Teaching Ecology and Conservation: Lessons from the COVID-19 Pandemic

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Note to educators: access presentations, teaching notes, exercise solutions, and associated files for these modules by registering as an educator, and searching for module by title.

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for Studio alumni and their colleagues focusing on centering equity when teaching conservation, drawing on the experiences of our colleagues at the Center for Biodiversity and Conservation. We continued this topic in our most recent Educator Exchange in October (following our summer Studio), organized in collaboration with the Society for Conservation Biology (SCB). Over 30 educators convened to discuss what competencies and literacies should be fostered in conservation education to meet the broadening scope of conservation practice. Social justice and equity are fundamentally important dimensions of conservation practice, and educators are increasingly seeking to make them a central part of their teaching and conservation competencies. Across the two exchange events this year, participants highlighted the role of social justice and equity, as well as affect, and collaboration, and multiple ways of knowing, as essential for a holistic conservation classroom today.

NCEP’s Conservation Teaching and Learning Studios and other professional development events have never been about “right” or “wrong” ways of teaching, but about fostering a critical teaching practice and connecting educators to a wider array of tools for their teaching toolkits. The past three years have offered us new ways of connecting with and learning from each other and our network, further expanding our own toolkit. Moving forward, we intend to keep online training and exchanges as an important part of NCEP’s professional development portfolio, even as we re-introduce in-person events at the Museum. We also look forward to new and continuing collaborations with organizations and associations such as SCB-North America. We envision this emphasis on true exchange and learning will lead us to a more effective community of practice and subsequently, a more inclusive conservation community.

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As a teacher leading an interdisciplinary course on Social Ecology for undergraduate social science students, the shift to online sessions due to COVID-19 was a challenging experience that nevertheless expanded my teaching and learning canvas. My reflections on that experience are informed by the feedback from my students.

“... the prompts in the running whiteboard made me curious and made me reach out to my friends to know what happened during the class which I missed.”

Interrupted internet and power supply and technical glitches often affected the smooth flow of the classes from both ends. In addition to recording the sessions and pre-recorded videos of certain important concepts, as a class, we realized the possibility of having a running whiteboard in the form of a Google document where every student could comment. This was a valuable space for collaborative learning as students used it to comment on related works, visual texts, or case studies.
“Online sessions helped me to overcome my fear of discussing openly in the class and I am happy that people were acknowledging the points I raised through Webex whiteboard. I would not have opened my mouth in a regular class.”

I learned to be mindful about students with different learning abilities and other challenges to being an active participant in the class. A sense of anonymity, while using tools like whiteboard in the Webex platform or Mentimeter, gave introverted students an opportunity to voice their opinions and contribute to classroom discussions. This experimental phase has also made me realize the importance of continuous feedback and conversations with students to make each session interesting. The feedback “I think there was much more learning through online classes, the perspectives which we got through discussion forums were enriching…” summarizes the way in which some students reacted to these kinds of exercises.

“… the emphasis at each stage for reflection had an impact on the way I connect myself with the environment.”

Reflective weekly essays were a regular mode of engaging students through asynchronous platforms. As a class, we realized the importance of learning in small chunks to help learners stay on track and pausing for a moment to reflect on why it is relevant for each of us. Using pre-recorded videos or related content for self-guided learning provides more space for reflective thinking and discussions in the classroom. Other strategies I now employ include having separate sessions to connect the discussions back to the syllabus and using online gamification tools like Quizziz. These strategies help me and the learners evaluate their learning and the classes become more interesting too.

The stresses of the pandemic and the transition to remote learning (and the associated digital overload) affected the attention span of my students. At the same time, I noticed a positive shift in the way my students related to the resources and the natural environment around them. A shared knowledge that came out through the classroom experiments during the pandemic was a mindful way of locating ourselves as *Homo sapiens* and having a critical way of examining conservation efforts. Discussions and activities during Social Ecology classes were also a search within, both for the teacher as well as the students.

### A Metamorphosis During COVID: a Biodiversity Mapping Exercise

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Until COVID and the ensuing necessity to transition my classes to online teaching, one of my favorite projects was during the early Fall semester when my students and I would work together to photograph and collect geolocation data on butterflies in and around the city of Bishkek, Kyrgyzstan. Then, using some simple mapping tools, we’d produce a map of various species within the city showing how different butterflies inhabit different places. This outdoor practical experience was always very popular with students, but, as all teachers know, there are always ways to improve and integrate assignments. Even though