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Alampi Room, Marine & Coastal Sciences

Motivating Teacher and Student Engagement with the Environment through Renewable Energy Education

Environmental and energy education is focused on fostering environmental behavior. This study investigates empirically if education leads to changes in environmental attitudes and subsequent environmentally significant behavior (ESB). The study contextualizes teachers' and students' motivation to engage in ESB within an environmental educational training framework. The results of structured questionnaires administered in Northeast, Mid-Atlantic, and Midwestern K-12 schools (n=214 for teachers and n=1498 for students) reveal that environmental attitudes are not a good predictor of teaching behavior but they do predict students' intent towards ESB. Teachers' energy attitudes are a better predictor in motivating them to teach while students are most responsive to their affective attitudes. The study finds that education does not play a significant role in changing environmental or energy attitudes of teachers and students. The study also advances a methodological tool for data collection that can expand the reach of evaluation instruments and measure learning across formal and informal audiences. It highlights how interactional technology can be readily utilized for future research and outreach in classrooms, nature learning centers, professional training programs, and museums. Overall, the work advances social-psychological understanding of how adults and youth respond to educational programming. It highlights the need to go beyond the cognitive shifts in affecting behavior. Curriculum based on environment might be necessary but is often not sufficient for changing environmental values. Finally, information and knowledge acquired must motivate the teachers' and students' desire and ability to conscientiously act, wherever necessary.

Dr. Nirav S. Patel is a Research Scholar at the Honors College who is responsible for advancing the scholarly mission of the Honors College. In addition to conducting independent research to advance interdisciplinary approaches to sustainability teaching, education, research, and problem solving, he teaches first year students within the Honors College. He is trained as a natural scientist and a social scientist and his research focuses on coupled natural-human systems. His current research and teaching focuses on interdisciplinary teaching and learning approaches to human-environment interactions within social-ecological systems. He earned his Ph.D. in Natural Resources from Cornell University where he was also awarded teaching award and emerging faculty teaching award which exemplifies teaching excellence, character, service, and advocacy for students enrolled in the core biology instructional program at Cornell University.

—Coffee/tea will be served prior to the lecture—