters often deepen pre-existing inequities, pushing vulnerable populations into survival mode and frequently displacing education as a priority (World Bank Group, 2018). This calls for an urgent reimagining of education systems through a climate justice lens—one that is adaptive to environmental shifts and responsive to the emotional, psychological, and social consequences of such crises.

Climate justice moves beyond the pursuit of environmental sustainability to confront the unequal distribution of climate-related burdens along lines of geography, race, gender, class, and ability (Fraser, 1997; Schlosberg & Collins, 2014). In educational contexts, climate justice emphasizes the need for learners to engage critically not only with scientific knowledge but with the socio-political and ethical dimensions of the climate emergency. As Kagawa and Selby (2010) argue, education should transcend awareness-raising to interrogate the root causes of climate change, including colonialism, capitalism, and global inequality. Education becomes a vehicle for collective action and transformation, anchored in equity, accountability, and historical responsibility (Stevenson et al., 2017).

In post-disaster contexts, education is sidelined as immediate survival needs take precedence. Schools are damaged or destroyed, communities are displaced, and children are forced to abandon learning. This is detrimental in marginalized settings where schools may serve as critical sites of stability and support. As Buchmann and Hannum (2001) observe, schools offer continuity and structure in the face of chaos. This fragile stability is among the first to erode during environmental crises. The loss of access to education, especially for girls and children in rural or impoverished regions, halts academic progress and exacerbates emotional trauma and social isolation (Malala Fund, 2021). A climate-just education should extend beyond physical reconstruction to incorporate emotional healing and psychosocial support into recovery efforts.

Contemporary models of climate education often prioritize Western epistemologies and technocratic solutions, marginalizing Indigenous, local, and experiential knowledge systems (McGregor, 2009; Whyte, 2017). This perpetuates epistemic injustice and hinders education's potential to foster transformative and culturally responsive responses to climate disruption. There is growing recognition of the need for pedagogies that acknowledge the existential and emotional dimensions of the climate crisis, particularly for youth and frontline communities (Leduc, 2021; Ojala, 2016). These approaches

advocate for education that is not only critical but healing, attuned to grief, anxiety, and the complex emotional terrain of climate trauma.

Trauma-Informed and Healing-Centered Pedagogies

Trauma-informed education has emerged as a powerful approach to supporting students and educators affected by adversity, including those living through war, displacement, and systemic violence (Carello & Butler, 2015; Sporleder & Forbes, 2016). Trauma-informed pedagogy prioritizes emotional safety, recognizing how traumatic experiences can impact learning, behavior, and social functioning. Ginwright (2018) contends that this approach should move beyond simply accommodating trauma toward transforming educational spaces into environments of collective care, resilience, and agency. Emerging scholarship on healing-centered pedagogy expands this vision, emphasizing storytelling, identity reclamation, and community-based healing practices (Love, 2019). This resonates strongly with climate justice, where trauma is both deeply personal and inherently planetary. The intersection of climate trauma and trauma-informed education remains underexplored, particularly in higher education and within comparative or transnational frameworks.

Autoethnography and Contemplative Inquiry as Method

Our study draws on collaborative autoethnography, a qualitative method that integrates personal narrative and cultural analysis to examine lived experiences within broader social and institutional structures (Ellis et al., 2011; Chang et al., 2016). In contexts of trauma, autoethnography offers a powerful means of validating emotional truths, processing grief, and reclaiming agency through storytelling (Douglas & Carless, 2013). When practiced collaboratively, it allows researchers to engage in dialogue, mutual witnessing, and relational healing. Contemplative inquiry informs our methodological framework by integrating mindfulness, self-awareness, and deep listening into the research process (Zajonc, 2013). These practices are epistemological and ethical, enabling researchers to hold uncertainty, metabolize eco-anxiety, and cultivate compassion in the face of environmental loss (Fisher, 2021). Within climate justice work, such approaches offer critical tools for processing trauma and imagining hopeful futures.

Bridging the Global South and Global North

Despite increasing global concern around climate change, the voices and knowledge systems of communities in the Global South remain marginalized in dominant educational and policy discourses. As Chakrabarty (2009) and Nixon (2011) argue, the global narrative of climate change often overlooks the uneven geographies of risk, trauma, and responsibility.

We center our positionalities as researchers from Pakistan and the United States. Through collaborative autoethnography, we explore the intersections of our lived experiences, emotional landscapes, and shared commitments to climate justice. By engaging in transnational dialogues, we seek to illuminate the divergent and convergent experiences of climate trauma and to cultivate solidarities across borders. The healing we envision should address the gaps in educational recovery that typically follow disasters. The emotional toll of environmental crises often remains unaddressed, leaving students and teachers without the support needed to process trauma and reconnect with their educational goals. To create a truly climate-just education system, we argue that it is essential to move beyond a focus on physical recovery and incorporate mental health support into recovery plans. This approach ensures that students and educators possess the emotional resilience necessary to resume their education and rebuild their lives. By integrating restorative practices into disaster recovery, we can cultivate an education system that not only helps students catch up on missed lessons but also provides the emotional tools necessary to heal from the psychological scars of environmental trauma.

Methodological Approach: Collaborative Autoethnography in Educational Contexts

We share our personal experiences as students and educators who have faced environmental crises, offering insights into disasters' emotional and educational impacts. Engaging in this reflective practice not only deepened our understanding of the power of shared storytelling and became a transformative process of collective healing. This process unfolded in a series of reflective journals, semi-structured interviews, and shared storytelling sessions. We explored the perspectives of two critical stakeholders in education: students and teachers. Each of us kept a journal over the semester, documenting our emotions, experiences, and reflections on the educational practices during and after the environmental crises we experienced. We held bi-weekly check-ins to gauge our progress and carve out space to process our feelings with one another.

Braun and Clarke's (2006) thematic analysis framework served as a tool for us to identify prominent patterns from our qualitative narratives collected through reflective journals, interviews, and storytelling sessions. Our key findings from the analysis of our data are the following:

- The synthesis revealed that **emotional burdens** were prevalent in educational spaces, often exacerbated by a lack of adequate support systems. Both Student and Educator emphasized the **urgent need for structured support**.
- Despite the challenges, there was a notable theme of **resilience in the face of uncertainty**, demonstrating the capacity of individuals to adapt and persevere.
- The **necessity for healing** emerged as a critical theme, underscoring the importance of integrating emotional and psychological recovery into educational frameworks to foster a climate of well-being and growth.

Our collaborative autoethnography, grounded in trauma-informed methodology, became an act of shared reflection and collective healing practice, transforming personal

trauma into collective wisdom. As Ellis and Bochner (2000) suggest, such storytelling fosters deeper connections, turning pain into insight that can lead to transformative change. This practice serves as a healing journey and a call for action toward a climate-just education.

Discussion and Analysis

Reflecting on our experiences—one as a student and the other as a teacher during an environmental crisis—we discovered that sharing these personal moments became an act of mutual care. It allowed us to uncover emotions we had not realized were still present. Re-living these overwhelming events felt less isolating when shared across borders, reminding us that vulnerability can serve as a bridge to connection.

We offer a narrative exploration of our experiences with the 2005 earthquake in Islamabad and the 2021 Great Texas Freeze in Austin. Our goal is to demonstrate how collaborative autoethnography can uncover hidden emotional truths, serving as a tool to imagine more compassionate and equitable educational environments. By weaving together our stories, we aim to highlight how environmental crises intersect with issues of access to education, gender, mental health, and belonging. We contribute to the envisioning of a climate-just education system: resilient, inclusive, and responsive to students' and teachers' needs.

Living Through Environmental Crises

Maha Shoaib. I was born and raised in Islamabad, Pakistan, and lived there before moving to the United States for my master's degree. I completed my education up to the bachelor's level in Pakistan and then spent two years teaching in a rural, under-resourced community. Immersing myself in the daily realities of that setting gave me a micro-level understanding of educational challenges and deepened my desire to pursue global education policy. Growing up in a middle-income family, I was often told that education was our only path to a better future. From a young age, I felt the weight of expectations. I wanted to make my family proud.

Pakistan is a country of breathtaking landscapes and four distinct seasons. As a nation close to the equator, we are experiencing the intensifying effects of climate change. Every year, torrential monsoon rains trigger devastating floods across the country. As I sit today with a warm cup of tea in hand, I find myself reflecting on my childhood—the moments when environmental crises shaped not just the world around me, but the course of my life. One of the most defining moments was the 2005 earthquake, an event that shaped my understanding of disaster, resilience, and the urgent need for emotional and systemic support in the aftermath of such catastrophes. Islamabad, my hometown,

is nestled against the majestic Margalla Hills. More than just the capital city, it is a delicate blend of green spaces, modern architecture, and cultural diversity. I spent my formative years at Islamabad Convent School in the H-8 sector, a relatively affluent neighborhood. The school symbolized opportunity, with cutting-edge technology, a beautifully designed campus, and a sprawling playground where I spent countless hours with friends. Life felt predictable, safe, and full of promise.

October 8, 2005, was a Saturday like any other. I was asleep, enjoying the rare luxury of a weekend free from school. Without warning, the earth began to shake. At first, it felt distant and strange. But within seconds, the tremors intensified. My mother's urgent voice pierced the air as she yelled for us to run. I stumbled out of bed, heart pounding, and we rushed outside, joining neighbors who were fleeing their homes in panic. The screams, the confusion, the raw fear—it was overwhelming. When the shaking stopped, a heavy silence fell. It was as if the city had gone still, holding its breath in the face of unspeakable loss.

The earthquake, measuring 7.6 on the Richter scale, devastated large parts of northern Pakistan, India, and Afghanistan, claiming over 73,000 lives and injuring more than 69,000 people (United Nations Office for the Coordination of Humanitarian Affairs [OCHA], 2005). Though our family was safe, the emotional toll was immense. The news reports painted a grim picture: entire towns destroyed, thousands of children trapped under rubble, and schools reduced to dust. As a child, I struggled to process the scale of the destruction. My heart ached for the families who lost everything.

When I began to talk about that experience years later, the emotions I had buried rose to the surface. I recalled how every aftershock felt like a cruel echo of that day—how we braced at the slightest vibration. At school, we practiced evacuation drills regularly, running out at the first sign of tremors. But no one asked how we were coping emotionally. We were taught how to protect our bodies, but not our minds. The fear settled in like a shadow, unacknowledged and unspoken. We carried it silently.

After weeks of closure, when school resumed, everything felt different. The air was thick with anxiety. We were told to focus on our lessons, but our thoughts were consumed by worry. What if another earthquake struck while we were in class? What if our families were not safe while we were away? Teachers tried their best to maintain normalcy, but they were not equipped to help us process the trauma. Some of my classmates never came back—their families had been displaced, or they could no longer afford school fees. For many girls, education was among the first things to be sacrificed when families faced economic hardship.

Though I was able to continue my education, I could not ignore the inequality around me. In lower-income areas, schools remained closed for months. Rebuilding was slow, and the lack of infrastructure left many children waiting for a return to the classroom. The earthquake exposed the deep cracks in our education system. It revealed how

trauma was overlooked, and how crises could easily push the most vulnerable, especially girls, further to the margins.

When I shared this with my co-author, I felt I was unlocking memories I had not processed. Speaking aloud was cathartic as I understood how these experiences had shaped my journey. My passion for education policy, climate justice, and creating safe, supportive learning environments made sense. Schools should be more than spaces of academic instruction. They need to be sanctuaries where students feel seen, supported, and safe. We cannot prevent disasters, but we can ensure that no child feels alone in the aftermath. Our shared stories of survival and resilience can inspire systems to be more compassionate. While we may not control the ground beneath us, we can shape the foundations of the world we build above it.

Sarah Kistner. I grew up in a rural Pennsylvania township, where the one-mile-wide geographical constraints shaped my worldview. Motivated by an inherent curiosity, education emerged as an escape route and a foundation, guiding me toward teaching opportunities domestically and internationally. After completing my bachelor's degree in Pennsylvania, my career path took an unexpected turn when my role as an English teacher trainer in Colombia was terminated by the COVID-19 pandemic, leading to my relocation to Austin, Texas, as a Bilingual Kindergarten teacher. While traumatic, this sudden transition deepened my engagement with international education policy. My experiences in Colombia and Texas profoundly illustrated education's transformative power in shaping communities, families, and societal structures. Yet, I could not have anticipated how these experiences would leave enduring psychological imprints that would resurface after in my doctoral program with Maha.

In my hometown, hidden between a valley of mountains, my family and I have experienced occasional flooding, but nothing to the extent of what I had faced during my time as a teacher in the Great Texas Freeze of 2021. My move to Texas was a transformative experience, though not in the ways I had imagined. It reshaped my understanding of environmental challenges and the role education plays in times of crisis. This encounter with environmental instability opened my eyes to the importance of climate-just education.

Austin is inland and surrounded by rolling hills separated by the Colorado River, making it a great place for outdoor activities. As it was my first year as a classroom teacher in the United States, these opportunities to engage with nature helped me get through the tough days. Austin has a humid subtropical climate under the Köppen Climate Classification, having long, hot summers and mild winters, with warm spring

and fall transitional periods (National Weather Service, n.d.). Mild winters would indicate temperatures ranging from 41°F to 62°F (5°C to 17°C).

Nearly 50 percent of the population identify as White (non-Hispanic), while individuals from other racial and ethnic backgrounds—Hispanic, Asian, Black, or African American—made up a smaller share. This disparity becomes more visible in the city's zoning and gentrification patterns, which push minority communities to the margins. The North and Southeast zones of Austin are not far from the city center, where one finds a smaller percentage of its residents making ends meet. I lived and taught in the Northeast part of Austin, alongside my students and their families.

In Texas, electricity runs through a unique system overseen by ERCOT, an independent operator whose intrastate grid is disconnected from the two major North American grids. But in February 2021, this model was tested. A polar vortex descended from the North Pole starting on February 10, 2021, pushing arctic air into Texas and locking the state in record-breaking cold temperatures. Texas's infrastructure, unprepared for this level of cold, ice, and snow, had to endure the worst, leading to road closures isolating communities and major accidents piling up across highways. As temperatures plummeted, the electric grid broke down and left almost 10 million people in the dark, including me. The North and Southeast parts of Austin were without power for almost five days. The storm's after-effects lasted two weeks. The scene felt apocalyptic—neighborhoods fell into a pitch-black silence, grocery shelves emptied quickly, and bursting pipes flooded homes. Nearly 300 deaths were reported, though many believe this number underestimates the loss.

While the city highlighted the devastating financial toll, which resulted in billions of dollars in damages, the emotional toll was much more severe. Texans faced the aftermath largely on their own, with little systemic or educational response to support those who suffered. The Great Texas Freeze left physical and emotional scars, some of which are still apparent to this day.

After losing power on that brutal Wednesday afternoon, I remember the growing fear I had as I lay my head on my cold pillow in a pitch-black room that night. The next day, we were still without power when the panic set in. School was canceled because the roads were impassable, and the school was still without power. The administration created group chats and urged all teachers to communicate with their students' families and stay in contact with them for the unforeseen end of this tragedy. The stress was creeping up on me as I felt this pressure to support and absorb the anxieties of the 21 families I supervised, though I did not know where I was going next.

On day three of the Great Texas Freeze, the pipes burst in my apartment, flooding our bedrooms and bathrooms and making it no longer habitable. I packed my bags and headed south towards a hotel with a friend. It felt like I had entered a parallel universe. How could it be possible that the families in my school were suffering while others had

access to luxurious lives in a time of crisis and with a complete disregard for the reality of those only fifteen minutes north of them? Inequities were clearer than ever.

The following Monday, it was business as usual, though I was filled with uncertainty. I remember my frustrations with the school district. They were forcing us to require virtual classes on Monday because many of my students were without power. It added unnecessary stress and burden to families to try and connect their children to a Zoom class or complete the asynchronous assignments. We faced unprecedented challenges, and while I felt the weight of my struggles, I recognized the collective burden we shared. We were learning to adapt and support one another amidst the chaos, reminding ourselves that even in the darkest moments, we could find strength in our community and a commitment to our students' well-being.

This experience exemplifies the power of collaborative autoethnography as a healing pedagogy. For four years, my body held on to that fear, anxiety, and guilt. My emotions caught on, and it was time to let them go and process it. Sharing and reflecting on this vulnerable and personal experience with Maha, I found strength and empowerment in emotional release.

Connecting Across Experiences and Healing

Maha Shoaib. As my co-author and I opened up about our journeys over the next few days, I was struck by how deeply our emotions mirrored each other's. Despite living on opposite sides of the world and facing different disasters, we both carried the weight of fear, anxiety, and uncertainty—a reminder that these feelings transcend borders. As a student, I had expected my teachers to have the answers and to offer unwavering support. Hearing my colleague's perspective as a teacher during a crisis revealed how unsupported educators often are. She felt overwhelmed by the expectations placed on her to care for her students while having no resources to help them, or herself navigate the emotional toll of the disaster. This conversation was eye-opening for me. It made me realize how much I had assumed, as an 8-year-old, that adults always knew what to do. Teachers were trying to navigate the chaos without any clear guidance.

Our conversations felt profoundly therapeutic. Back then, I never talked about how scared I was. I buried my fear, pushing through the pressure to perform well academically. Every aftershock heightened my anxiety, and every news report brought a new wave of fear. I remember the images of Margalla Towers—a massive building in Islamabad—collapsing into rubble, with people frantically searching for their loved ones. Families gathered in large, open spaces like F-9 Park, bringing food, water, and prayer mats, hoping they would be safer outside if the ground shook again.

At school, my classmates and I would discuss the unfolding news during breaks, processing the fear and grief in fragments. But once the bell rang, we were expected to return to class as if nothing had changed. There were no conversations led by teachers, no counselors, and no check-ins. It was as though the emotional trauma we were experiencing didn't exist. We were left to carry the burden alone. The situation was worse for children from low-income communities, where resources were scarce, and many schools remained closed for extended periods.

Talking with my co-author made me realize how crucial it is to create spaces where people can share their stories without fear of judgment. It gave me a sense of closure I did not know I needed. I could revisit that 8-year-old version of myself and feel seen. I now understand how essential it is—whether as students, teachers, or community members—to have systems that address not just the physical impacts of disasters but the emotional ones. Mental health support, open conversations, and empathy are universal needs that should be prioritized.

I feel fortunate to have shared my story with my colleague, who listened with compassion and understanding. I extend my gratitude to her. This experience was a reminder that no matter where we are in the world, we need support. The simple act of listening to someone's story can be a powerful first step towards healing.

Sarah Kistner. Listening to Maha's experience as a student during the earthquake opened my heart to the pains and suffering of my young students, whom I assume may have been experiencing similar yet different sentiments without the tools, language, or support to do so. I still feel great guilt and shame for not being able to be that support for them. However, I believe that is exactly what this reflective process is teaching me now. For many of my students, school was a way to get two free, warm meals that they may not be able to receive at home. It was a place for students to feel safe. When we were out of school for almost two weeks, students and families lost essential nutrition and an overall sense of safety, as well as social and peer connection time. Many of my students' families had just arrived in the United States from other countries, such as Honduras and Guatemala. Amidst the catastrophe, they were at risk of being even more isolated during the storm without proper support, information, and care.

While schools were shut down, students and families no longer had safe spaces to go, lacked resources, and did not have access to pertinent information, such as COVID-19 protocols, food distribution, changes in school schedules, or access to local news updates. A young child froze to death as their family did all they could to provide warmth in their home with the few fleece blankets they had. That child, our fellow community member, did not deserve to die. There were no words or statements made about this terrible and senseless loss of life to our school community. We pushed through business as usual to get students to grade level. It is hard to focus on far-fetched state standards when the community around you is grieving.

The Great Texas Freeze hit when students were facing steep levels of stress, anxiety, and depression due to the pandemic. As a teacher, I was instructed to fit a 30-minute social-emotional learning (SEL) exercise into my lesson plan daily. The mandatory SEL practice became another item on the checklist rather than a holistic practice embedded into my teaching. Teaching became forced and rushed to meet standards. I was becoming anxious that I was failing my students. I stayed up late, brought my work home, texted and called parents 24/7, and worked on the weekend to ensure my students were ready for first grade. While we were pushing through the rest of the year, the buildings were not equipped to host us. Broken pipes and flooding caused mold to flourish, which led to long-term health effects on young bodies. My school did not need to shut down completely, but students and families were anxious about coming back. We lacked proper ventilation. I extend my gratitude to Maha for being part of this healing process. Through this experience and new insights, I reached out to my former teachers in Austin and shared my story with them. Four years later, we took that time to reflect on those events and found new peace. Our conversation is a positive step towards a greater healing process for the school and community in Austin.

Reflection and Recommendations: Our Vision for Climate-Just Education

Our vision for a climate-just education system is rooted in shared experiences from two geographically distinct cities—Islamabad, Pakistan, and Austin, United States. Both contexts illustrate how disasters create cascading effects that go beyond immediate physical destruction. These events disrupt education, social stability, and emotional well-being. Marginalized communities bear the heaviest burden, highlighting the urgent need for transformative educational practices that can bridge the gap between disaster and healing. While education is vulnerable to disaster-related disruptions, it holds the potential to act as a force for resilience and renewal.

We envision an alternative education system—one that moves beyond traditional models and embraces holistic and contemplative approaches to learning. Instead of focusing solely on academic recovery in the aftermath of climate disasters, this system prioritizes emotional resilience, community connection, and well-being. Inner wisdom and insight are not peripheral but central to education. Engaging deeply with their lived experiences, students and teachers alike can cultivate a more meaningful understanding of self, others, and the world around them.

Education in this framework entails preparation for the uncertainties of climate change and a practice of building strength, adaptability, and emotional intelligence to face life's challenges with courage and compassion. At a systemic level, climate-just education should confront structural inequities that climate change exacerbates. While some

education systems are equipped to deliver a climate-informed curriculum that includes science and SEL, others are not. To address broader societal implications, schools should adopt a justice-focused approach—one that fosters constructive coping strategies and builds leadership skills to support a more inclusive and resilient future (UNESCO, 2021).

Equity is a core principle of climate-just education. Ensuring that students, especially those in underserved and climate-vulnerable communities, have access to the resources and curricula that empower them to engage with climate issues meaningfully and confidently. A crucial part of this transformation involves acknowledging and addressing collective and individual traumas. Restorative practices—like community-building circles—offer safe and supportive spaces where students and educators can process their emotions, strengthen relationships, and begin to heal. These practices create conditions for learning rooted in empathy, accountability, and trust.

School and Community-Level Approaches

Schools and communities should prioritize emotional and psychological recovery to ensure long-term resilience in the aftermath of environmental disasters and crises. Research shows that focusing on emotional healing, rather than rushing into academic recovery, leads to better learning outcomes and personal growth (Durlak et al., 2011). Schools can play a critical role in this recovery by fostering environments that encourage emotional expression, mutual support, and healing. Community-building circles allow students and teachers to share their experiences and rebuild relationships. This helps them process trauma, cultivate empathy, and strengthen social bonds, making schools a place for holistic recovery rather than just academic catch-up. Providing counseling services for students, parents, and community members ensures that emotional needs are met, promoting a smoother transition back to normalcy (Čitil Akyol, 2024).

Students and teachers experience emotional distress following a crisis. The lack of structured emotional support during these times can exacerbate the challenges faced. Schools should address this gap by integrating trauma-informed practices and school-based mental health services. Research indicates that trauma-informed approaches can significantly aid in the recovery process, helping students and teachers cope with the psychological impact of a crisis (Baweja et al., 2021). Providing mindfulness training, counseling services, and safe spaces where individuals can openly express their emotions creates a culture of mutual understanding and support within the school community (O'Toole et al., 2019). Such an approach ensures that emotional well-being is not an afterthought but a critical part of the recovery process.

In post-crisis environments, there is pressure to catch up on lost instructional time, but this can lead to burnout and emotional fatigue. When schools prioritize the mental and emotional health of students and teachers, they can support the rebuilding process, reducing the negative impacts of stress and trauma. This means allocating time for emotional healing, incorporating restorative practices in the classroom, and providing teachers with the necessary resources to address the emotional needs of their students. Without such support, the focus on accelerated academic recovery can hinder the opportunity for genuine learning and growth.

Disaster preparedness should be integrated into school curricula across all grade levels. As disasters become more frequent due to climate change, students should develop the skills to navigate these challenges. Teaching climate resilience not only equips students with survival skills but enhances critical thinking, problem-solving, and adaptability, which are key in responding to future crises (Cohen, 2017). Schools can help students understand the importance of environmental conservation while simultaneously preparing them for the inevitable impacts of climate change. By embedding climate education into the curriculum, schools foster a generation of proactive individuals who are better equipped to face and address the challenges of the future.

Counseling services are vital in helping communities process the trauma caused by environmental disasters. These services can support parents, students, and community members in overcoming anxiety and grief, ensuring a smoother transition back to school and a healthier recovery process (Čitil Akyol, 2024). Given that the length of school closures after a natural disaster is often uncertain, accessible and professional counseling services can help families and communities cope with the emotional upheaval. Schools, with their established networks and resources, can serve as central hubs for these counseling services, offering critical support during the recovery phase. By addressing both the emotional and academic needs of students and their communities, schools can play a transformative role in healing and building resilience.

Individual-Level Strategies for Emotional Resilience

Climate-just education empowers students and teachers with the personal tools they need to build emotional resilience in the face of catastrophes. Emotional resilience is crucial for coping with the ongoing stresses that come with living through climate disasters, and both students and educators need strategies to navigate these challenges. Integrating mindfulness, restorative practices, and self-care techniques into daily routines, individuals can better manage stress, anxiety, and the trauma associated with climate change. These practices are not just beneficial for coping with immediate crises but for fostering long-term emotional well-being (Gonzalez et al., 2020).

Mindfulness practices like meditation, breathing exercises, and self-reflection help individuals remain grounded in the present moment, which is essential when facing overwhelming challenges. Incorporating these practices into the school day, students and teachers can build the resilience needed to weather difficult emotional states. Restorative practices, like the Butterfly Hug or Emotional Freedom Technique (EFT), offer simple yet powerful tools for regulating emotions and processing trauma. The

Butterfly Hug is a grounding technique that promotes emotional safety and helps calm the nervous system, making it particularly useful for individuals who may feel overwhelmed. EFT, or tapping, involves using acupressure points to release stress and reframe negative emotions, helping individuals regain emotional balance during times of crisis. These techniques provide immediate relief from emotional distress and can be used by students and teachers to maintain emotional equilibrium (Davis & Hayes, 2011).

Yoga and Yoga Nidra are valuable practices for building emotional resilience. These techniques help individuals relax, release tension, and cultivate a sense of inner peace. Yoga encourages physical movement and breathwork, both of which are essential for managing stress and anxiety. Yoga Nidra, a form of guided meditation, helps individuals reach a state of deep relaxation and emotional healing, allowing them to process difficult emotions and experiences. Schools should consider integrating these practices into daily routines to help students and teachers manage the emotional challenges associated with climate change (Johnson et al., 2020).

Creative outlets like art therapy offer ways to express and process emotions nonverbally. Art therapy allows students and teachers to explore feelings through visual expression. It is a therapeutic release for emotions that are difficult to articulate. Engaging in creative activities can serve as a form of community-building. It encourages collaboration and shared expression within the school. Schools should incorporate creative practices into the curriculum, giving students space to reflect on their experiences and express their emotions in a supportive, non-judgmental environment (Malchiodi, 2012).

Conclusion

We explored how educational systems can serve as spaces for emotional and psychological healing in the aftermath of disasters. We discussed transformations that could enable education to function not just as a site of knowledge, but as a force for climate justice and collective healing. Through collaborative autoethnography, we examined how this process can support personal and communal healing of trauma across different global contexts. By grounding our research in contemplative inquiry, lived experience, and critical reflection, we position this paper at the intersection of climate justice, trauma-informed education, and transnational solidarity.

We highlight the importance of including marginalized voices and knowledge systems in dominant educational policy discourses. Despite increasing global concern around climate change, these voices remain excluded from climate knowledge production and decision-making. Our approach offers a comparative lens that interrogates the relational and affective dimensions of climate trauma and justice, allowing us to reflect on the broader educational systems we inhabit and seek to transform. We reimagine educational spaces as places of healing, transformation, and justice.

Looking toward the future, we see the weight that disasters place on the hearts of young people, schools, and communities. Despite these challenges, we believe in the power of a climate-just education, one that does not merely endure the harsh impacts of crises but learns and grows from them. Our vision, *Bridging Worlds and Healing Scars*, goes beyond preparedness. It is about cultivating resilience, fostering deep emotional connections, and strengthening communities. We envision students who learn to navigate life with courage, empathy, and a sense of purpose. We see teachers and families whose well-being is valued and prioritized, creating a foundation for true collective healing.

Sarah Kistner. Sarah Kistner is a PhD student in the International Education Policy program at the University of Maryland, specializing in Peace Education. With over seven years of experience in the education sector, she has taught in diverse cultural contexts and contributed to a range of educational programming initiatives. Her research interests include alternative development, education in emergencies and conflict, climate change education, and holistic, contemplative approaches to learning. Sarah is especially passionate about the transformative role of play in the lives of children affected by conflict and crisis. Her work explores how play fosters well-being, builds resilience, and empowers children as active participants in peacebuilding efforts. These passions have also shaped her scholarly contributions, including co-authoring "Toward Eco-centric, Earth-as-school, and Love-based Curriculum and Learning" and "A Multidimensional Perception of Time Connecting Education to the Earth and the Universe." Both works reflect her commitment to reimagining education as relational, earth-connected, and rooted in love.

Maha Shoaib. Maha Shoaib is a Ph.D. student in the International Education Policy program at the University of Maryland, focusing on reimagining education through contemplative, ecological, and justice-centered frameworks. She serves as a Research Consultant at Special Olympics and a Senior Fellow at the Global Campaign for Education-US. With several years of experience in Pakistan and internationally, Maha has worked as a schoolteacher, educational consultant, and project coordinator across the public, private, and non-profit sectors. Her work centers on promoting equity, inclusion, and access to quality education, especially for communities affected by conflict and systemic inequality. Maha's research lies at the intersection of education, social justice, and sustainability, exploring how learning environments can foster healing, mental well-being, and ecological awareness. Through her work, Maha seeks to reimagine education as a transformative force for individuals, communities, and the planet.

References

- Anderson, L., & Glass-Coffin, B. (2013). I learn by going: Autoethnographic modes of inquiry. In S. Holman Jones, T. E. Adams & C. Ellis (Eds.), *The handbook of autoethnography* (pp. 57-83). Left Coast Press.
- Baweja, S., Santiago, C. D., Vona, P., Pears, G., Langley, A. K., & Kataoka, S. H. (2021). Addressing adversity and trauma: The role of school-based mental health services in promoting resilience. *Children and Schools*, 43(2), 107-17.
- Balban M. Y., Neri, E., Kogon, M. M., Weed, L., Nouriani, B., Jo, B., Holl, G., Zeitzer, J. M., Spiegel, D., & Huberman, A. D. (2023). Brief structured respiration practices enhance mood and reduce physiological arousal. *Cell Reports Medicine*, 17(1), 100895. 10.1016/j.xcrm.2022.100895.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(1), 77-101. DOI:10.1191/1478088706qp0630a
- Brown, R. P., & Gerbarg, P. L. (2005). Sudarshan Kriya yogic breathing in the treatment of stress, anxiety, and depression. *Journal of Alternative and Complementary Medicine*, 11(4), 711-717. DOI: 10.1089/acm.2005.11.711
- Buchmann, C., & Hannum, E. (2001). Education and stratification in developing countries: A review of theories and research. *Annual Review of Sociology*, 27(1), 77-102. https://doi.org/10.1146/annurev.soc.27.1.77
- Carello, J., & Butler, L. D. (2015). Practicing what we teach: Trauma-informed educational practice. *Journal of Teaching in Social Work*, 35(3), 262-78. https://doi.org/10.1080/08841233.2015.1030059
- Chakrabarty, D. (2009). The climate of history: Four theses. *Critical Inquiry*, 35(2), 197-222. https://doi.org/10.1086/596640
- Chang, H., Ngunjiri, F., & Hernandez, K.-A.C. (2013). *Collaborative Autoethnography* (1st ed.). Routledge. https://doi.org/10.4324/9781315432137
- Church, D. (2013). The EFT manual. Energy Psychology Press.
- Čitil Akyol, C. (2024). Lived experiences of school counsellors: Needs after the earthquake. *Journal of Psychologists & Counsellors in Schools*, 34(4), 433–450. https://doi.org/10.1177/20556365241281380
- Cohen, M. (2017). A systematic review of urban sustainability assessment literature. *Sustainability*, 9(11), 2048. https://doi.org/10.3390/su9112048
- Clayton, S., Manning, C. M., Krygsman, K., & Speiser, M. (2017). *Mental health and our changing climate: Impacts, implications, and guidance*. American Psychological Association and ecoAmerica.

- Douglas, K., & Carless, D. (2013). Living, resisting, and playing the part of athlete: Narrative tensions in elite sport. Psychology Press.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. *Child development*, 82(1), 405–432. https://doi.org/10.1111/j.1467-8624.2010.01564.x
- Ellis, C., Adams, T. E., & Bochner, A. P. (2011). Autoethnography: An overview. *Forum Qualitative Social forschung/Forum: Qualitative Social Research*, 12(1), 1-18. https://doi.org/10.17169/fqs-12.1.1589
- Fisher, A. (2021). *Radical ecopsychology: Psychology in the service of life* (2nd Ed.). SUNY Press.
- Fraser, N. (1997). *Justice interruptus: Critical reflections on the "postsocialist" condition*. Routledge.
- Ginwright, S. (2018). The future of healing: Shifting from trauma-informed care to healing-centered engagement. *Medium*.

 https://ginwright.medium.com/the-future-of-healing-shifting-from-trauma-info rmed-care-to-healing-centered-engagement-634f557ce69c
- Haynes, D. J. (n.d). *Contemplative practice and the education of the whole person.* www.contemplativemind.org/programs/academic/Haynes.pdf
- Intergovernmental Panel on Climate Change (IPCC). (2021). Sixth assessment report: The physical science basis. IPCC. https://www.ipcc.ch/report/ar6/wg1/
- Intergovernmental Panel on Climate Change (IPCC). (2021). *Climate change 2021: The physical science basis*. IPCC. https://www.ipcc.ch/report/ar6/wg1/
- Kagawa, F., & Selby, D. (2010). Education and climate change: Living and learning in interesting times. Routledge.
- Leduc, T. (2021). *Climate, culture, change: Inuit and Western dialogues with a warming north.* University of Ottawa Press.
- Limitless Potentials. (n.d.). *Yoga Nidra, breathwork, and tapping (EFT): Self-care options during times of disaster and extreme stress*. Limitless Potentials. https://limitlesspotentials.com/yoga-nidra-breathwork-and-tapping-eft-self-car e-options-during-times-of-disaster-and-extreme-stress/

- Love, B. (2019). We want to do more than survive: Abolitionist teaching and the pursuit of educational freedom. Beacon Press.
- Malala Fund. (2021). A greener, fairer future: Why leaders need to invest in climate and girls' education. Malala Fund. https://malala.org/research/a-greener-fairer-future
- Malchiodi, C. A. (2012). Art therapy and health care. Guilford Press.
- McGregor, D. (2009). Honouring our relations: An Anishinaabe perspective on environmental justice. In J. Agyeman, R. Haluza-DeLay, P. Cole, & P. O'Riley (Eds.), *Speaking for ourselves: Environmental justice in Canada* (pp. 27-41). UBC Press.
- National Weather Service. (n.d.). *Austin climate summary*. https://www.weather.gov/media/ewx/climate/ClimateSummary-ewx-Austin.pdf
- Ojala, M. (2016). Facing anxiety in climate change education: From therapeutic practice to hopeful transgressive learning. *Canadian Journal of Environmental Education* (*CJEE*), 21, 41-56. https://cjee.lakeheadu.ca/article/view/1393
- Pennebaker, J. W., & Chung, C. K. (2011). Expressive writing: Connections to physical and mental health. In H. S. Friedman (Ed.), *The Oxford handbook of health psychology* (pp. 417-37). Oxford University Press.
- Riley, K. E., & Park, C. L. (2015). How does yoga reduce stress? A systematic review of mechanisms of change and guide to future inquiry. *Health psychology review*, 9(3), 379-396. https://doi.org/10.1080/17437199.2014.981778
- Saksvik-Lehouillier, I., Hetland, J., Vassenden, M., & Einarsen, S. V. (2012). Mindfulness in schools: A pathway to mental health and resilience. *Journal of Educational Psychology*, 104(3), 555-68.
- Schlosberg, D., & Collins, L. B. (2014). From environmental to climate justice: climate change and the discourse of environmental justice. *Wiley Interdisciplinary Reviews: Climate Change*, *5*(3), 359-374. https://doi.org/10.1002/wcc.275
- Stevenson, R. B., Nicholls, J., & Whitehouse, H. (2017). What is climate change education?. *Curriculum perspectives*, *37*, 67-71. https://doi.org/10.1007/s41297-017-0015-9
- Sporleder, J., & Forbes, H. T. (2016). *The trauma-informed school: A step-by-step implementation guide for administrators and school personnel*. Beyond Consequences Institute.
- United Nations Educational, Scientific, and Cultural Organization (UNESCO). (n.d.). *Education in emergencies: Ensuring the right to education in emergencies and building*

- resilience in the face of crisis. UNESCO. https://www.unesco.org/en/emergencies/education
- United Nations Educational, Scientific, and Cultural Organization (UNESCO). (2021). Learn for our planet: A global review of how environmental issues are integrated in education. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000377421
- United Nations Educational, Scientific, and Cultural Organization (UNESCO). (2020). *Climate change education for sustainable development*. UNESCO.
- https://www.unesco.org/en/sustainable-development/education
- United Nations Office for the Coordination of Humanitarian Affairs (OCHA). (2005). *Pakistan: Earthquake OCHA situation report no.* 15. OCHA. https://reliefweb.int
- Whyte, K. P. (2017). Indigenous climate change studies: Indigenizing futures, decolonizing the Anthropocene. *English Language Notes*, 55(1-2), 153-62. https://doi.org/10.1215/00138282-55.1-2.153
- World Bank Group. (2018). World development report 2018: Learning to realize education's promise. World Bank Group. https://www.worldbank.org/en/publication/wdr2018
- Zajonc, A. (2013). Contemplative pedagogy: A quiet revolution in higher education. *New Directions for Teaching & Learning*, 134. https://doi.org/10.1002/tl.20057
- Van der Kolk, B. A. (2014). The body keeps the score: Brain, mind, and body in the healing of trauma. Viking.
- Zehr, H. (2002). The little book of restorative justice. Good Books.