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**Teaching statement**

At the University of Wyoming, I was a teaching assistant for introductory biology, evolutionary biology, genetics, marine biology, and ecology. Upon completion of my doctorate studies, I worked for one year as a Visiting Assistant Professor at Lees-McRae College (a small liberal arts college in North Carolina), where I taught the following courses: introductory biology, evolutionary biology, zoology, and an advanced genetics course. I also participated in an active learning training program at the University of Wyoming (the LAMP mentoring program) and in the teaching and learning center of the Appalachian Colleges Association. I have also taught skill-oriented workshops (e.g., computer programming for fisheries at the Fisheries Research Centre in Tanzania TAFIRI) and facilitated academic exchange through the organization of varied research symposia (University of Wyoming’s Program in Ecology Student Symposium and Costa Rican Researchers Abroad Symposium). As a research scientist passionate about science communication, I treasure opportunities to participate in both teaching and outreach activities. As an educator, I strive to share my passion for learning and provide students with opportunities to take pride in their learning journey, learn from each other in a teamwork setting, and connect what they learn in the classroom with real-world experiences. I also believe in integrating diverse examples into teaching, and promoting inclusive education so that students can witness more of the diverse and intercultural community currently involved in science and technology (Landreman 2013; Tanner 2013). My mission is to engage diverse learners and increase the positive impacts of teaching in our society. Thus, my pedagogical approach involves the following strategies: **1)** empower students to become lifelong learners, **2)** applyingexperience-oriented learning opportunities in the classroom, and **3)** use innovative technologies to foster curiosity and creativity.

I believe that a clear roadmap for student success is essential for promoting lifelong learning. As part of my course design, I present clear activity goals that closely align with the learning outcomes of lectures, while providing fair assessment, room for low-stakes errors, and constructive feedback to evaluate learning (Wiggins and McTighe 2011; Rauschert et al. 2019). For this reason, I break down content into achievable goals and emphasize the value of sustained, purposeful practice to build robust neural pathways and a growth mindset. I want students to become confident in the knowledge they acquire and learn from trial and error through lab activities and assessment designed to identify learning gaps. Identified misconceptions become key opportunities to adapt teaching strategies, lead classroom discussions, and encourage peer-learning. Team-based activities in the classroom, such as sharing exam preparation strategies, and peer evaluations represent useful tools for students to practice giving and receiving constructive feedback, explain concepts, and ultimately, reflect on their own learning processes (i.e., metacognition; Tanner 2012). I strive to be an approachable teacher on one-on-one interactions inside and outside the classroom. Incorporating such an adaptive approach to teaching is essential to empower students to become lifelong learners and masters of their own learning.

Class projects in which students take concepts learned in class and apply it to solve a puzzle or societal problem of their choice are my preferred way to generate knowledge in the classroom (McInerney et al. 2011, Delić and Bećirović 2016). One way I have implemented such an experiential learningframework (as described in Walker and Rocconi 2022) is through an environmental DNA (**eDNA**) lab in an advanced genetics course (Golcher-Benavides 2023). In this activity, students learned about the challenges associated with monitoring populations of a vulnerable aquatic salamander and used **eDNA** to detect the presence of this species in local streams that had not been surveyed before. Students were able to practice advanced techniques in molecular biology (e.g., DNA extraction, quantitative polymerase chain reaction) and at the same time inform future management actions benefitting local wildlife. Linking classroom content with emerging real-world challenges provides powerful ways to positively impact society.

A screenshot of a website

Description automatically generatedThe process of learning is inherently multifaceted; thus, integrating content and assessment tools in various forms, including students’ interests can promote **curiosity and creativity**. I love activities that allow for the exploration of different tools and outcomes depending on a student’s interest. As part of my evolutionary biology course, I start by asking students to mention their favorite organism and then give them as assignment to write something they learned while searching for their favorite organism using the tree of life phylogeny tool (www.OneZoom.org). At the end of the semester, students participate in a class symposium about topics of their choice in evolutionary biology publicized in popular news outlets. In an ecology course I was a teaching assistant for, I designed a project where students quantitatively analyzed patterns of biodiversity focused on their taxonomic group of choice using iNaturalist, a popular citizen science platform. Through my active participation in this platform (over ~3,000 observations so far), I can also share more about my own personal interests and demonstrate my commitment to teaching biology beyond an academic setting. I keep myself up to date in new software and other technological advances to present both inquiry-based content in multiple ways, as well as to increase the toolkit students acquire during their undergraduate education (**Fig. 1**). Integrating the interests of students is also key to cultivate a learning drive, and self-confidence.

**Fig. 1**: Banner for the biological inventory event or “bioblitz” to engage students enrolled in the lab component of a general zoology course at Lees McRae College in Banner Elk, North Carolina. This event relied on using the social network of naturalists in the iNaturalist platform. During a 1-day event, students found and identified as many organisms as possible at the college’s field station.

I firmly believe that my cultural background and experience with teaching strategies that encourage lifelong learning, positively contribute to society, and incorporate innovative technologies will contribute to building a stronger teaching and learning community at Hope College. I deeply value the opportunity to be constantly growing professionally, discussing scientific ideas, and celebrating diversity through my teaching. Just as previous researchers encouraged me to pursue science, I pursue opportunities to inspire and help others to do so.

**Citations**

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