Ecoliteracy: Mapping the Terrain
Öko-Bildung: Das Erfassen von Räumen

Zenobia Barlow, USA

Das Erfassen von Räumen in der Öko-Bildung folgt geographischen und konzeptiellen Gesichtspunkten. Die Wasser- und Feuchtgebiete des San Francisco Bay-Delta spiegeln einen konzeptiellen Zusammenfluss von indigenem ökologischem Wissen wieder. Unter dem Namen „Öko-Bildung" hat u.a. Fritjof Capra ein innovatives und integratives Erziehungsmuster geschaffen, das holistische Erfahrungsprozesse der Vernetzung von Individuum, Familie, Umgebung und Natur auf der Grundlage von Achtung und Respekt vermittelt. „Öko-Bildung" ist eine Bildungsvision als Systemtheorie, die ein Denken im Sinn von Beziehung, Vernetztheit und Umfeld erfordert. Im Gelände der Feuchtgebiete des San Franscisco Bay-Delta erlernen auf diese Weise die Schüler die lebenserhaltenden Musterprozesse der Natur.

The terrain we are mapping in the work of the Center for Ecoliteracy is both geographic and conceptual. Geographically we are engaged at the confluence of the Pacific Ocean and the San Francisco Bay-Delta.[1] The waters of the San Francisco Bay-Delta are collected in a vast watershed that encompasses roughly 60,000 square miles, about 40 percent of California, stretching from the Cascades to the Tehachapi, and from the Sierra to the Sea. Our work lies at a confluence of powerful conceptual streams, as well as geographic ones.

These streams include the wisdom of indigenous people, systems theory, systemic school reform, and place-based education — all of which embrace a systemic or ecological understanding. The convergence of these streams creates a pattern of educational innovation and integration referred to as ecological literacy, or ecoliteracy.

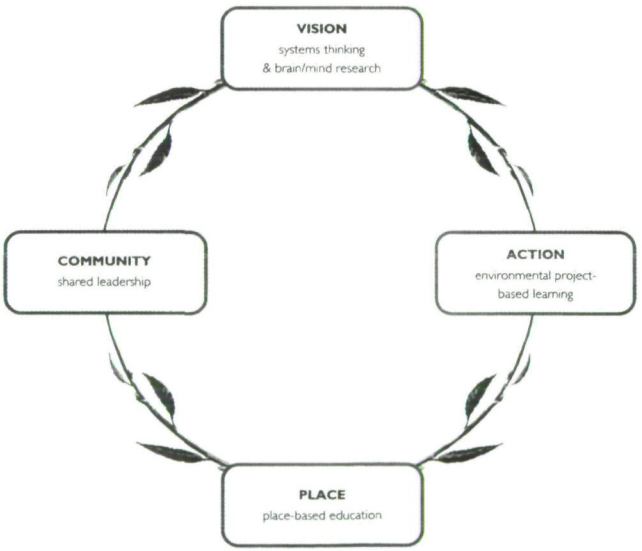
The confluence of flowing streams has been understood since ancient times in India as a place of great power and mystery in the landscape. At such a confluence, a *sangam* in Sanskrit, another stream is implied. It is a mystical or metaphorical river that runs beneath. In the work of the Center for Ecoliteracy, this deeper stream is

[1] Satellite photo: <www.sfbayquakes.org>

spiritual, in the sense that reverence is evoked. Awe, and a profound respect for the mystery of life — for the intricacy of the web and our intimacy with it — are essential dimensions of ecological understanding.
At a *sangam*, the traveler reaches a crossing over place that is simultaneously a literal fording of the river and an internal perceptual shift. In Sanskrit, this crossing over place is a *tirtha*, an awe inspiring place in the exterior and interior landscape.

Indigenous Wisdom

Jeannette Armstrong, a Native American, author, writer, artist and activist, has helped guide the work of the Center.
From Jeannette, and other members of the community, we are learning the *En'owkin* process, a process of transformation intended to continuously challenge complacency and rigidity, essential capacities in a community capable of sustaining itself over a many generations. The holistic parameters of the process, she says, demand responsibility to all that we are connected, and embrace sound principles of sustainability.



Ecoliteracy adopted the En'owkin prozess, old knowledge by Okangan ancestors of Jeanette Armstrong — Ecoliteracy übernahm den En'owkin-Prozess, altes Wissen der Okangan Jeanette Armstrong[2]

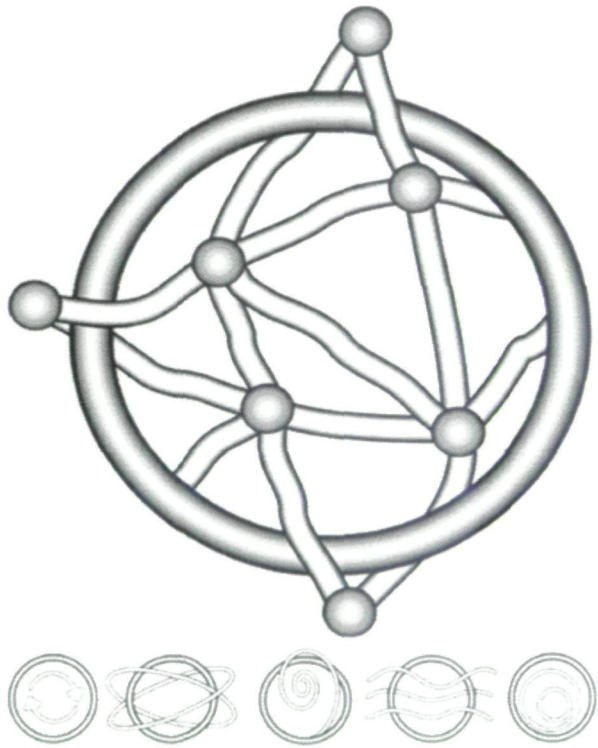
The challenge of En'owkin is expressed within the framework of two pairs of mutually complementary perspectives (Vision-Place and Community-Action) that exhibit inherent tensions.
To map the terrain of ecoliteracy, the Center has adopted the En'owkin circular framework of Vision, Action, Place and Community. The framework results from

[2] All Photos and figures: Center for Ecoliteracy, Photos: Tyler

a centuries-old technique perfected by Okanagan ancestors for building sustainability into community process. The process articulates four interrelated yet diverse perspectives which form the structure for our work.

Systems Thinking

Fritjof Capra, systems theorist, author, and a co-founder of the Center for Ecoliteracy has articulated a vision for education applying systems theory, a scientific framework that requires thinking in terms of relationships, connectedness, and context.



Fritjof Capra's Systems thinking, requiring thinking in terms of relationships, connectedness and context is a powerful framework for school innovation — Fritjof Capras Systemisches Denken, ein Denken in Beziehungen, Vernetzungen und Zusammenhängen, ist ein starker Rahmen für Innovationen in der Schulerziehung.

From a systems perspective, he says, we discover similarities between phenomena at different levels of scale — the individual child, the classroom, the school, the district, and the surrounding human communities and ecosystems.
With its intellectual grounding in systems thinking, ecoliteracy, the educational strategy undertaken by the Center for Ecoliteracy, offers a powerful framework for a systemic approach to school innovation and reform.

Systemic School Reform

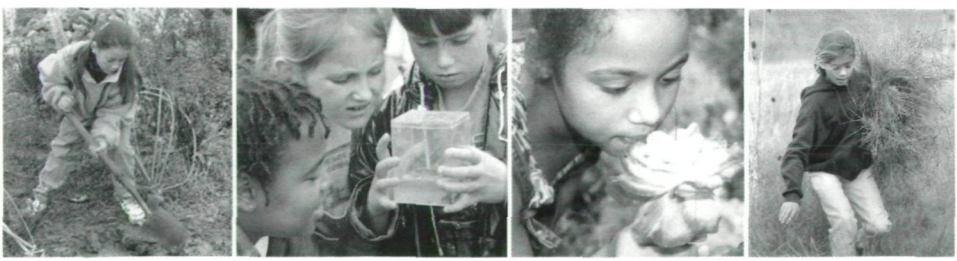
An important insight in systemic school reform is that the school itself is a system, with individual classes and teachers nested in the wider culture of the school, the school district, and its community.
The beliefs and practices that characterize a school community, though tacitly learned, powerfully affect student learning.

Children in nested community educated in a culture of collaboration und shared leadership — Kinder eingebettet in eine Gemeinschaft und erzogen in einer Kultur von gegenseitiger Hilfe und geteilter Führung

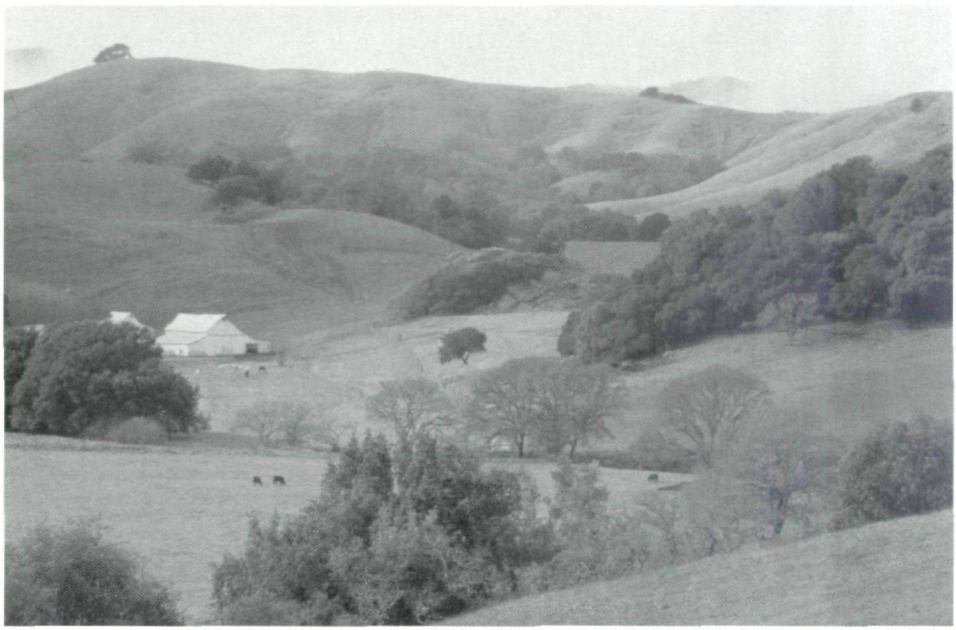
Systemic school reform nurtures a collaborative culture. Leadership, like expertise or meaning, arises throughout the learning community, and in the interactions between them. Leadership, like energy is not finite, not restricted by formal authority and power, it permeates a healthy school culture and is undertaken by whoever sees a need or an opportunity. With shared leadership, authority and responsibility are encouraged to radiate across the school.

Place-based Education

The practice of acquiring ecological literacy requires a place — whether a garden, a nearby creek or a local watershed. The terrestrial, marine, and freshwater eco-



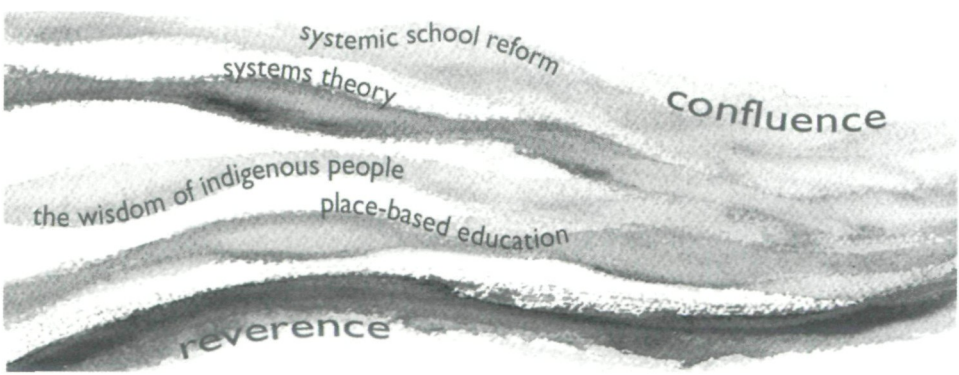
systems of the San Francisco Bay-Delta provide vibrant contexts for fostering ecological literacy. Place has become an essential focus in the Centers work with educators.



The idea is simply that we take our senses seriously throughout education at all levels and that doing so requires immersion in particular components of the natural world — a river, a mountain, a farm, a wetland, a forest, a lake, an island before introducing students to more advanced levels of disciplinary knowledge.

Closing

In the Bay Area's waterways, wetlands, farmlands and shorelines students are discovering ecological principles, core concepts in ecology that describe the patterns and process by which nature sustains life.



In schools practicing an ecological approach to whole school change, environmental projects become the focus around which both curriculum and community are integrated.
From its headwaters in the hills of Petaluma, Stemple Creek flows through miles of cattle ranches to the Estero de San Antonio. In the restoration of Stemple Creek, we are mapping the geographic and conceptual terrain of ecoliteracy.

Zenobia Barlow
Executive Director – Center of Ecoliteracy
San Pablo Avenue 2522
USA – 97402 Berkeley
zenobia@ecoliteracy.org

ZENOBIA BARLOW is executive director and a founder, with Fritjof Capra and Peter Buckley, of the Center for Ecoliteracy in Berkeley, California. The Center is a public foundation and publishing imprint, Learning in the Real World®, dedicated to education for sustainability by fostering a profound understanding of the natural world grounded in direct experience. Barlow is an accomplished photographer who has traveled extensively documenting traditional people at worship and places of pilgrimage in the region of the Himalayas.