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Climate change is one of the most pressing issues of our time, and with four out of five students viewing it as a “crisis” (Males, 2019), there is a critical need to incorporate climate education into teacher training programs. However, a significant challenge is the variation in how states implement these curricula, especially given the uneven adoption of standards like the Next Generation Science Standards (2013). As some states assert more control over education standards, particularly in conservative states/regions, climate education risks being minimized or misrepresented due to political biases and polarization. This creates an uneven climate literacy landscape across the country. Therefore, system-level reforms in climate education are essential to prepare teachers to address this global issue with their students. The increasing public awareness of climate change and its catastrophic effects have spurred movements advocating for stronger climate literacy in schools (Beach, 2023). Inspired by activists like Greta Thunburg, students are calling for educational change, recognizing the role of human activity in driving climate change (Males, 2019). However, the deeply polarized and politicized nature of these discussions continues to complicate efforts. Studies show that while 97% of scientists agree on human-driven climate change (Anderegg et al., 2010), only half of American adults believe it (Funk et al., 2019). The disconnect between scientific consensus and public belief, fueled by political rhetoric and media portrayal of climate change as a “controversial” topic (McCright & Dunlap, 2011), creates a challenging environment for teachers to effectively educate students on climate issues without encountering backlash or conflicting viewpoints from the media and potentially their students’ own families. Professional and associational networks provide support for teachers navigating these

complex topics, offering resources, peer support, and advocacy for climate education. The National Council of Social Studies (2019) emphasizes that climate education should not only cover scientific aspects but should also integrate social justice, economic, historical, and cultural perspectives. Integrating climate education across all subjects, not just the natural sciences (Beach, 2023). Many teachers feel unprepared to address climate change due to a lack of training (Kissling & Bell, 2020), highlighting the need for professional development opportunities for all teachers. By supporting teachers with resources that blend scientific understanding with social justice, these networks empower educators to present climate change as a multifaceted issue that impacts various social systems and communities differently.

This approach is essential to address the climate crisis effectively. Climate change intersects with social, economic, and political systems, so teaching about it requires a multidisciplinary approach. For instance, teachers in social studies can explore topics like environmental justice, economic impacts, and historical trends in climate policy (Damico & Baildon, 2022). Research shows that when climate education is confined to science classes, it often misses these broader social and cultural dimensions, limiting students' understanding of the crisis (Todd & O'Brien, 2016). Including climate change across disciplines allows students to view it not only as a scientific issue but as a global issue that demands social and ethical engagement and considerations.

To prepare future teachers for integrating climate education across subjects, a pre-service teacher education program should prioritize interdisciplinary, justice-centered, and student-empowering approaches. While science teachers often lead climate education, understanding climate change's foundations is crucial across all subjects. This component would include courses covering key scientific principles of climate change, human impact on

ecosystems, and evidence-based research on climate trends. Non-science educators would learn to incorporate these principles within their curricula.

This program should emphasize climate change as a social justice issue, as it disproportionately impacts marginalized communities. Centering equity in discussions by including case studies on topics, like how sea-level rise and extreme weather disproportionately affect low-income neighborhoods and developing countries (Martusewicz et al., 2014; Turner, 2015). By highlighting real-world impacts and systemic inequalities, this intersection can foster empathy and civic responsibility.

I also love the idea of centering Indigenous peoples' Perspectives on sustainable practices rooted in Traditional Ecological Knowledge (TEK). I would incorporate TEK principles, and present Indigenous knowledge to enrich students' perspectives on environmental stewardship. Highlighting Indigenous views on reciprocity and harmony with nature, emphasizing that all species actively contribute to ecosystem health and resilience. Incorporating TEK not only honors diverse perspectives but also offers solutions-oriented approaches that inspire students to view their relationship with the environment through a lens of respect and mutual responsibility. Climate change can be an overwhelming topic, particularly for younger students facing climate anxiety. This program would also focus on reframing climate change in terms of positive action, empowering students, and hopefully providing a sense of agency. Through programs like these, we can cultivate a generation of educators and ultimately students who are prepared to meet the challenges of climate change with knowledge, empathy, and agency.