



ENVIRONMENTAL HUMANITIES
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Student Engagement and Environmental Awareness

Gen Z and Ecocomposition

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Abstract This article collaboration addresses the importance of contextualizing current climate change discussions in twenty-first-century ecocomposition classrooms. It specifically focuses on the practical significance of what students' writing and research can accomplish in and outside the classroom, and on how student involvement in the research process can create spaces for new awareness and renewed interest in active engagement with climate change discussions. The article references student projects exhibited at ClimateCon 2020, including one project that focused on Rachel Carson's ability to persevere despite the many challenges she faced. With ecocomposition as an entry point, the article shows the importance of continued education about the environment and climate change, getting involved with sustainable practices, engaging with environmental awareness campaigns, and, when needed, lobbying for readjusting corporate business practices to include sustainability efforts.

Keywords contextualized learning, ecocomposition, rhetoric and environment, climate change action, participatory engagement

Starting the Conversation: Learning about the Environment in the Writing Classroom

Rachel Carson concludes "A Fable for Tomorrow," published in her influential 1962 book, *Silent Spring*, by pointing out that "a grim specter has crept upon us almost unnoticed, and this imagined tragedy may easily become a stark reality we all shall

know.”¹ No longer a fable, tragedies include vast forest fires across the globe, hurricanes, floods, and global pandemics. These tragedies are also played out at a local level in northern Arizona where we as the study’s authors live, teach, and learn. Here, increased cancer rates on the Navajo reservation are associated with uranium mining, and a nearby forest fire cost the lives of nineteen firefighters.² These tragedies, and many like them, have caused ecoanxiety, ecophobia, and climate depression.³ Students tell us that they feel powerless and paralyzed in the face of a rapidly advancing climate crisis.⁴ Many young people have confirmed that their fears about climate change, quite similar to the fears about COVID-19, are connected to an uncertainty over what is yet to come, which, according to Caroline Hickman, a member of the Climate Psychology Alliance, creates an “out-of-control feeling.” To address such debilitating experiences, Hickman argues, we need to take action, either individually or collectively, to create a sense of agency and reduce anxiety levels.⁵

In this article we, as a collaboration between two professors and one undergraduate student, discuss the results of taking action and incorporating opportunities for contextualizing current climate change discussions. We show teachers how the principles of ecocomposition can be used to combine current narratives focused on fear and overwhelming anxiety about the climate crisis with a growing awareness, curiosity, and willingness to explore creative solutions to transform a currently unstable and uncertain future. Specifically, we focus on the practical significance of what students’ writing and research can accomplish, and on how student involvement in ClimateCon 2020, a collaborative student conference, can create spaces for new awareness and renewed interest in active engagement with climate change discussions. We conclude by pointing out the need to combine teacher, students, and citizen roles to create a call to action that expands current narratives about the environment and that realigns public opinion in favor of sustainability and climate change action. With ecocomposition as an entry point, we show that we can participate in education about the environment and climate change, get involved with sustainable practices, engage with environmental awareness campaigns, and, when needed, lobby for readjusting corporate business practices to include sustainability efforts.

The Reason for Ecocomposition and Environmental Awareness in the College Classroom

“Why isn’t there more of an outrage?” asked Maria Welch, a Navajo field researcher with the Southwest Research Information Center in an interview with Laurel Morales, a

1. Carson, *Silent Spring*, 3.

2. Steinbach, “Six Years Later.”

3. See Estok, “Theorizing”; Estok, “Introduction”; Christman, “I Have a Dream”; Alex and Deborah, “Ecophobia”; Deyo, “Eophobia”; and Pikhala, “Environmental Education.”

4. See Plautz, “Environmental Burden”; Richardson, “Climate Trauma”; Wallace-Wells, *Uninhabitable Earth*.

5. See Nugent, “Terrified of Climate Change?”

senior field correspondent for *Fronteras Desk* and NPR.⁶ Welch, whose parents grew up next to uranium mines on the Navajo reservation and played in contaminated water, studies the impact of uranium mining on Navajo families today. Welch's questions about the silence surrounding the environmental destruction caused by uranium mining are indicative of a history of discrimination faced by Native Americans, communities of color, and low-income communities. George McGraw, a human rights advocate and founder and CEO of DigDeep⁷—an organization that focuses on bringing running water to communities such as the Navajo Nation—puts it bluntly: “This is a community that has found themselves voiceless.”⁸

Such voicelessness, and political, racial, and economic marginalization, are not new in the United States, nor are we surprised that the environmental struggles of communities of color, working-class communities, and communities considered to have little economic and political power are often left out from discussions on climate change. Nancy G. Barrón and Sibylle Gruber, both identifying as Gen X professors, embraced the challenge of breaking the silence and using ecocomposition to incorporate climate change into class discussions and to create ClimateCon, a public space to address environmental action opportunities. Gavin Huffman, a Gen Z English major who was enrolled in a capstone rhetoric and writing course and participated in an undergraduate research projects course, embraced the challenge to explore possible approaches to the environmental crisis and to provide insights from and for Gen Z students on how to move beyond feeling scared, angry, and overwhelmed. Barrón and Gruber have lived and worked for more than twenty years near the Navajo reservation in northern Arizona where they teach rhetoric, writing, and digital media studies through theory-based application projects grounded in ecocomposition practices. Huffman applied his rhetorical knowledge to discussions on climate change and sustainability that could lead to social change and action.

The increasing urgency of climate action, and growing student concerns about the environment,⁹ encouraged Barrón and Gruber to focus three junior/senior-level rhetoric and writing courses on historical, local, national, and global discussions surrounding the environment and climate change, especially how they influenced Gen Z. We focused our teaching practices on principles of ecocomposition,¹⁰ which emphasize the interdisciplinary nature and the “ecological pursuit” of writing,¹¹ in which any writing activity has to be seen in its historical, political, or ideological context.¹² We also incorporated

6. Morales, “For the Navajo Nation.”

7. Dig Deep, “Our Work.”

8. Morales, “For the Navajo Nation.”

9. See, for example, Plautz, “Environmental Burden”; Winston, “Young People Are Leading the Way.”

10. See, for example, Dobrin, “Writing Takes Place”; Weisser, “Ecocomposition and the Greening of Identity”; Gaard, “Ecofeminism and Ecocomposition.”

11. Dobrin, “Writing Takes Place,” 18.

12. See Plevin, “Liberatory Positioning of Place”; Hothem, “Suburban Studies and College Writing.”

process pedagogy, Paulo Freire's concept of democratizing education and knowledge, and feminist principles as a way to "teach students an appreciation for diversity that can prepare educated citizens to shape and participate in a multicultural, democratic, and ecological society."¹³ Even though many of the studies on the impact of an ecocomposition curriculum on student learning focus on short-term results of specific situational practices,¹⁴ we were encouraged to apply these practices in our own localized environments and contribute to the growing work of ecocomposition scholarship.

After students in previous rhetoric and writing courses told us about feeling paralyzed and powerless because of media portrayals of the current and impending climate crisis, we created course curricula and learning environments for three junior- and senior-level courses that focused on environmental literacy, climate change, and sustainability, and that also provided opportunities to map the connections between the environment and human actions. With this, "the ecological dimensions of selfhood," in which "the whole spectrum of the nonhuman physical environment is embedded in each of our identities,"¹⁵ became part of the curricula we introduced to students. The end results were student-directed projects that were focused on environmental developments and climate change actions, and that provided spaces for the "discovery and articulation"¹⁶ needed to gain well-rounded knowledge about necessary educational approaches to climate change discussions.

In addition to providing students with a rhetorical foundation,¹⁷ we introduced work by such authors as Rachel Carson, Ward Churchill, Barbara Kingsolver, and Winona LaDuke.¹⁸ Our closeness to the Navajo Nation was especially important in our course design and in our decision to create spaces for transformative actions. Because of the social injustices and the unwillingness or inability by a normative system to communicate these injustices, many activists who live and work outside this normative system have experienced pushback and threats when trying to write about or discuss the cultural, political, social, and economic complexities of environmental developments. We incorporated texts that addressed environmental justice, the contributions of Indigenous peoples to climate discussions, and the need for a renaissance of thought that acknowledges Indigenous contributions to educational thought.¹⁹

To our students, and to us as well, the opposition often seems insurmountable, and belittling comments, refusing to listen to arguments, undermining justified actions,

13. Gaard, "Ecofeminism and Ecocomposition," 176.

14. See Goggin and Waggoner, "Sustainable Development"; Hembrough, "Engaging"; Hembrough, "Case Study"; Geary, "Writing about Wolves"; Heiman, "Odd Topics."

15. Weisser, "Ecocomposition and the Greening of Identity," 81.

16. Gaard, "Ecofeminism and Ecocomposition," 166.

17. Bitzer, "Rhetorical Situation"; Burke, *Grammar of Motives*; Burke, "Ideology and Myth"; hooks, *Teaching*; Foucault, *Discipline and Punish*; Anzaldúa, *Borderlands*.

18. Carson, *Silent Spring*; Churchill, *Struggle*; Kingsolver, *Prodigal Summer*; LaDuke, *All Our Relations*.

19. See Kincheloe and Steinberg, "Indigenous Knowledges in Education"; Battiste, "Struggle and Renaissance"; Price, "Indigenous Leaders."

and detracting from scientific facts have become politically accepted tactics.²⁰ To show that individuals and groups can participate in climate change action, we included talks on guerilla gardening in South Central Los Angeles, urban agriculture, and stories and podcasts on the impact of climate change on Native American communities.²¹ We developed the course curricula with room for student input, and we encouraged them to bring in additional materials that they could introduce to their classmates. In each course, students worked on conceptualizing projects related to climate change. They also crafted a research paper with an action plan for countering climate change, and they developed a presentation that highlighted the rhetorical situation for creating the application project.

Gen Z Sensibilities and Transformative Action: The Need for Climate Change Discussions

When we first discussed creating a common space for students that would allow them to “build their own environmental ethics through a process of exploration,”²² we saw it as an opportunity to expand classroom spaces and promote open discussions about normative systems, environmental racism, environmental policies, the climate crisis, and environmental activism. The contextual nature, and the importance of purpose and audience in ecocomposition, combined with a critical pedagogy that focuses on democratizing education and questioning ideologies, norms, and social conventions, provided the starting point for student explorations of how environmental concerns were and are being brought to the forefront of US consciousness. This way, education and knowledge, as Freire points out, are “processes of inquiry”²³ that create opportunities for developing critical consciousness and encourage us to reflect on and revise our pedagogical strategies.²⁴

The need for “a process of exploration”²⁵ and a place for “true reflection and action upon reality”²⁶ resulted in a collaborative research conference to provide students from the three redesigned junior- and senior-level rhetoric and writing courses a forum for public discussions on climate change action. Organized around panel discussions, poster presentations, and breakout sessions, ClimateCon provided many opportunities for focusing on the escalating climate crisis. Before the conference, students had read, discussed, and presented on sustainability, environmental justice, and climate change action as part of the weekly assignments. In addition, students in each class used their

20. See, for example, Williams and Treadaway, “Exxon and the Valdez Accident”; Whyte, “Dakota Access Pipeline”; Nakamura and Wagner, “Trump Mocks Sixteen-Year-Old Greta Thunberg.”

21. See Finley, “Guerrilla Gardener”; Davison, “How Urban Agriculture”; Carter, “Greening”; Flatow, “How Native American Communities”; Jones, “How Native Tribes”; US Department of the Interior, “Climate Change”; Laduzinsky, “Disproportionate Impact”; Bryce, “Indigenous Leaders”; Morales, “For the Navajo Nation”; Whyte, “Dakota Access Pipeline”; Ibrahim, “Indigenous Knowledge Meets Science.”

22. Gaard, “Ecofeminism and Ecocomposition,” 174.

23. Freire, *Pedagogy of the Oppressed*, 72.

24. Freire, *Pedagogy of the Oppressed*, 84.

25. Gaard, “Ecofeminism and Ecocomposition,” 174.

26. Freire, *Pedagogy of the Oppressed*, 84.

experiences as members of Gen Z to research a topic related to climate change, create a project that showed opportunities for transformative action, and present their findings at ClimateCon. The conference was designed for formal and informal interactions in a meaningful setting,²⁷ with scheduled and “unscheduled” learning opportunities. These unscheduled learning opportunities, as Boyan Slat pointed out in his discussion of re-launching an unsuccessful ocean clean-up system, are part of revisiting failed attempts and creating spaces for future success.²⁸

We knew that ClimateCon had potential for encouraging students to see their work as an opportunity to influence a public audience and to engage in hopeful climate action in small and large ways. We were not prepared, however, for the overwhelming enthusiasm and the positive atmosphere that surrounded the event. The participation in brief panel discussions was animated and included sustainability in baseball, China’s garbage classification system, addressing climate denier arguments, and environmental narratives in game design. The conversations were even more dynamic when students mingled in the hallways of the Liberal Arts Building where participants elaborated on their posters, showed their videos on iPads, and provided details on three-dimensional projects, and where audience members surrounded presenters, asked questions, talked about their own experiences, and provided feedback on what they found especially eye-opening. A student’s project on “Growing Sustainability on Campus and Reducing Single-Waste Use” showed what specific campus efforts were already in place at Northern Arizona University, including the elimination of serving trays, the push for bringing your own drinking flasks, and the use of multi-use carry-out containers. This led to spirited debates on how these efforts could be advertised more fully and publicized across campus.

Audience members also practiced with a student-developed app called “Gamifying Sustainability,” and they provided suggestions on how to market the app to Gen Z. They wanted to know more about recycling and reducing carbon emissions on the Big Island of Hawai’i, where climate change is no longer a far-off threat and rising sea levels are predicted to cause severe coastal flooding. The immediacy of the current climate crisis led to a brainstorming session that included possible individual actions of reducing single-car use, moving to sustainable eating practices, and encouraging social media use to create or join action networks. And because the presenter and the audience had learned about ecoanxiety and social media from another presenter, they were encouraged to discuss the futility of social media “dooms-scrolling,” an activity that many of them had engaged with. Instead, this presenter pointed out that information on Greta Thunberg’s commitment to climate strike actions and Fridays for Future were accessible because of social media, and that young people could easily find out about climate change actions because social media provided an easily available forum for distributing information.

27. Illich, *Deschooling Society*, 29.

28. Slat, “System 001B.”

In addition, posters on sustainable eating, fast fashion and sustainability, renewable energy on the Navajo Nation, sustainable gaming, the effects of climate change on wildlife, and generational differences in climate change discussions provided students with multiple opportunities to engage with one another and to show their knowledge of current discussions on climate change. As one student pointed out, her research on climate change and the discussions with the audience led her to further explore the connections between racial inequality, sustainability, and conservation efforts.

Gen Z and History: Contextualizing Climate Change Action

Many of the presentations encouraged spirited exchanges. We highlight one of them because it was especially influential in showing the need for remembering and addressing critical moments in history. Huffman, an undergraduate English major, decided to explore the life and work of Rachel Carson, a historical figure that he knew little about, and that most of Gen Z had never heard about. Huffman's research, in other words, rediscovered Carson for Generation Z and showed why she was successful not only as a scientist but also as a writer whose personal and professional lives were far from ordinary. In this presentation, Huffman could show that Carson was able to apply her professional skills as a marine biologist and conservationist to change how we now understand the intricate connections between humans and natural environments, and how detrimental the use of pesticides is to the ecosystem. Specifically focusing on Rachel Carson and *Silent Spring*, with its attention to narrative style and scientific soundness, Huffman discovered that Carson, despite many adverse forces in her personal and professional life, gave voice to the concerns of many who suffered the effects of the chemical industry. His research, and his poster presentation at ClimateCon, were especially powerful as a way to reestablish Carson's influence on current discussions on the environment and climate change.

Huffman's enthusiasm, and the attention he received during ClimateCon, showed us that Carson's life story and her writing on environmental pollution resonates with young adults. Carson's ability to persevere because she believed that silence would be detrimental to the planet was especially powerful for Gen Z. Students related to Carson's initial training as an English major, her literary publications that focused on the environment, and her studies in biology. Carson applied what Lloyd Bitzer called the rhetorical situation—"the nature of those contexts in which speakers or writers create rhetorical discourse."²⁹ As Bitzer put it, and as Carson so skillfully shows us in *Silent Spring*, "rhetoric is a mode of altering reality, not by the direct application of energy to objects, but by the creation of discourse which changes reality through the mediation of thought and action."³⁰ Carson knew that her readers needed to be convinced that the current environmental damage affected the human and nonhuman world. She also

29. Bitzer, "Rhetorical Situation," 1.

30. Bitzer, "Rhetorical Situation," 4.

knew that she needed to include more than scientists to create a widespread appreciation for the devastating impact of DDT on the environment.³¹

One of the important points for Huffman to show was Carson's seamless fusion of science and the art of storytelling to create a narrative that does not discriminate against the nonscientist and can be understood by a general audience. Her readers, he pointed out to his audience of Gen Z students, were able to imagine the urgency of Carson's plea for preserving the earth. Instead of focusing on the separation of the arts and sciences, splitting audiences as specialists and nonspecialists, and creating divisions based on subject-knowledge,³² he showed his peers that Carson focused her writing on multiple stakeholders with and without disciplinary knowledge.

Huffman wanted his audience to understand that Carson challenged readers of *Silent Spring* to take action. In Carson's case, this meant that rather than simply informing the public that DDT was harmful to the environment and its inhabitants, she offered ways to combat it. Students who participated in the exchange pointed out that, without solutions to mitigate the dire predictions, Carson would not have been able to convince her audience that they can participate as change agents. They specifically pointed out Carson's use of questions throughout the book, which encouraged readers to think more critically about the ways they are affecting the planet and how they can change the environmental narrative. In other words, students were particularly impressed that Carson was able to change her audience's behaviors and become more environmentally conscious. Huffman and his Gen Z peers attributed this to Carson's emphasis on showing her audience the possibility of a brighter future despite an uphill battle instead of presenting a doomsday narrative. Through the impassioned discussions in the hallway, students concluded that a solid argument, a well-written narrative, and a convincing presentation need to be followed by perseverance in the face of adversity, ridicule, and dismissal.

ClimateCon created an enthusiasm for participating in climate change action that the preceding class activities—readings, discussions, analytical writing exercises, and a proposal centered around climate change action—could not garner. Once students started to work on creating solutions for localized problems, an important point emphasized by Thomas Hothem in "Suburban Studies and College Writing,"³³ and after they received feedback from audience members at ClimateCon, their commitment to participating in climate change action increased. The final weeks in class were spent on refining their projects and writing a final paper that incorporated theory and application and that outlined the exigence for creating the project and the climate change action that students would embrace. The work they submitted showed engagement, a willingness

31. See Griswold, "How *Silent Spring* Ignited"; DeMarco, "Rachel Carson's Environmental Ethic"; Willis-Toker, "Environmental Rhetoric of Rachel Carson," 293.

32. See Gartner, "When Science Writing Becomes Literary Art."

33. Hothem, "Suburban Studies."

to leave their comfort zones, and an ability to “shape a rhetorical position for themselves,”³⁴ and it helped them “acquire a sense of context with which to gauge their relationship to their surroundings, their backgrounds, their education, and hence their future.”³⁵

Changing Public Opinion: Hope for the Future of Gen Z

Young climate change activists are part of a global movement. Deborah Adegbile from Lagos, Nigeria; Ayakha Melithafa from Cape Town, South Africa; Greta Thunberg from Stockholm, Sweden; Alexandria Villaseñor from New York City; and Ridhima Pandey from Haridwar, India; are just a few of the engaged activists who organize protests, take legal action, and work with farmers affected by climate change.³⁶ When students learn about the commitment of their Gen Z contemporaries, and when they are encouraged to question “the shape of choices, the structure and distribution of power and authority, the participatory process of decision making,”³⁷ climate change discussions can become part of a participatory and transformative curriculum for Gen Z students. Instead of remaining a temporary academic exercise, using the principles of ecocomposition provided opportunities for students to see the connections between historical events and current discussions on climate change. Changing “doomsday scrolling” and doomsday narratives to narratives of opportunity prompted Barrón, Gruber, and Huffman to embrace the following motto for ClimateCon2020: “If we agree that today’s climate change crisis is human-made, then we can make the changes necessary to reverse it.” ClimateCon2020 showed that we could become agents of change, and that we could encourage those around us to move toward transformative action, whether it’s on a small or large scale.³⁸

This article is a reminder for teachers that we need to bring the principles of ecocomposition—“the study of the relationship between discourse, nature, environment, location, place”³⁹—to the forefront of our teaching and learning environments. This is especially important when science is often discredited, politics is focused on a consumer mentality, and social media platforms are used to attack climate change activists. This Machiavellian approach to the environment—what can be described as a disinterest in ethical concerns by politicians and big corporations deploying power for their own gain—encourages complacency of the powerful. ClimateCon2020 provided

34. Hothem, “Suburban Studies,” 35.

35. Hothem, “Suburban Studies,” 38.

36. See Dillen, “Time to Listen”; Reynolds, “Star Student on a Mission”; Varagur, “Meet India’s Teen Climate Advocate”; and Galvez-Robles, “Nineteen Youth Climate Activists”; Leung, “Swedish Teen Climate Activist.”

37. Gaard, “Ecofeminism and Ecocomposition,” 176.

38. We acknowledge that organizing a conference and incorporating collaborative learning is not easy. We are full professors who do not teach a 5/5, and our research agenda includes the rhetoric of climate change, science writing, ecofeminism, and ecocomposition.

39. Dobrin, “Writing Takes Place,” 14.

the setting for expanding narratives about the environment, sustainability, and climate change. It encouraged a shift away from self- and media-induced lethargy to a belief that each one of us can and needs to participate in our fight for slowing climate change. As one student said, ClimateCon2020 “was about our futures and not about our homework.” To continue the momentum, it is important to promote ecological literacy by continuously creating spaces for public exchanges and by combining our roles as teachers and students with our roles as citizens to create a call to action that encourages an expansion of current narratives about the environment, changes our anthropocentric worldview, and begins to realign public opinion in favor of sustainability and climate change action.⁴⁰ With this article, we show that we can participate in continued education about the environment and climate change, get involved with sustainable practices, engage with environmental awareness campaigns, and, when needed, lobby for readjusting corporate business practices to include sustainability efforts.

We end this article by reminding our readers of Wangari Maathai, a 2004 Nobel Peace Prize winner and founder of the Green Belt Movement who emphasizes the connections between environmental and social justice actions. As she put it in her Nobel Lecture: “I would like to call on young people to commit themselves to activities that contribute toward achieving their long-term dreams. They have the energy and creativity to shape a sustainable future. To the young people I say, you are a gift to your communities and indeed the world. You are our hope and our future.”⁴¹ Our experiences confirm Maathai’s description of young people. Recent climate change actions such as Fridays for Future, Extinction Rebellion, and Earthjustice⁴² led by committed members across the globe show us that they have the strength and creativity needed to prompt global action on climate change. Our responsibilities as teachers and students include continuous critical and analytical learning about current climate change discussions to end an immoral silence and acknowledge environmental degradation as a social justice issue. With knowledge and understanding of the climate crisis, we are hopeful that we can participate in and design successful climate change action for a safer and healthier natural environment.

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40. See Plumwood, “Androcentrism and Anthropocentrism”; Plumwood, *Environmental Culture*; Boddice, *Anthropocentrism*; Quinn, Castéra, and Clément, “Teachers’ Conceptions of the Environment”; Leonard, “Why Lakes and Rivers”; Marchesini, *Beyond Anthropocentrism*; Dobbins, Piga, and Manca, *Environment, Social Justice*.

41. Maathai, “Nobel Lecture.”

42. Fridays for Future, “What We Do”; Extinction Rebellion, “What Is XR?”; Earthjustice, “Our Work.”

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