

Immersion and Place-Based Learning: Making Connections in a Novel Environment



Andy Danylchuk¹ and Steven Cooke²

¹Department of Natural Resources Conservation, University of Massachusetts Amherst

²Environmental Science and Biology, Carleton University, Ottawa, Canada

Enhancing Education

If you tell me, I will listen.

If you show me, I will see.

If you let me experience, I will learn.

Lao Tzu – (6th Century BC)

Experiences can enhance learning

Experiential Education

Tools - observations, actions, and hands-on activities



Encourages learners to become active participants in the world around them

Guiding Principles

Immersion

Connection to place; refine observation skills; deepens interest

Involvement

Interacting with ‘place’; application of knowledge; increased awareness

Guiding Principles

Ownership

Sense pride; responsibility; rigor; self-reflection

Legacy

Time series; add to knowledge base; contribute to big picture; transference

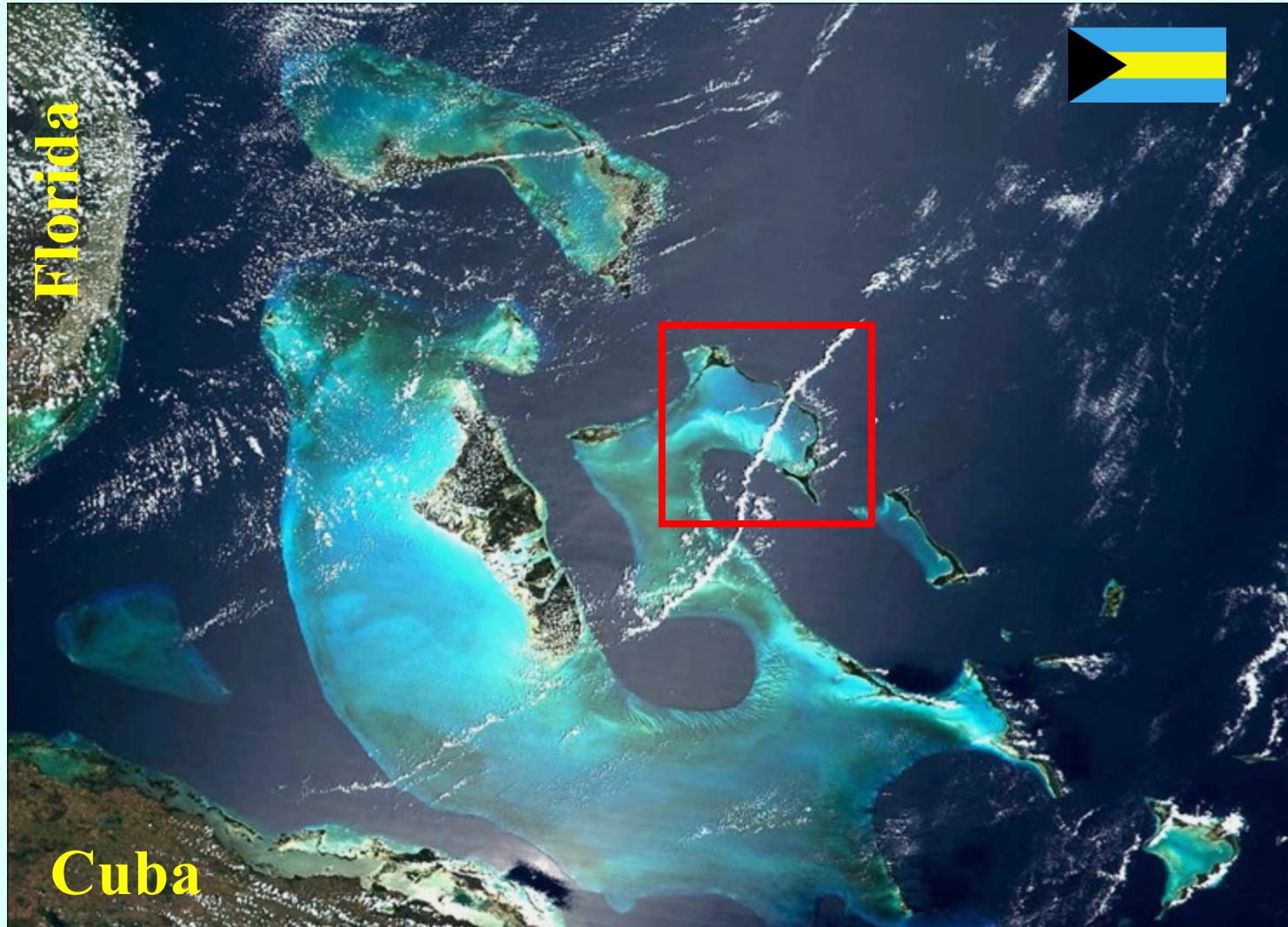
Novel Environments

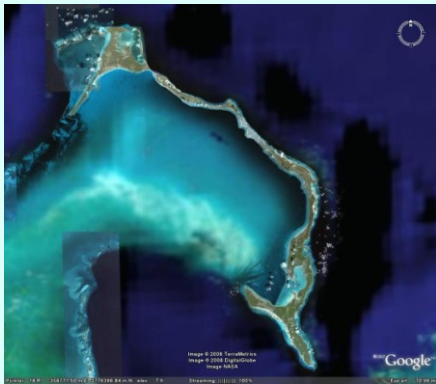
Edge of the Comfort Zone

New environments foster an excited nervousness that results in heightened awareness ('fun house effect')

Encourages learners to ask questions about their surroundings

Immersion







Natural Environment

Coral reefs



Mangroves



Terrestrial



Cultural Environment

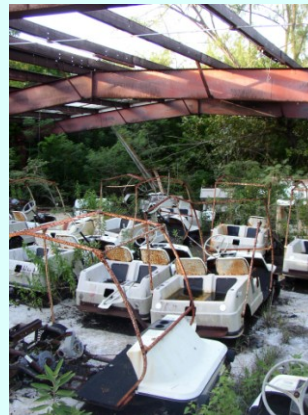


Built Environment



Old versus new

Tourism-based economy





Sustainable Design



Integrated Coastal Zone Management

Framework for addressing the connection between the land, sea, and community



Involvement in Scientific Research

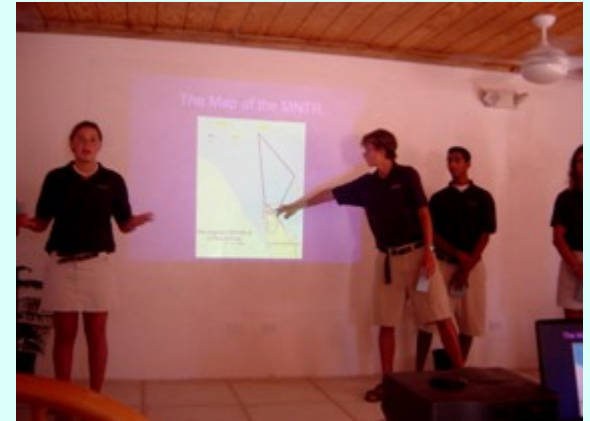
Authentic experiences that contribute to the conservation of environment and culture

Fosters a sense of responsibility and deepens the connection to the experience

Applicable for a wide demographic of learners



High School

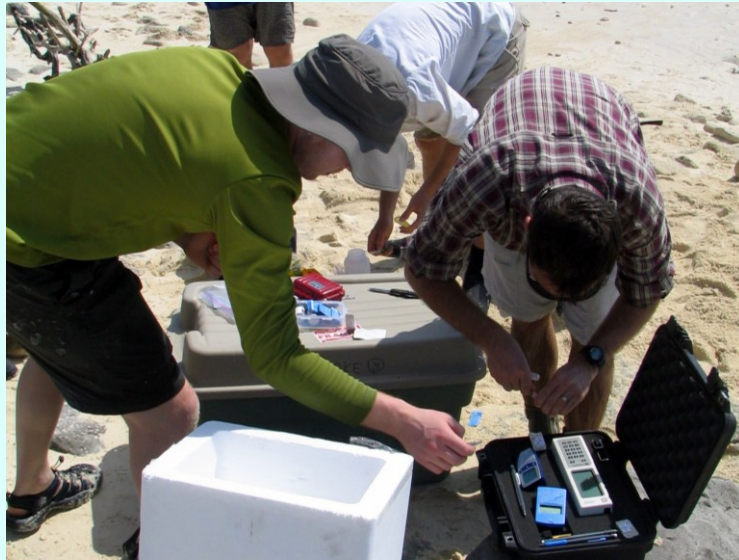


Undergraduate





Graduate



Journal of Fish Biology (2008) **73**, 1351–1375
doi:10.1111/j.1095-8649.2008.02008.x, available online at <http://www.blackwell-synergy.com>

Effects of different capture techniques on the physiological condition of bonefish *Albula vulpes* evaluated using field diagnostic tools

S. J. COOKE^{†‡§}, C. D. SUSKI^{*||}, S. E. DANYLCHUK^{*},
A. J. DANYLCHUK^{*†}, M. R. DONALDSON[†], C. PULLEN[†],
G. BULTÉ[¶], A. O'TOOLE^{†‡}, K. J. MURCHIE^{*†}, J. B. KOPPELMAN^{*#},
A. D. SHULTZ^{*}, E. BROOKS^{*} AND T. L. GOLDBERG^{**}



ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

Comparative Biochemistry and Physiology, Part A xx (2007) xxx–xxx

CBP

www.elsevier.com/locate/cbp

Physiological disturbance and recovery dynamics of bonefish (*Albula vulpes*), a tropical marine fish, in response to variable exercise and exposure to air

Cory D. Suski^{a,b,*}, Steven J. Cooke^{a,c,d}, Andy J. Danylchuk^{a,c}, Constance M. O'Connor^c,
Marie-Ange Gravel^c, Tara Redpath^c, Kyle C. Hanson^c, Andrew J. Gingerich^{c,d},
Karen J. Murchie^{a,c}, Sascha E. Danylchuk^a, Jeffrey B. Koppelman^{a,c}, Tony L. Goldberg^{a,f}

^a Flats Ecology and Conservation Program, Cape Eleuthera Institute, Eleuthera, The Bahamas

^b Department of Natural Resources and Environmental Sciences, University of Illinois, Urbana, IL, USA

^c Fish Ecology and Conservation Physiology Laboratory, Department of Biology, Carleton University, Ottawa, ON, Canada

^d Institute of Environmental Science, Carleton University, Ottawa, ON, Canada

^e Missouri Department of Conservation, Columbia, MO, USA

^f Department of Pathobiology, University of Illinois, Urbana, IL, USA

Summary

Incorporating key principles of immersion, involvement, ownership, and legacy in course design can increase learning potential

Experiential education in novel environments can further enhance learning

Increases environmental awareness, promotes a conservation ethic



