

Chapter 8

Indonesian Adventures: Developing an Ecology of Place on Sulawesi Utara

Vajiramalie Perera, Wiske Rotinsulu, John Tasirin, and David Zandvliet

Abstract In this chapter, we develop an island metaphor to communicate our emerging framework for EE in Indonesia. The concept of an island is a powerful metaphor in everyday speech as well as in the disciplines, and we use it here as an attempt to clarify our meaning of community. Beyond the metaphor, islands have also played a major role in the realm of knowledge construction (e.g., descriptions of isolated gene pools were seen as instrumental in the development of Darwinism, and these processes were described as taking place within the “Malay” archipelago by Wallace). Social anthropology also uses islands implicitly in the description of isolation and boundedness in cultural systems. In the case of Sulawesi Utara, this insularity is a strong descriptive metaphor but also describes an ecological reality for this region. Environmental learning then can draw on the functions, intersections, and relations of place-based education. Our discussion is informed by a place-based island metaphor for ecological education that emerged from the development work for a field school conducted in Indonesia. Place-based education (in our view) discards a one-sided view of education by taking as its first assumption that education is both “about” and “for” defined communities. This perspective then informed a study of place-based education on Sulawesi Utara and the design of the field school for teachers that we conduct there.

8.1 Prologue

From a look at a globe or a map of the Eastern hemisphere, we shall perceive between Asia and Australia a number of large and small islands forming a connected group distinct from those great masses of land, and having little connection with either of them. Situated upon the Equator, and bathed by the tepid water of the great tropical oceans, this region enjoys a

V. Perera (✉) • D. Zandvliet
Simon Fraser University, 5886 Coquitlam St, Chilliwack, BC V2R 0A1, Canada
e-mail: vajiramalie@gmail.com; dbz@sfu.ca

W. Rotinsulu • J. Tasirin
Universitas Sam Ratulangi, Kampus Unsrat, Bahu-Manado 95115, Indonesia
e-mail: wiske_rotinsulu@yahoo.com; jtasirin@gmail.com

climate more uniformly hot and moist than almost any other part of the globe, and teems with natural productions which are elsewhere unknown. The richest of fruits and the most precious of spices are Indigenous here. (Alfred Russell Wallace 1890, p. 11)

At its initial conception, it was envisioned that an elective field school program in Indonesia (as part of the undergraduate minor in environmental education (EE)) would appeal to teacher candidates who were interested in pursuing a career in this domain. The focus of the field school was to be on the development of students' environmental perspectives through an investigation of diverse ecological contexts in an international setting. Most importantly, we believed that the adventurous aspect of the field school would create a unique place-based learning opportunity for students.

Indeed, Indonesia offers students a rich opportunity to explore intercultural and international approaches in education as part of a unique semester-abroad experience. The program includes two courses: environmental education (104 h) and directed studies in environmental education (52 h). These are delivered in cooperation with local partners and involve day excursions or multiple day-trips to local communities, national parks, meetings with community organizations, exchanges with university students, cultural events, presentations by university representatives, and volunteer work with community organizations and schools. These experiences form the core of a place-based curriculum centered in various island communities on Sulawesi Utara, located on the northern tip of the island formerly known as Celebes. Our interactions with the community there set up a dialectic that leads to service learning opportunities and formulation of self-directed studies in support of local community. In this, students were encouraged to develop a project that supported local efforts at environmental remediation, communication, or curriculum development.

The course follows in the footsteps of explorer and naturalist Alfred Russel Wallace, who traveled extensively throughout the region in the mid-eighteenth century and codeveloped his theory of natural selection with Darwin. The place also witnessed waves of intrepid Dutch traders prior to that, who colonized much of modern-day Indonesia, centralizing governance in Jakarta and developing its botanical treasures into a three-century monopoly on the trading of coveted spices such as cloves and nutmeg. In this context, the study program for the field school provides opportunities for students to consider environmental perspectives in both rural and urban settings while also considering theories associated with critical and place-based education such as those of decolonization and re-inhabitation as described by David Grunewald (2003).

8.2 “We’re Going on an Indonesian Adventure”

This chapter also researches and describes through an ethnographic perspective a core EE course taught in the international setting of Indonesia. The course examines in detail the educational problems entailed in developing human awareness and

understanding of the environment through a dialectic of the global and local. It also explores environmental issues through multidisciplinary lenses which include scientific inquiry, aesthetic, and social justice perspectives to a consideration environmental ethics. It also relates historical and contemporary issues in human–environment interactions to school curricula from the elementary to the secondary level. Designed for prospective teachers, the course is a core for the minor in environmental education at Simon Fraser University (SFU).

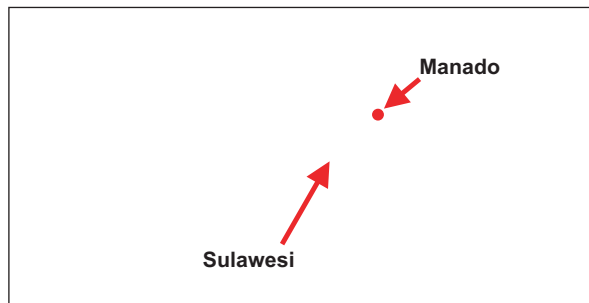
From volcano geology to highland agriculture studies to coral reef ecology, students can look forward to a range of coursework about the environment. With the current trends in sustainable development, the main objectives of this field school will be on developing students' environmental perspectives through hands on fieldwork in an international setting. Also, the program provides an introduction to how educators can promote environmental and ecological thinking across all grade levels and all subject areas. (Excerpt from the 2011 brochure)

This study describes the development and delivery of an international field school in Indonesia that has been offered since 2007. The field school represents collaboration with the Universitas Sam Ratulangi in Manado that extends the university's earlier capacity building in the region with the CIDA-funded Eastern Indonesian Universities Development Project (EIUDP) through the 1990s (Munro and Dagg 1998). We employ an auto-ethnographic reporting style where “researchers constitute their own object of research so that the knowing subject and the research object become one” (Roth 2005, p. 109). In addition, we explore the “lived experience” (van Manen 1990) of students and faculty participating in the program and relate to our evolving conceptions of a critical place-based education in situ and the relationship of this experience to various learning outcomes associated with environmental and ecological education.

The model for ecological education discussed in this chapter builds on existing theories of place-based education (Smith 2002) while describing a deepening partnership between Indonesian and Canadian universities in the offering of an international field school. It draws on participatory action research methods (Gaventa 1988) to relate the perspectives of various stakeholders including community members, students, teachers, and university faculty throughout our work.

The goal for place-based education of this nature is to describe an ecology that emphasizes the embeddedness of human societies and cultures within localized places or communities (Bowers 1999). This conceptual model describes a range of ecological, sociocultural, and technical influences that frame educators' interpretations of curriculum. Our field school explores this model within the context of island communities where we apply the framework in specific ways – contributing to the development of future educators through their field work, community service, and curriculum development (Fig. 8.1).

Fig. 8.1 Location of the Indonesia Field School (Adapted from: <https://www.cia.gov/library/publications/the-world-factbook/geos/id.html>)



8.3 “Island” as Metaphor and as Place

The position of Celebes (Sulawesi) is the most central in the Archipelago. Immediately to the north are the Philippine islands; on the west is Borneo; on the east are the Molucca islands; and on the south is the Timor group – and it is on all sides so connected with these islands by its own satellites, by small islets, and by coral reefs, that neither by inspection on the map nor by actual observation around its coast, is it possible to determine accurately which should be grouped with it, and which with the surrounding districts. (Russel Wallace 1890, p. 380)

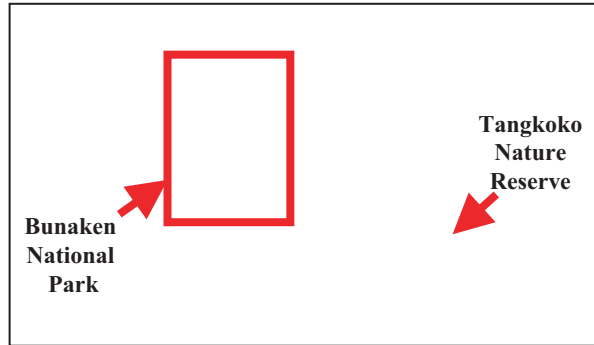
The Indonesia Field School uses an island metaphor to communicate a developing framework for place-based education that is suitable for an archipelago nation like Indonesia. The concept of an island is a powerful metaphor in everyday speech as well in disciplines such as sociology or science, and we use it here as an attempt to clarify our meaning of community. Social anthropology also uses islands implicitly in the description of isolation and boundedness in cultural systems (Ericksen 1993). In the case of Sulawesi Utara, this insularity is a descriptive metaphor that also depicts the ecological reality for the region as a distinct cultural region and a biodiversity hotspot with high levels of endemism.

Islands have also played a major role in the realm of knowledge construction in science: descriptions of isolated gene pools, for example. Indeed, Wallace (1890) first described a mechanism for natural selection in the Malay Archipelago:

Isolation is no doubt an important aid to natural selection, as shown by the fact that islands so often present a number of peculiar species ... an examination of its animal productions shows Celebes (Sulawesi) to be at once the poorest in the number of its species, and the most isolated in the character of its productions, of all the great islands in the Archipelago ... A considerable number of its animal forms are so remarkable, as to find no close allies in any part of the world (Russel Wallace 1890, p. 31)

Today, nearly 70% of all species on the island of Sulawesi are still considered endemic to the island (John Tasirin, personal communication). These include a range of endangered mammals, such as the anoa (a dwarf species of water buffalo), babirusa (the so-called pig deer), bear, cuscus, maleo bird, and a number of rare species of primate (i.e., the black crested macaque and spectral tarsier). This high degree of endemism is attributed by scientists – Darwin and Wallace included – to the isolated physical location of these islands and the extremely active seismic

Fig. 8.2 Manado and the Minahasa region (Adapted from: <http://www.minahasa.net/en/about-map.html>)



nature of the surrounding region. It is a place where the Asian and Australian tectonic plates collided and brings about a blend and evolution of floral and faunal species from the Oriental and Australasian bioregions of the world.

Geographically, islands can be said to be mountains that emerge from the bottom of the sea to tower above the water. In the case of Sulawesi Utara, this is literally the case as active and dormant volcanoes, fringed by coral reefs, form the backdrop for various forms of community life. The structural similarity of the “phenomenological order” between such types of landscape as an island in the middle of the open sea allows for the similarity of metaphorical meanings for an island or mountain (Lehari 2005). In this, the precondition of an island’s metaphorization is its existence in our own environmental experience. Put more simply, “an island is not an island, until you go there” (Zandvliet and Brown 2006). That is, the isolating component of this metaphorization of island can only be described by those “on island” looking back out rather than those viewing the phenomenon from other vantage points (Fig. 8.2).

8.3.1 *Sulawesi Utara*

The first night we were there, a bunch of us caught our first Indonesian sunset. I remember us being in awe at the colours of the sky, the Manado Tua volcano backdrop and the calmness of the Celebes Sea. (Vajiramalie/RA)

Locating a field school in the Minahasa region of Sulawesi was an ideal design decision for modeling our concept of place-based education owing to both its cultural and biological diversities. The region must be truly experienced to be understood:

The trees are more covered with lichens and mosses, and the ferns and tree-ferns are finer and more luxuriant than I had been accustomed to seeing ... The forest, however, is most luxuriant. Noble palms, Pandani, and tree-ferns are abundant in it, while the forest trees are completely festooned with Orchideae, Bromelidae, Araceae, Lycopodiums, and mosses ... Ordinary stemless ferns abound; some with gigantic fronds ten or twelve feet long, others barely an inch high; some with entire and massive leaves, others elegantly waving their finely-cut foliage, and adding endless variety and interest to the forest paths (Russel Wallace 1890, p. 349)

The reasons for this abundance are clear: first, the region has been recognized as a biodiversity hotspot by scientists (UNESCO 2005) and is located well within the famed coral triangle. Second, located on the northern tip of an island, Sulawesi is itself surrounded by other small volcanic island groups to the north and south and is bathed by the warm currents of the Celebes Sea.

8.4 Learning in Place

Being from (an island) not so far from Indonesia, I was quite used to the climate and living conditions. I enjoyed the hot weather, spicy food and beautiful beaches. Almost every facet of Indonesia reminded me of home ... Still I was a little afraid that I would not get experience of being outside my comfort zone ... little did I know that the experiences that have changed my life came from our group and the ordeals that we had to endure together (Vajiramalie/RA)

The learning activities designed for the field school allowed students to build community through student dialogue while also experiencing diverse natural settings such as the active volcanoes of *Lokon* and *Mahawu* in the highlands of Tangkoko Nature Reserve (a protected lowland forest) and *Pulau Bunaken* (with its fringing coral reefs). These activities first exhibited the adventure aspect of our experience perhaps challenging students physically and/or mentally while also providing a firsthand look at the extraordinary diversity of ecosystems present in the Minahasa region.

Our natural history adventures lasted from short trips of a few days to longer trips of a week or more, as we explored the surrounding environment from a geological and/or biological perspective. These scientific experiences were complemented with visits to cultural sites such as Pasar tradisional (the traditional market) in *Tomohon* or *Airmadidi* (with its ancient Minahasan burial crypts known as *Waruga*). Many other activities explored traditional local (sustainable) technologies, such as bamboo cooking, fish traps, and other forms of traditional knowledge that have been part of these local cultures for thousands of years.

My fondest memory in Indonesia is definitely the outing to Tangkoko National Park. The army of macaques that surrounded me that afternoon was unreal. All it took was one alarm call from one macaque and a crowd of them appeared, it was beyond what I expected to see on the field school ... it was an amazing experience.... (Steven, field school participant) (Fig. 8.3)

Important to our goal of modeling ecological education practices: several different indigenous groups were present in the Minahasa highlands along with an intermingling of migrant populations from neighboring islands in the coastal region. It is a textbook case of cultural boundedness that has been eased by the migration of other groups to Minahasa. In the highlands, nine tribes have merged to form the dominant Minahasan cultural group. Much of this intermingling was accelerated by the colonial presence of early Portuguese or Dutch traders. While Portuguese were in the region only briefly, the Dutch planted coffee or spices leaving a lasting cultural impact. This included the establishment of Christianity as the dominant religion in the region and the persistence of the Dutch language among elders in the community.



Fig. 8.3 Black crested macaque (Tangkoko), Waruga complex (Airmadidi), and bamboo cooking (Tomohon) (© D. Zandvliet)

8.5 Dutch Influence

The country was divided into districts, and the system of *Controlleurs*, which had worked so well in Java, was introduced. The *Controlleur* was a European, or a native of European blood, who was the general superintendent of the cultivation of the district, the adviser of the chiefs, the protector of the people, and the means of communication between both and the European Government ... under the direction of the *Controlleurs* most of the houses were rebuilt on a neat and uniform plan. It was this interesting district which I was now about to visit (Russel Wallace 1890, p. 344)

For us, environmental learning in a place like Indonesia draws on the functions, intersections, and relations of a critical form of place-based education. For example, in our “spice of life” assignment, we analyzed the ongoing Dutch influence in the region as a historic spice-producing region for the Dutch East India Company (or VOC) through a variety of activities. In this assignment, we describe differences between colonial relations to place and other (indigenous) relations to land, where a traditional ecological knowledge of the land is integral to “being and knowing in the world” (Meyer 2008, p. 211), this as seen through the globalizing practice of spice trading (Fig. 8.4).

The major source of new and useful spices turned out to be in South East Asia where spices such as pepper, cardamom, ginger, cinnamon, cloves and nutmeg were indigenous. After a brief period of Portuguese dominance in the region, Dutch traders drove all other European nations out of the region and gained a virtual monopoly of the trade in nutmeg and cloves ... Dutch influence grew with the increasing wealth of the enterprising Dutch East India Company until the British and French smuggled out plants and began competing plantations in other regions. The Dutch East India Company eventually collapsed in 1799 (Excerpt from Spice of Life assignment guidelines)

This colonial relation to place in Minahasa is still evident (alongside indigenous perspectives) as large clove and coffee plantations persist in and around many villages such as Ruruan. Despite the end to Dutch colonization in the 1950s, this relationship remains a complex one as many Minahasans fought alongside the Dutch (against the Javanese) during the Indonesian war of Independence. Some Minahasan elders continue to believe that they enjoyed greater economic and



Fig. 8.4 Nutmeg, coffee and cloves, profitable Indonesian commodities in the Dutch colonial time (© D. Zandvliet)

political autonomy under colonial Dutch rule than under their current leaders in Jakarta (personal communication), this, despite the recent efforts by the central government in Jakarta to grant greater autonomy in the region.

8.6 Kawanua

In the Minahasa language the word Kawanua often means inhabitant of the country, or wanua–wanua (people) who are one, or Mina–Esa (Minahasa People) (John Tasirin, local lecturer, personal communication)

The meaning of the word Kawanua is thought to be derived from the earlier proto-Malay word Wanua, meaning a dwelling or domain, and later it developed to mean village, negeri (country), or nation. At the same time, in Minahasan culture, the word Wanua had come to take the deeper (ecological) meaning of country or village.

For the first part of our stay in Indonesia, we typically attempt to embody the concept of Kawanua as we try to inhabit the area: imbedding ourselves in typical highland patterns of daily life while observing/participating in the rituals which surround us in this largely subsistence-based agricultural region. These patterns include (in part) communal agricultural practices, local or small cottage industries, and intergenerational vocational education programs.

We settled into the nice cool weather and fresh mountain air... we were invited to a “wedding breakfast dinner” at a close-by village. They had interesting customs and were very accommodating to us (Veronica, field school participant)

The techniques we use to imbed ourselves in community life include a process of community mapping that involves open-ended, ecological inquiry into the life of a village or locality. As part of this process, students are asked to observe, analyze, and represent their personal experiences of community to each other through each of three lenses. The first (sociosphere) involves people-watching and otherwise dialoging and informally interacting with locals (using interpreters where necessary). The second (technosphere) involves investigating the how and why things are done



Fig. 8.5 Tree ferns, farm collaborative, market produce, and rice paddy all representing the community (© D. Zandvliet)

a certain way (e.g., building or farming techniques). Finally, the lens of ecosphere considers the all-encompassing natural environment where all of these other activities take place (Fig. 8.5).

We were sent on our community–mapping project ... I loved this part of the field school. Walking through the village and talking to random strangers was quite exciting. I really enjoyed walking through paddy fields and visiting the pagoda (Jessica, field school participant)

8.7 A Critical Approach to Place-Based Education

On one occasion, shortly after the community mapping activity and just after a visit to the traditional market in Tomohon, one student expressed a deep concern: he noted that many endangered species we had observed on excursions to natural areas such as the Tangkoko Nature Reserve (i.e., rats, bats, snakes, monkeys) had found their way to the market as food. To this point one of the local lecturers (John Tasirin) responded:

This is the problem we are trying to address. In the Minahasa region, we have one of the highest levels of biodiversity on the planet ... but we have a culture that eats everything...

Later in the field school, this same lecturer related that the actual relationship might be a bit more complex than originally stated. During a personal communication, he indicated that this cultural reality underscores a need for critical forms of environmental education as the loss of an endangered species such as *Macaca nigra* (the black crested macaque) would also see a loss of significant cultural capital. However, many Minahasans (himself included) still consume local (indigenous) plants or animals as a kind of cultural practice – often linked to their personal identity as Minahasans in an increasingly globalized and interconnected society (Fig. 8.6).

The notion of place-based education has been well described by David Orr (1992) and David Sobel (1993), while related ideas have been expanded on by others (e.g., Woodhouse and Knapp 2000). The idea of place-based learning connects theories of



Fig. 8.6 Traditional highland food, bajo with fish trap, UNSRAT biologist, John Tasirin (© D. Zandvliet)

experiential learning, contextual learning, problem-based learning, constructivism, outdoor education, indigenous education, and environmental education. The above incident underscores the need for critical approaches in the study of place-based education in that it has both ecological and cultural dimensions. In support of what he described as a critical pedagogy of place, David Gruenewald (2003) states that our educational concern for local space (community in the broad sense) is sometimes overshadowed by both the discourse of accountability and by the discourse of economic competitiveness to which it is linked. Echoes of this idea can be seen in the increasing influences of globalization that are observed in many urban areas of Indonesia, but also in the Dutch colonial influences that are still visible in the Minahasa region. As this case illustrates, the consumption of local foods becomes commodified at a local market rather than a home-based cultural practice. This, in turn, contributes to the growing conservation issues as they are influenced by increasing urbanization caused by the fact that more and more Indonesians leave their rural communities for jobs in the larger cities.

8.8 Menado (Manado) and the Coastal Region

The little town of Menado is one of the prettiest in the East. It has the appearance of a large garden containing rows of rustic villas with broad paths between, forming streets generally at right angles with each other. Good roads branch off in several directions towards the interior, with a succession of pretty cottages, neat gardens, and thriving plantations, interspersed with wildernesses of fruit trees. To the west and south the country is mountainous, with groups of fine volcanic peaks 6,000 or 7,000 feet high, forming grand and picturesque backgrounds to the landscape. (Russel Wallace 1890, p. 341)

The Manado that Wallace described some 150 years ago was a product of coastal human migration patterns to this productive and scenic region. However, these were magnified by increased development during Dutch colonial times. Today, the region has seen more dramatic growth as a global tourism destination (due to its proximity

to the Bunaken Marine Park) and as an important regional center for government, agriculture, mining, and commerce. It increasingly resembles any large city with popular shopping complexes, fast food, chic hotels, and trendy restaurants. As the city grows, so do its problems: urban encroachment on protected areas, solid waste (i.e., plastic migrating to coral reefs), air pollution, and traffic congestion. In short, Manado faces many of the same sustainability issues that larger urban areas face, for example, how to balance development without compromising the important ecological and cultural capital present in the surrounding regions.

This then was to be the true urban adventure as an important program activity is the act of living in and experiencing the city of Manado. We do this by shopping or eating, by interacting with school children while teaching English at local schools, by meeting with local NGOs, and by attending lectures at the local campus of Universitas Sam Ratulangi. The content of these activities provides participants with a host of information on topics such as marine ecology and the natural history of Sulawesi Utara, but they also include topics of a more urban focus including issues of language and culture, public health, education, and a variety of other development-related issues. The intent of this is to allow students to draw connections between their everyday lives and the issues apparent in the surrounding physical/cultural environments that support their (largely) urban lives.

Overall, we believe that the inclusion of a form of urban EE in our field school program gives students a greater appreciation of the diversity of cultural and environmental systems around them as well as an urge to act to overcome existing problems. Indeed, it is a synergy of universities, schools, and community-based organizations that are together struggling to promote more sustainable living here in Sulawesi Utara and abroad. Still, common urban practices such as hyper-consumerism, environmental depletion, and socioeconomic inequality also need to be seen as contributing to the range of environmental problems. All educators, as individuals and professionals, are expected to respond to the collective demand for a greener socially just world but are themselves implicated through their everyday lives:

My experience has allowed me to develop another set of lens in viewing our home in Canada. It has made me more aware of how my value system, decisions, and actions all influence my immediate surroundings and may encompass environmental consequences....
(Jessica, field school participant)

8.9 Island Reflections

Bunaken National Park, only a few watery kilometers from the growing city of Manado, encompasses a coral ecosystem and has been recently proposed as a UNESCO World Heritage listed site. It is also considered by scientists to be near the epicenter of marine biodiversity on the planet (UNESCO 2005). This location marks a final destination for course activities. Here students finalize coursework and reflect deeply on their learning throughout the program. Portfolio presentations and action projects comprise the bulk of the activity while on island, and these are



Fig. 8.7 Artistic expression (water colors) as an example of the portfolio process by Merissa Robson (© D. Zandvliet)

supplemented by a number of field excursions to beaches, reefs, villages, schools, and other excursions (i.e., dolphin or whale-watching) – all of these occurring within the park boundaries. Students engage in peer-teaching activities where they also share knowledge gained about the local ecology and culture and try out ideas or techniques related to the practices or theories of environmental education (Fig. 8.7).

During the last module of the course (in the form of a retreat), you will share artifacts, ideas, writings and lessons using a portfolio of your own design, to demonstrate learning and connections made between conceptual frameworks for Environmental Education and your own developing practice (Excerpt from 2014 course syllabus)

Through deep reflection within the portfolio process, participants come to understand that place-based and experiential programs can examine the complexity of natural systems. Human interaction with/in these systems is also examined while they explore how holistic forms of education can help to develop a sense of respect and appreciation for the natural world. Aesthetic appreciation, along with a scientific understanding of nature, encourages them to act to protect and sustain the environment. The actions they intend will take the form of detailed directed studies proposals that students compose in order to complete their studies in the semester-long program.

Student-designed (directed studies) projects take the form of curriculum writing projects, community action projects, or various other types of creative works (McClaren and Hammond 2005). Throughout, the principles for organizing and conceptualizing EE are demonstrated and applied by students. These aspects include a consideration of complex systems, aesthetics, environmental responsibility, and the practice of an environmental ethic (BC Ministry of Education 2007). As educators, we need to facilitate understandings of what constitutes responsible environmental action but also to help students to think/act responsibly in both their personal/professional lives.

8.10 Ecological Education

Ecological frameworks (such as the one described here) apply the principles of ecology, derived from the Greek root “oikos” (household), to an examination of the relationship of all living things with their environments and with one another as living and interdependent systems (Bowers 1999). So too, in a philosophical sense, ecological notions such as community or *Kawanua* apply to our conception of the human–world relationship and to the theory and practices of education. Ecological frameworks also aim to build on a specific understanding: that humankind is an interconnected part of both the human and natural worlds (Smith 2002). Further, to understand ecologically is to make sense of the human world as part of, not apart from, nature; it is to understand humankind’s “interconnectivity in life” (Grunewald 2003, p. 6).

It was in North Sulawesi that I found a true appreciation and realization as to just how interconnected our environment is ... Living here (in Canada) I feel disconnected from my immediate environment. In Indonesia, I knew where the banana I was eating came from as I saw the (Minahasa) boy cut it down from a tree, and I knew where my fish was from as I saw it swimming in the ocean (Amanda, field school participant)

Understanding ecologically also has an emotional core: one’s knowledge about ecological processes and principles is meaningful due to an emotional attachment to the world and all of its living communities. According to the authors, the consideration of an inclusive, ecological framework for education at once responds to a critique of the mainstream organization of curricula by providing for alternative issue-based and place-based pedagogies while allowing teachers to interpret curriculum in ways that refocus learning on and in communities. Teaching within an ecological framework focuses energies on the importance of quality of life within communities while assisting students in the development of a sense of place within them. While others such as Grunewald (2003) and Smith (2002) make arguments for place-based or community-based models of learning, we attempt to take this view further by also describing the need for critical and embodied approaches in their implementation. Central to this is the idea that ecological frameworks for education recognize that our assumptions about effective teaching are best enacted when actions are deeply embedded within the complexity and authenticity of real communities:

Teaching in Indonesia at both a public and private school made me realize two things. First, just how much I love working with children. Second, that providing people with a proper education can happen anywhere. You don’t have to have big fancy schools, projectors, smart boards etc. what is essential is having capable and caring educators. No matter where I go in life, whether in the traditional classroom or in a government office, I aspire to be an educator. (Amanda, field school participant)

By the end of my two months in North Sulawesi, Indonesia “Terima kasih” (thank you) rolled off of my tongue with no trouble. It is a phrase I hope I never forget as I am forever thankful for my time and experience in Indonesia ... (Rachel, field school participant)

8.11 Final Thoughts

For me, Indonesia is like that door that ‘Alice in the Wonderland’ enters. Indonesia was an experience of many ‘firsts’ for me such as swimming in the ocean, visiting a black sand beach, hiking ... just to name a few (Jessica, field school participant)

As described here, the idea of place-based learning connects theories of experiential learning, contextual learning, problem-based learning, constructivism, outdoor education, indigenous education, and EE. However, in describing the need for a critical pedagogy of place, Gruenewald (2003) writes that our educational concern for local space (community) can be overshadowed by the discourse of accountability and economic competitiveness to which it is linked. This assertion has also been witnessed through our experiences in Sulawesi Utara as the influence of globalization is increasingly felt within the local communities we visit during the field school. Place becomes a critical construct to its opponents, not because it is in opposition to economic well-being but because it challenges assumptions about the dominant metaphor of progress and its embedded values.

An ecological framework for EE breaks from this mold by taking as its first assumption that education is both about and for community. Ecological conceptions of education should place an emphasis on the inescapable embeddedness of humans and their technologies in natural systems. Instead of conceptualizing nature as *Other*, it involves the practice of viewing humans as one part of the complex natural world, where human societies and cultures are a product of the interactions between our species and the places in which we find ourselves (Smith 2002). Such an approach also negates issues of right or wrong and allows individuals or groups to consider multiple (cultural) perspectives on an issue or problem. This allows for sociocultural critiques to be placed alongside the usual scientific or economic considerations. The implications of this shift in thinking could be profound for the future of environmental education:

There is an unexplainable distinction between departing and arriving – so much fills the space between the two and it seems as if words cannot convey the weight of the experience. I am here, on the plane ... about to take off from the Manado airstrip. We are ... full of memories, experiences, new destinations, sadness, future plans, and we have shared something that is more than we ever envisioned it to be ... Never before have I been so ignited with future aspirations and felt the possibility of it all and how anyone, anywhere can impact who we are and how we perceive the world. (Veronica, field school participant)

As a final reflection, the Indonesia Field School director (David Zandvliet) also attributes the implementation of this field school as a transformative moment in his own professional career:

In planning the logistics and theory to be implemented in this program, I had the opportunity to travel extensively in Indonesia and visited many places in Sulawesi including Tomohon, Tangkoko, Manado and Bunaken ... all of these are now special places in my own experience and each place teaches our students a great deal about the interactions of culture and environment. Despite this, the experience of running the field schools in this region has changed me in ways that I will never be able to fully understand, much less describe ...

Thinking through our experiences in Indonesia has caused us to view the concept of home quite differently and the purposes of education too. So, is ecological education the answer to this form of economic inequality so prevalent in regions like Indonesia? Many theorists argue that a place-based or “ecological education” may help to alleviate this condition. This assertion has also been strengthened through our experiences in Sulawesi as the influence of globalization is increasingly felt within the local communities visited. Place becomes a critical construct to its opponents, not because it is in opposition to economic well-being but because it challenges assumptions about the dominant metaphor of progress and its embedded values. I believe that in summary, this is an important consideration for all those interested in the internationalization of education, as the diverse cultural practices we witness in other locations can function to “make the familiar, strange” in the places we now call home.

Questions

Discussion questions that could help instructors and students to engage in meaningful conversation about the ideas presented in this chapter.

1. List the differences and similarities of the terms “place-based education” and “environmental education” based on their description in this chapter. Are they compatible? What would be the benefit(s) of meshing the two together in formal, non-formal or informal learning environments?
2. How do aspects of culture and environment interact in this description of a field school?
3. How would you describe the meaning of “kawanua” in this study, and can you think of similar ideas developed in other settings?

References

- Bowers, C. (1999). Changing the dominant cultural perspective in education. In G. A. Smith & D. R. Williams (Eds.), *Ecological education in action: On weaving education, culture and the environment* (pp. 161–178). Albany: State University of New York Press.
- British Columbia Ministry of Education. (2007). Environmental learning and experience: An interdisciplinary guide for educators. Retrieved from http://www.bced.gov.bc.ca/environment_ed/.
- Eriksen, T. E. (1993). Do cultural islands exist? *Social Anthropology*, 1(1), 133–147. <https://doi.org/10.1111/j.1469-8676.1993.tb00246.x>.
- Gaventa, J. (1988). Participatory research in North America. *Convergence*, 21(2/3), 19–27.
- Gruenewald, D. (2003). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, 32(4), 3–12.
- Lehari, K. (2005). Island. Retrieved from http://www.eki.ee/km/place/pl03/Place3_Lehari.pdf.
- McClaren, M., & Hammond, B. (2005). Integrating education and action in environmental education. In E. Johnson & M. Mappin (Eds.), *Environmental education and advocacy: Changing perspectives of ecology and education* (pp. 267–291). New York: Cambridge.
- Meyer, M. A. (2008). Indigenous and authentic: Hawaiian epistemology and the triangulation of meaning. In N. K. Denzin, Y. S. Lincoln, & L. T. Smith (Eds.), *Handbook of critical and indigenous methodologies* (pp. 217–232). Los Angeles: Sage.

- Munro, J., & Dagg, C. (1998). *Canadian and Indonesian universities work towards sustainable development in eastern Indonesia*. University Leaders for a Sustainable Future. Publications, 2(2). Retrieved from http://www.ulsf.org/publications_declaration_index.html
- Orr, D. (1992). *Ecological literacy*. Albany: State University of New York Press.
- Roth, W. M. (Ed.). (2005). *Auto/biography and auto/ethnography: Praxis of research method*. Rotterdam: Sense Publishers.
- Smith, G. A. (2002). Place-based education: Learning to be where we are. *Phi Delta Kappan*, 83(8), 584–594.
- Sobel, D. (1993). *Children's special places*. Tucson: Zephyr Press.
- UNESCO. (2005). World heritage list. Retrieved from <http://whc.unesco.org>.
- van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. New York: State University of New York Press.
- Wallace, A. R. (1890). *The Malay Archipelago: The land of the orang-utan, and the bird of paradise. A narrative of travel, with sketches of man and nature* (10th ed.). London: Macmillan.
- Woodhouse, J., & Knapp, C. (2000). *Place-based curriculum and instruction: Outdoor and environmental education approaches*. Charleston: ERIC Clearinghouse on Rural Education and Small Schools.
- Zandvliet, D. B., & Brown, D. R. (2006). Framing experience on Haida Gwaii: An ecological model for environmental education. *Canadian Journal for Environmental Education*, 11(1), 207–219.