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TEACHING PHILOSOPHY STATEMENT

Teaching Experience

My teaching portfolio includes eight years of formal academic teaching (Assistant Professor [visiting and professor of practice included], Adjunct Professor, and Teaching Assistant), and seven years of informal education through non-profits and community positions. I wrote curricula for both undergraduate and graduate courses across the organismal and ecological biology and environmental spectra. Additionally, in my current role I am coordinating the effort to develop quantitative thinking and interpretation of scientific principles in non-science majors. I have experience teaching at various levels of the undergraduate education, from introductory courses in biology and environmental sciences, focusing on developing learning skills and evening the knowledge base for freshmen, to upper division courses building critical thinking and investigation of topics to a deeper level. Examples of upper division courses I taught include evolutionary biology, behavioral ecology, conservation science, and water politics and policy. In graduate pedagogy, a significant portion of my focus is on building quantitative skills as well as producing deliverables that show professional excellence. The courses I have taught at the graduate level include animal behavior, forest ecology and biogeography.

Following my passion for pedagogical development and curriculum design, I have served on various departmental and institute wide committees focusing on altering program curricula and requirements, as well as committees adapting courses to current needs and expectations in the field. This work included sitting on a committee re-working the environmental science program at a small liberal arts college- with the aim to meet market challenges and accreditation demands. I sat on the biology curriculum committee at a historically black university (HBCU) and piloted an updated design I built to a coordinated course in introductory organismal biology at the same institution. I built the course to highlight active and experiential learning with a goal of developing quantitative thinking and scientific literacy, skills HBCU biology majors often struggle with, entering the class with uneven experience and skill sets.

Teaching role

In my teaching experience, over a decade, my understanding of my role as an educator has shifted. While my view of the three pillars of pedagogy have not changed, the importance of each has shifted together with the make-up of the student body and the demands of society and industry over the past couple of decades. Today, I rank mentorship as the most significant demand. I act as a guide to my students, building their skills and providing them with tools. Experiential learning and wide tool kits have become keys for minority students to excel and transcend societal and socioeconomic biases. Of second importance, overseeing professionalism has taken a greater role in tertiary pedagogy. Assuring my students are capable of performing the positions for which they are training and learning how to conduct themselves in a demanding and rigorous work environment ensures my institutions reputation and sources of employment for my students, post-graduation. Lastly, as an expert in my field, it is my role to impart knowledge to my students. However, in a changing informational landscape, this role has changed from the sole purveyor of information to a guide in assessing the quality of information.

Additionally, with the changes in information accessibility, I have become a big supporter of the American education model, that highlights liberal arts education - even in research institutions. By providing my students with interdisciplinary education, regardless of the course, they expand their critical thinking capabilities and learn to identify better information across disciplines. In turn, this enhances my students' abilities as informed citizens, and future leaders.

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All my perceived roles as an educator directly lead to the fundamental ability to achieve and develop critical thinking in my students. This has inspired my adoption of experimental teaching- adapting and testing active learning strategies. Examples of methods I experimented with include debate and discussion, flipped classrooms, guided in-lab research projects and more. Beyond teaching the expected curriculum, I put emphasis on case studies that analyze controversial aspects of the learnt field, directing a meaningful conversation of each side of the arguments. Through critical thinking exercises, I build confidence in my students and allowing me to test their abilities. I emphasize the development of synthesis perspective of how courses and topics influence the entire scope of their career.

Course development

I build courses aiming to implement five pedagogic roles correlating to my goals as an educator: (1) knowledge transmission in form of theory, (2) fostering discussion of the theory and derivation of the rationality behind it, (3) observing how the theory is manifested in the observed environment, (4) challenging the theory in the lab, and (5) synthesis of the gained knowledge into real life applications.

When possible, I balance my courses with equal parts for lecture, discussion (debate), field and laboratory components. Each of the above stimulates the students in different ways. Lectures and discussions disseminate knowledge and reinforce logic. Field exercises and labs connect the ideas with tangible experience that enforce a broader perspective and synthesis. In addition, having built a portfolio of active learning methods, I learned to select the right exercise for the course objectives following Bloom's pedagogic taxonomy and the characteristics of the students attending my course. The best example of this is the choice to design mastery-based introductory level courses that reduce test taking anxiety and provide a platform to elevate students of disadvantaged minorities. Similarly, in upper-level courses, I apply guided and assigned-role group projects, which simulate a work environment and help prepare my students for productive post-academic work.

Lastly, given my experience working with underrepresented minorities and students with disabilities, I have taken universal design to heart. Using this philosophy, I aim to build fair and balanced curricula. Striking the balance between achieving high standards, increasing student retention, and not oversimplifying a course, can be a difficult balancing act. My approach to achieving this balance has been to diversify my evaluation methodology. Namely, I rely less on test taking, and now favor evaluating students on assignments that allow for feedback and learning correction. While this approach has yielded good outcomes, I acknowledge the difficulty of implementing many of these strategies in large enrolment courses and heavy teaching loads. These have led to some compromises I needed to make in the past.

Diversity, Mentorship, and Advising

I prescribe to the philosophy that the role of an educator reaches far outside the classroom. In my interaction with students, I offer a safe space to my students of all backgrounds. My own decision to attend an undergraduate university stemmed from diversity awareness, and I believe it is important to provide this service to my future students. I have an open-door policy with my students and offer support and advice to my students wherever possible be it on academic matters, personal life challenges, or career advice. I developed rubrics to help me guide my advisees in their academic choices, maximizing their success, and keeping realistic goals to achieve to their maximum abilities.

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