

Chapter 8

Island Ecology for Educators: The Intersection of Ecosystems Content, Coastal Environmental Education, and Technology

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ABSTRACT

Island Ecology for Educators is an interdisciplinary course that is cross-listed between environmental studies and education students engaging both undergraduate and graduate students. This chapter aims to contribute to our understanding of environmental education practices by introducing the TTIP Teaching Model addressing (1) the importance of teaching about and in nature, (2) issues of teaching in the digital age, (3) benefits derived from interdisciplinary courses, and (4) building partnerships in your community. The TTIP model is the framework that the authors developed and adapted for creating an engaging platform for learning and teaching of environmental education and blends the aspects of teaching outdoors (T), technology inclusion (T), interdisciplinary courses (I), and partnering with experts (P). The discussion includes the outcomes of the course and recommendations for how to design similar environmental education courses using the TTIP Teaching model focusing on content application, pedagogical application, technology infusion, and partnership creation.

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INTRODUCTION

“The edge of the sea is a strange and beautiful place.” ~ Rachel Carson

The edge of the sea is indeed a special place. Can you imagine a coastal community that is so rich in diversity that a biological hotspot designation applies? Can you imagine a community where unique flora and fauna coexist and compete for limited resources across thirteen different ecosystems, all easily accessible in just a short hike? The answer is yes. This local edge of the sea exists and provides university preservice education and environmental studies students a glimpse into one possible way that an ecology education field course can begin to address the goals of sustainable environmental education. For the last nine summers, the authors have taught a course on a barrier island rich in history, culture, and biodiversity. *Island Ecology for Educators* is an interdisciplinary course that is cross-listed between environmental studies and education students engaging both undergraduate and graduate students. This chapter aims to contribute to our understanding of environmental education practices by introducing the TTIP Teaching Model addressing

- 1). the importance of teaching about and in nature,
- 2). issues of teaching in the digital age,
- 3). benefits derived from interdisciplinary courses and
- 4). building partnerships in your community for contextual learning.

The TTIP model (Figure 1) is the framework that the authors have developed and adapted over the last nine years while teaching this course. This model has proven to be beneficial in creating an engaging platform for learning and teaching of environmental education and blends the aspects of teaching outdoors (T), technology inclusion (T), interdisciplinary courses (I), and partnering with experts (P).

This chapter describes how the design of the unique setting for this university course engages and leverages future science educators to support students' learning of ecological concepts. The authors address the pedagogical context, learning objectives, assessment tools, and student produced web-based products for the course. The discussion includes the outcomes of the course and recommendations for how to design similar environmental education courses using the TTIP model focusing on content application, pedagogical application, technology infusion, and partnership creation. Research efforts examining key factors in environmental education uncovered a number of broad patterns that emerged from prior studies. A sample of those findings that played an integral role in the development of this ecology education field course are included.

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