THE POWER OF PLACE-BASED LEARNING: CARING FOR OUR ISLAND EARTH

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ABSTRACT
By utilizing the environments that students live in to teach concepts, place-based education creates learning that is personally relevant and meaningful. It allows young people to apply what they learn to issues in their community. This article describes a training project in Hawai‘i that is capitalizing on a remarkable worldwide journey of two double-hulled canoes--the Hōkūle‘a and Hikianalia--as a vehicle to have students connect history and culture to their own lives. The author describes how teams of teachers and librarians are engaging the students in experiences that nurture a deeper appreciation for traditional local practices, and that invite them to embrace a sense of kinship with and responsibility to the larger community called Earth.

INTRODUCTION
In a recent article in Educational Leadership, David Perkins (2016) made a critical case for “lifeworthy learning” that embodies the following elements (p. 16):

- Goes beyond content mastery to the acquisition of skills that have lifelong applications including collaboration, communication, and citizenship
- Assumes local to global dimensions of exploration
- Meshes themes and topics that provide vibrant lenses bringing the past and present together
- Erases the silos that separate traditional approaches to disciplinary study
- Focuses on students’ personal choice, commitment, and passion.

Place-based education is a way for students to make these essential connections with their history, their place, their culture and their future (Kemp, 2006). Place-based education is a phrase that is relatively new; however, as a concept it has been around for historically longer (Evans & Kilinc, 2013). In describing meaningful learning that extends beyond the school walls, John Dewey (1916) said that “experience outside the school has its geographical aspect, its artistic and its literary, its scientific and its historical sides. All studies arise from aspects of one earth and the one life lived upon it” (p. 91).

A sense of place represents the vital link between where we live and who we are (Scott, 2002). It capitalizes on knowledge that is manifested in the local community and uses this as a springboard to introduce concepts in multiple content areas through hands-on, real-world experiences. Although the concept of place originated in the discipline of geography, place-based projects are multidisciplinary and interdisciplinary (Resor, 2010). These projects enhance students’ appreciation for the natural world and promote stronger ties between schools and community organizations and local citizens, who are striving to restore a connection with the land (Sobel, 2004). These experiences contribute to young people’s sense of stewardship for the world in which they live (Kudryavtsev, Stedman, & Krasny, 2012).

THE HAWAI‘I PLACE-BASED PROJECT
The idea of creating a place-based learning experience for students in Hawai‘i motivated a six-
member team of educators from the Hawai‘i Department of Education, Chaminade University of Honolulu, and the Hawai‘i Association of School Librarians to successfully seek a Teaching with Primary Sources (TPS) grant from the Library of Congress in 2015. The training program brought together ten K-12 school teams of teachers and librarians to collaborate on experiential, inquiry-based activities and lessons that were rooted in a rich sense of place and the knowledge system of the ancient Polynesians. The training focused on Mālama Honua (roughly translated as “to care for our Island Earth”) that is central to the 2013-2017 worldwide voyage of two Hawaiian canoes, the Hōkūle‘a and Hikianalia. This four-year voyage is presently taking the double-hulled vessels over 47,000 nautical miles to 85 ports and 26 nations to grow a global movement toward a sustainable world environment. Spearheaded by the Polynesian Voyaging Society, a non-profit research and educational corporation based in Honolulu, the message being carried on this journey is a compelling one: like islanders surviving on a canoe in the open ocean or on an island in the middle of the sea, all of the world’s citizens must be responsible for the limited resources on our “island earth” (www.hokulea.com).

This historic undertaking provided a dynamic cultural backdrop for the TPS-funded training program entitled, “E Noiʻi Kākou (Let’s Inquire!): Leveraging Primary Sources on Pacific Voyaging in Support of STEM Learning.” The training targeted learning about open ocean Polynesian way-finding and merging the related cultural traditions and practices with concepts and processes in the sciences and the arts. The school teams designed interdisciplinary projects that met the following objectives: (1) integrating some aspect of the socio-historical aspects of the ancient voyaging experience, (2) connecting this with a contemporary global issue, and (3) creating hands-on experiences that demanded rigorous thinking and problem solving. Rather than relying on textbooks, the teams incorporated primary digital resources from the Library of Congress and texts, videos, and artifacts from local databases specializing in Native Hawaiian history and culture. In the remainder of this article, we describe examples of team-created experiences that engaged students in a “glocal” perspective to explore human relationships with the local environment in the context of global environmental issues. A critical aspect of the studies has been building student awareness of and respect for indigenous knowledge that is culturally rooted in a deep reverence for place.

COMPARING MACHINES OF THE PAST AND THE PRESENT

At Waimanalo Elementary, Ann Marie Ho and Lita Leonhardt, third grade teachers, and Carleen Matusda, librarian, took a conventional unit on the workings of simple machines and spun it into a bigger challenge for their young students by introducing the following big questions: What types of machines did the ancient Hawaiians use? How are simple machines from the past and present alike? Different?

By building ramps, pulleys and catapults, the students were introduced to basic principles in physics and engineering. They also read and viewed visual and print sources on simple machines and demonstrated their understanding using a graphic organizer (Frayer Model) to define terms and illustrate them with examples. What made this experience unique, however, was having the students also use archival photographs and handle actual artifacts to identify the tools and instruments aboard the double-hulled canoes as well implements used in ancient Hawaiian homes. Lita’s students worked on science fair projects based on what they learned. Some of the older students are participating in the actual building of a canoe under the guidance of Hui
Malama O Ke Kai, an after-school program that celebrates traditional values by involving children and families in learning and creating together (http://www.huimalamaokekai.org). Carleen is sharing pictures of the ongoing work with the younger pupils.

MERGING LOCAL WITH GLOBAL PERSPECTIVES
Every year, seventh and eighth graders at Kailua Intermediate participate in National History Day activities. Given this year’s overarching theme of “Exploration, Encounter, and Exchange in History,” Shauna Hirota, social studies teacher, and Kathleen Nullet, librarian, encouraged students to consider topics dealing with the Polynesian ocean voyages. Of the 170 students participating this year, almost 40 pupils created projects dealing with the voyages. Shauna and Kathleen emphasized the importance of using primary sources in the student works. They were delighted when one of the students placed third in the State History Day competition with her exhibit, “Hōkūle‘a: The First Voyage.”

Students also participated in a once-in-a-lifetime experience through a virtual tour of the Pinnacle Point Caves in South Africa. This opportunity came about when the Hōkūle‘a reached its midpoint mark in South Africa. Via a Google Handout session involving several schools in New Zealand and Hawai‘i, students joined a tour of the caves hosted by renowned archaeologist Peter Nilssen. They were fascinated to learn about this site regarded by cultural historians as the cradle of modern civilization. It generated broader as well as deeper questions amongst the students about the origins of all people alive on earth today.

FOSTERING ENVIRONMENTAL CONSCIOUSNESS
At Pearl City High School, Jaclynn Gora-Aina, social studies teacher, and Audrey Okemura, librarian, decided to focus on the effects of plastic marine debris on marine life and the ocean environment. Their larger goal was to target the importance of sustainability and the impact of humans on the environment. The Great Pacific Garbage Patch, a soupy collection of debris in the Pacific Ocean, provided the context for this STEM inquiry. The team introduced various videos to bring home the magnitude of the plastic problem in the ocean, and student interest was definitely aroused when they viewed videos and blogs created by Hōkūle‘a crew members. Students grappled with the following driving questions: What can we learn from the past to preserve our resources? What can we do to sustain and care for our islands? Why is the issue of ocean pollution critical for the rest of the world?

Individually and in pairs, the students used an online ocean current simulator to track the path of the debris mentioned in the crew’s videos and blogs and predicted its final destination. To collect additional first hand evidence, students formed teams of four to conduct surveys and analyze beach sand samples. For their final products, students created products from recycled plastic based materials such as artwork from bottle caps and wallets and tote bags from newspaper bags well as candy and food packaging (Harada, in press). In their reflection logs, students described the influence of this STEM experience on their roles as stewards. One student wrote:

I learned that instead of just throwing our trash on the ground and letting it drift to the ocean we can upcycle our items. Every piece of plastic makes a difference. There are so many things we can do. We have to set a good example. (A. Okemura, email, May 19, 2016)
BUILDING CULTURAL IDENTITY
Lori Chun, librarian at Kaimuki High School, strongly believes that the fine arts provide vivid expressions of human culture. She discovered that The Estria Foundation (TEF) was leading a public arts movement as a way to see the world as ancient Polynesians saw it. The non-profit foundation wanted to create a large scale, outdoor mural in a public space bringing together local artists, youth, and community members. Lori won administrative approval to have a 200-foot mural created on a building fronting the school.

She enlisted the help of Josette Kaleo Hanohano, director of the school’s Hospitality Academy, to have Kaleo’s students involved in the project. Kaleo’s extensive knowledge of the Hawaiian language and culture was invaluable in studying the community’s history. Her students wrestled with the following essential questions: How can we use art to promote a sense of place in our community? How can our project advocate for stewardship of the land and water?

The students discovered that creating a wall mural was one way to extend art in a social context. Working with Estria Miyashiro, co-founder of TEF, the students sketched their visions after spending time at the Kanewai Lo‘i (taro patch), learning about the history of the place, and meditating on their field experience. Their sketches revealed a strong presence of water that prompted the theme, “Ho’oulu ka wai, Ho’okahe Aina,” translated as “When the waters flow, the land thrives.” The resulting artwork, which was a team effort with local artists, was a powerful and moving depiction of the water motif over time beginning with the legend of Kahalaloopuna, Maiden of Manoa, who was the goddess of rain and wind. It showed the gift of water in sustaining the resources present in the regional land-sea ecosystem and captured the message of caring for the land. Students realized that the mural was a vehicle for public voice and neighborhood self-definition. Once they had a chance to look at different symbols and think about the importance of technique, colors, shapes, and styles, they found their voices as artists and as activists (Harada, in press).

POWER OF TEAMWORK
Importantly, the projects illustrated the strength of collaborative design and teaching among the members of the school teams. Audrey at Pearl City High stated:
I really liked Jaclynn’s idea and contribution in setting up a Google Classroom for our project and making me a co-teacher. This allowed both of us to post assignments and view, assess, and grade student projects. Working on this inquiry based initiative also allowed us to be facilitators of student learning as pupils researched their own questions. They were able to look for answers to questions that they had a personal connection with and that mattered to them. (A. Okemura, email, May 19, 2016)

At Kailua Intermediate, Kathleen wrote:
Shauna and I shared teaching and other responsibilities effortlessly. We worked so well together we seemed to read each other’s minds. We communicated a lot using Google apps, sharing documents, texting, and email. We touched base weekly and bounced ideas. It has truly been a symbiotic relationship. (K. Nullet, email, May 12, 2016)

CONCLUSION
A challenge for today’s educators is to guide young people in constructing healthy identities relating to both self and community. Learning that is grounded in place allows students to see how it connects with their own experiences. Place-based education builds a group identity in which learners become part of a community larger than their own and perceive of themselves as valued members of society.

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REFERENCES


