

Anastasia C.E. Quintana, Statement of Teaching Philosophy

Online teaching portfolio: anastasiaquintana.com/teaching/

Interdisciplinarity and Experiential Learning. The two pillars of my teaching are interdisciplinarity (theory and methods) and experiential learning through inductive reasoning, case analysis, and field experiences.

I teach about people and oceans. Learning about people and oceans requires students to think interdisciplinarily and assess evidence from diverse methods. To facilitate this, I teach using cases from my own research. My research on collective action and self-governance in fisheries and coastal conservation provides rich case material for students to explore theories from different fields. For example, in my Policy Analysis of the Commons course this fall (Masters-level course which I redesigned and am teaching, funded by a Bass Instructional Fellowship), we started with theories of cooperation in behavioral psychology, and my students analyzed the results of cooperation games from my field site in Baja California Sur. We zoomed out to the political science of public goods and common-pool resources, and my students generated hypotheses about my field site. We assessed these hypotheses by combining papers from my case and basic policy analysis tools within common-pool resource theory (a broad framework of governance of the commons rooted in the work of Elinor Ostrom and her colleagues). Finally, we are adding layers of theoretical complexity: ecological (nonlinear feedbacks and open marine systems), scalar (polycentric and multi-level governance), and Complex Adaptive Systems thinking. Through this process, my students are learning to critically assess theory and methods from public policy, institutional analysis, anthropology, ecology, behavioral economics, and social-ecological modeling. Several of them are using theory, methods, and frameworks from my class for their Masters projects.

The second pillar of my teaching is experiential learning. Experiential learning is easiest in the field, but is important in the classroom as well. In the classroom, I use inductive learning activities to have students develop ideas based on their own experiences before they learn others' theory. For example, last spring I co-taught Deep Sea Science and Environmental Management with a biologist (I taught the social science part). To learn about property rights as a many different rights, I first had students do a thought exercise in pairs where they compared their rights to their notebooks, the classroom chairs, the classroom, and Duke's rights to the chairs and classroom. I had them inductively categorize types of property rights over resources, especially common resources. Then, I had them read a classic paper that categorizes property rights over common-pool resources and apply this categorization to their notebooks and chairs, as well as to the deep sea. One of my students has since reported that they have brought up this categorization and used it to defend their argument in two law courses at Duke.

Where I can, I also incorporate field experiences outside the classroom. Field experiences encourage interdisciplinary methods, and they provide opportunities for students to think both inductively and deductively. I was head Teaching Assistant for a month-long field course in Mexico (Community-Based Conservation in the Gulf of California), and found evidence of deep learning from the course: in addition to gaining interview skills, ecological survey skills, and theoretical knowledge on community governance, most students completely changed their opinions the role of small-scale fishing communities in coastal conservation, moving from a 'people apart from nature' stance towards a 'people within nature' one. I have lived or taken courses at field stations in Costa Rica (Pitilla, Murcielago Island), Spain (L'Estartit), Turks and

Caicos (South Caicos), Mexico (Kino Bay), and Maine (Darling Center); in my future teaching, I plan to use these excellent resources to take students to for research and learning experiences.

Teaching experience. As a PhD student at the Duke Marine Lab, I have sought training and opportunities to teach. This fall I am sole Instructor of Record for Policy Analysis of the Commons, a Masters course, filling a gap in courses offered this semester as almost a third of our Marine Lab faculty are on sabbatical. As mentioned above, I also designed the social science portion of Deep Sea Science and Environmental Management in Spring 2019, as part of the Certificate in College Teaching's Teaching Triangles Program (note: Teaching Triangles feedback is included in this package). The Deep Sea Environmental Science and Management course had previously been designed and taught by eminent deep-sea biologist Cindy Van Dover but without social science theory. I worked with Cindy to develop a deep-sea relevant social science curriculum to complement the course. The course was highly received by students (see course reviews), and my social science materials have been permanently adopted into the course because of the positive reviews from students. In addition to these teaching experience, I have served as Teaching Assistant for four courses: Marine Climate Change, Biological Oceanography, Marine Policy, Community-based Conservation, seeking opportunities to TA far beyond the departmental requirement of 1 course TA-ed over the course of the PhD. In the classroom, my teaching techniques derive from experience mixed with formal training through Duke's Certificate in College Teaching, including two 2-unit courses on teaching, teaching observation, and peer feedback on my own teaching through a semester. One of these courses, taught by Grant Murray, involved 12 hours of critical classroom observation at the Marine Lab, and I have incorporated many tools that I learned during this observation into my teaching now. Additionally, I have contributed to improved teaching at the Duke Marine Lab through the Teaching Triangles program. Through this program, I observed and provided feedback to three other PhD students on their teaching during spring 2019. My feedback has contributed to these students' teaching this semester.

Mentoring experience. For the "Ocean Evidence Gap Map" Bass Connections project between Duke University and the World Wildlife Foundation in which I was involved 2017-2018, I mentored a team of undergraduate and graduate students to conduct a systematic literature review using the gap mapping software, Colandr. This experience taught me that keeping students motivated is perhaps the most important part of mentoring. I found that weekly working sessions emphasizing face-to-face time paired with accountability and peer quality control keep students excited and motivated. In my future teaching and mentoring, I will use these skills to motivate and support my students.

Commitment to teaching and mentoring diverse learners. I am committed to supporting diversity in the classroom. My transgender sibling has taught me the importance of formal training, and so I have sought training in Gender and Sexual Diversity (Duke University, 2017) and teaching diverse learners (central topic of Facilitating Student Learning course at Duke University, 2016). Four years ago, I founded an annual event called Girls Exploring Science and Technology ("GEST") at the Duke Marine Lab for local middle schoolers to do hands-on STEM activities with scientists. This year, GEST welcomed over 200 participants and 50 volunteers, and partners with the Boys and Girls Club, middle schools, and local businesses. The Duke Marine Lab is now using GEST as a model for their diversity pipeline in environmental sciences, which was integrated into their strategic plan last year. I am eager to continue actively working to teach and mentor diverse learners, seeking further trainings and opportunities to create spaces for diverse learners.