



Thinking Outside the Classroom: an Interview with Zenobia Barlow

by **Derrick Jensen**

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Say you're driving through the country in the middle of a weekday and spot a group of children mucking around on the banks of a stream. Chances are, your first thought is: Why aren't those kids in school? Zenobia Barlow's answer is: Maybe they are.

Barlow is at the heart of an educational revolution aimed at reconnecting students to the natural world. "If we are to survive as a species," she says, "we need to shape minds capable of grasping ecological understanding." What this means in practice, she tells us, is getting our hands dirty, working in fields and gardens.

The Center for Ecoliteracy (www.ecoliteracy.org), which Barlow directs, wants to help young children hold on to the wonder they naturally find in trees, rivers, and animals, before it's lost to the culture of television, computers, and consumerism. The center is a public foundation that funds San Francisco Bay Area schools and manages a publishing imprint, Learning in the Real World. With the center's support, students at Martin Luther King Jr. Middle School in Berkeley have turned part of their schoolyard into a working garden called the Edible Schoolyard, which provides food for the school's "kitchen classroom." More than that, it provides inner-city children with the chance to put their hands in the earth, to get to know small wildlife, and to watch the seeds they planted grow into healthy plants. Several years ago, as part of another center-supported project, a class of fourth-graders began to rehabilitate the habitat of the endangered California freshwater shrimp. The project has since grown to include a network of a hundred classes and has helped bring the shrimp back from the brink of extinction.

Whether working in a garden or on a stream, these children are learning a crucial lesson: that their actions can make a tangible difference in the world around them. At the same time, they are building a sense of belonging to a place. And it doesn't hurt that their grades in every subject — math, science, writing, history — benefit from the time they spend outside the classroom.

Barlow is named for her grandmother, who lived on the Mississippi Delta and was a country schoolteacher and mother of thirteen. Barlow herself grew up on a ranch in west Texas, where she learned early on about the connection between people and the landscape. "The physical environ-



ment in which we grow up," she says, "radically alters how we behave toward each other, how we move through our days." As an adult, she worked for the Office of Child Development and the American Academy of Pediatrics. More recently, she was the executive director of the Elmwood Institute, an ecological think tank and international network of activists and scholars founded by physicist, systems theorist, and author Fritjof Capra.

In addition to her work with children and the environment, Barlow is an accomplished photographer and has had a long and deep interest in spiritual practices around the globe. She has traveled extensively with her camera in India, Tibet, Nepal, and other regions, documenting traditional forms of worship.

She and her family live in Oakland, California, where she gardens and feeds the squirrels that scamper across her balcony. She also befriends the children who live in her neighborhood, talking to them and teaching them to garden. She says, "Little girls in the neighborhood come and work with me in the garden. That's how they learn. That's how humans have always learned: by working alongside the ones they love."

Barlow and I met for this interview on a hot summer day in July 2001, in Newport Beach, California, where she and her partner were staying at the home of a friend. As we spoke, a dove picked up twigs from the ground and carried them up to build its nest in the arbor above our heads. Before the tape started running, Barlow and I began talking about violence, and as I turned on the tape recorder, she was making some remarks that could easily have applied to the events of September 11 (still more than a month away) and the subsequent U.S. bombing of Afghanistan.

Barlow:

At the heart of many of the atrocities we see around us is a failure of compassion, a failure of empathy. It is the loss of our capacity to see the Other and ourselves as sacred. When our capacity for compassion isn't nurtured, or when it breaks down, or when we distance ourselves until we begin to treat another being as if he or she has no heart or soul, then hatred and violence begin to seem inevitable.

Violence has been with us throughout our existence; in fact, it may be essential to our survival as a species. I don't think it would be inaccurate to say that the potential for cruelty is present in all human interaction. There are circumstances, though — certain historical times and cultural conditions — in which violence is amplified. Unfortunately, in this culture, at this moment in time, we seem to be magnifying our capacity to disturb, disrespect, and disconnect. This disconnection is at the heart of our problem.

Even though we seem to be creating conditions that magnify violence, in each of us there remains the capacity for empathy and compassion and the ability — even the tendency — to appreciate the sacred in one another and in the landscape. The question is: How do we create conditions that foster empathy, as opposed to violence? We could start with schoolchildren. Wouldn't it be wonderful if all kids had a collective experience that fostered empathy by evoking in them the capacity for reverence and awe?

Jensen: Isn't that a rather tall order?



Barlow:

Not in my experience. I've dis-
to create situations where people
reverence and awe.

At the Center for Ecoliteracy
nine hundred square feet, with ceil-
capped by skylights. We keep the
pieces of bamboo, rocks, and a few
minutes of walking in, people
It calms them and encourages them
a spacious, empty room with a few
what it means to be truly human.
in a building on a busy thorough-
attention into a place of receptiv-
in this direction, they become

We have a small organic garden
every few weeks, the staff members
garden. And every day, as people
paths between buildings, they might
peas to a bamboo pole or to pull
pick raspberries or harvest lettuce for lunch. As we work together in the garden, we become kinder
toward one another. We form deeper connections.

That's the sort of environment we're trying to create in schools: a sense of community and connec-
tion to the natural world, outside the tyranny of the schedule and the sterility of the classroom. We
like to get children working cooperatively in the garden, to help them understand what it feels like
to be connected to the rhythms and cycles of the natural world.

Jensen:

How would you describe the current relationship between education and the natural world?

Barlow:

The natural world is perceived as peripheral, if it is acknowledged at all. Although there are many
programs that engage children in the environment, they do not allow the natural world to become
a means of bringing school and community together. To a large degree, place is absent from the
discourse in education. Educators have begun to talk about community, but the ecosystem in which
the schools and communities are embedded is rarely mentioned. In the history of education, we
even went through a phase when architects didn't put windows in classrooms, so that students
could "focus their attention." That's how little relevance a sense of place has had to education.

Jensen:

I teach at a maximum-security prison, and the first time I saw the building, I thought it looked
remarkably like my high school: same concrete walls, same tiny windows that don't open.

Barlow:

We laugh, but it's a painful truth: the architecture of schools is neo-penal.

Jensen:

It occurred to me just now that my junior high school was right next to a reservoir, yet we never



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covered that it doesn't take much
can rediscover their capacity for

there's a large room, approximately
ings more than twenty feet high,
room empty except for some big
pieces of simple furniture. Within
comment on how serene the space is.
to slow down. Something as simple as
natural elements can remind people
And this is in the middle of the city,
fare. It's that easy to shift our
ity and serenity. And as people shift
kinder.

outside the spacious room, and once
at the center work together in the
pass through the garden on the
stop for a moment to tie a tendril of
weeds from the beds. Sometimes we



once went there, much less used it as a tool for learning. And my high school was in the Front Range of Colorado, yet we never talked about the geology of the region.

Barlow: Except perhaps as an abstraction. Environmental educator and author David Orr, who serves on our board, has referred to learning in schools as “abstraction piled on top of abstraction.” Education isn’t connected to the places where we live and work. Educators have a limited sense of place, he says, because our immediate surroundings are no longer sources of food, livelihood, energy, or inspiration.

I once led a workshop for the faculty of a preschool near the Marina District in San Francisco. In the workshop, we explored the neighborhood around the school. I gave them a half-hour to go anywhere within three blocks, write three lines of poetry or narrative based on what they observed there, and bring back a found object. We then used the writing they brought back to create a poem, and we placed the found objects on an oversized map of the school and its surroundings. The results were incredible. You don’t need to be in the wild to use the environment for learning. Life is erupting everywhere. Weeds grow out of cracks in cement.

That preschool was actually divided into two groups, one that used the environment for learning, and another that didn’t. I went back a few months later, and one of the teachers in the environmental group had begun taking his students on trips to the local post office, pet store, and Mexican restaurant, and having them draw and write about life in the city. It was the richest “curriculum” they could possibly have imagined — and it was cheap. The same teacher taught his class to build bird feeders in the yard outside the classroom and how to be still and observe what was happening there. One afternoon, a bird alighted on the finger of a four-year-old. By contrast, children in the non-environmental group often threw rocks at birds.

I have no doubt that having the bird land on his finger was a transformative experience for that child. Awakening reverence and a sense of wonder is crucial to teaching ecological views. It is important to see other beings as relatives with whom we can interact in a meaningful and respectful way, to recognize that we live on the same planet and drink from the same water hole. That’s such a simple perceptual shift, and yet it means everything.

Jensen:

What are some other examples of the relationship between education and place?

Barlow:

One suburban elementary school decided to encourage each student to find a special place in the open space contiguous to their campus. The children drew or photographed their special places and wrote about how they changed with the seasons. By the end of the year, each child had established an intimate relationship with a particular place.

Many urban campuses are covered with asphalt, but even there, one can still find a special place. Children have this tremendous ability to focus on minute things. If you’re small yourself, you’re more likely to see all these other tiny life forms — ants and such — that the rest of us pass by. Something’s always happening any place you look. Ecological awareness can start with a seed in a cup on the windowsill.

We keep hearing that children have increasingly limited attention spans from watching tv or playing computer games. The natural world fosters an expanded sense of time. Schoolchildren involved in garden projects want to go back daily to see how the plants are doing. Their attention spans expand out over days and weeks and months just by being in a garden. We’re working with students who’ve planted willows along a stream, and they all say that, when they grow up, they want to bring their own children back to witness what they began.



Jensen:

When I plant a seed even now,

Barlow:

It is natural to nurture other happened to your seed. And if care. Children enjoy watching from a seed to a beautiful, days or so. But look at what talking about more than a

Unless children are immersed lose this expanded sense of a rich learning environment create its equivalent. And the everywhere, right now, if we



I check it every day.

life forms, to want to see what the plant dies, you notice; you radishes grow because they go edible plant in just thirty-five has happened: suddenly, we're month as a short time span.

in the natural world, they will time. The natural world is such that we could never afford to natural world is available simply step outside.

Jensen:

I spent a good portion of my childhood flat on my stomach looking at anthills. Not just me, but my friends, too. Our attention wasn't always benign, but at least we were attending to something. And we knew that stretch of the irrigation ditch like nobody else did.

Barlow:

In one exercise, we ask teachers to draw a map of someplace they knew as a child. For most, it's a place in the natural world, although for some, it's a basketball court or another paved spot. Regardless, they're astonished by the details they recall. They can still smell the smells. They knew that place intimately. And this reminds them that the children in their classrooms are absorbing life with that same intimate attention to detail.

Until very recently in human history, people spent most of their time outdoors. Our brains are wired for the intricacies of the natural world. If you ask adults to remember a learning experience from their childhood, the richest memories will be of outdoor experiences, rather than anything that happened in a classroom. Something memorized in a classroom isn't as likely to be retained, because it isn't charged with meaning, socially reinforced, or applied in the world.

The current generation, though, is discouraged from going outdoors. The outdoors is considered too dangerous, or too boring. They've got their electronic games and so on. The assumption today is that our children will be economically successful if they become computer savvy at an early age. But being intimate with your place and developing kinesthetic skills are of more use than computer know-how for young children. When you ask businesspeople what sort of employees they're looking for, they say, "Generalists, people who can think, who are resourceful, who can get along with each other." The priorities we are imposing on our educational systems fail to create these very capacities.

Jensen:

You've written a lot about nested systems. What are they?

Barlow:

Fritjof Capra, one of the founders of the Center for Ecoliteracy, has written about nested systems in a book titled *The Web of Life*. The term "nested systems" refers to the understanding that, at every level in the universe, from galaxies to subatomic particles, systems are embedded within other systems to form one interconnected whole. At the center, we recognize that the classroom



is embedded in the school, the in its community, and the com-
example, we are working with
District to link the curriculum
services, and sustainable farms

To look at something as a
focus, if only momentarily, away
observe the dynamic processes
children are acute observers of
such as the behavior of ants.

Probably one of the best ways
ant-hills, or anything else, is to
nomenclature. Memorizing
comparison to the experience of lying on your stomach, watching the ants carry things around
and interact with each other. Teaching science is supposed to be about training children to
observe, but much of the old-fashioned science class is just about naming things.

Jensen:

When I taught writing at a university, I never taught grammar, because teaching grammar is
pointless until the students have found something they want to say. And once they've found
something they want to say, they automatically want to learn grammar.

Barlow:

Curiosity is the most important thing. I'm not saying naming isn't important, because it is. But if
you have a motivation for wanting to know something's name, you're more likely to remember
it than if you've been forced to memorize the name in a vacuum.

We need to start thinking of schools not as places where we cram as much knowledge as possible
into often unwilling children, but as communities of teachers, students, administrators, and
parents, where everyone works together. Learning thrives when it's centered on real-world projects
that not only teach people about the places they live, but that benefit these places as well, in
a pattern of reciprocal relationships.

Eight years ago, a single fourth-grade class decided to study an endangered species of shrimp
by restoring a specific piece of the shrimp's habitat. Now we have a network of a hundred classes,
kindergarten through high school, from thirty-five different schools, working on restoring twenty
miles of creek. They monitor water quality, map habitat, keep track of bird and insect populations,
and create artwork relating to the creek. Those kids have a sense of intimacy with that place,
and it bonds them to one another, and to the community, and to the land. It's a very different
experience than sitting around in classrooms talking about ecosystems.

And the children are getting results: the shrimp are coming back. The experts told us it
would never happen — or, at best, it would happen in fifty or a hundred years —but eight years
later, the shrimp are coming back. The migratory birds are returning, too, because we've restored
the habitat where they nest. A situation that seemed hopeless has, with a minimal investment,
begun to be remedied. And those children have hope for the future and have seen how meaningful
their actions can be.



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munity in the ecosystem. For
the Berkeley Unified School
to gardens, alternative food
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system, you have to shift your
from the individual parts and
of the whole system. Most
relationships and processes,

to kill children's interest in
focus exclusively on
a list of words pales in



They're also discovering how to work together. The fundamental problem of being social creatures is learning how to get along with one another. Indigenous peoples have just as many squabbles as we do, but they make a commitment to cooperate, because they know they are in it for the long run. They know that this other person's grandchild might marry their grandchild. Westerners, by comparison, have become so mobile, so transient, so uprooted that we don't commit to relationships. We have forgotten how to accommodate each other. We need to expand our identification with one another and to care for one another and other life forms. I believe it was Gregory Bateson who said that the notion of "the skin-encapsulated ego is the greatest epistemological error of the Occidental mind." The idea that these bodies we're sitting in here next to the beach constitute our true identity is an error because who we are extends beyond ourselves. Our geography, for example, radically influences how we behave, how we move through our days, and through our lives.

Jensen:

How does a sense of belonging to a particular place promote well-being?

Barlow:

What people today say causes them the deepest pain is a feeling of isolation, of not belonging. Teachers, too, are affected by this. They complain that they're isolated from one another, that the subjects they teach are fragmented and disconnected, and our children lack resilience and a depth of understanding as a result. Students' behavior, the teachers say, suggests that life for them is lacking in meaning.

The deeper and wider the pattern of connections we teach our children, the better they will understand the earth's processes and their membership in the web of life. Ecological decisions require an attention span longer than a single lifetime and a frame of reference wider than one's immediate surroundings. If you don't have a sense of connection to your ancestors or your descendants, then the long-term planetary impacts of nuclear waste might not seem an important issue.

Native peoples have traditional practices, reinforced by taboos, that sustain resources and allocate them fairly among community members over a long time. This behavior does not spring out of a vacuum. Thinking beyond oneself and one's immediate family into an indefinite future requires discipline and education. It's not something you or I could easily do, because it goes farther back into the past and farther ahead into the future than we've been trained to think. In fact, we may be training our children in the opposite direction. The use of computers and other electronic media is distorting and compacting time, which is antithetical to being an ecologically literate human being.

Jensen:

Understanding ecology seems to necessitate making observations over long periods of time.

Barlow:

Yes, I'm a gardener, and I love watching the variations in growth patterns from year to year. You never know exactly when flowers will bloom, or how they will bloom in relationship to one another, because there are so many different factors involved: temperatures, moisture, and so on. People who really know their place have a very sophisticated understanding of these cycles. When these factors get out of sync, there are terrible consequences. But when you don't know the cycles of your place, then tampering with the natural order by genetically modifying organisms may seem perfectly reasonable. If it doesn't occur to you that there are complex cycles at work in a place, then bulldozing and plowing up the land may seem perfectly reasonable.



When kids plant vegetable the food, they have an invest-cycle. And when questions are altering life-forms, they have a place the discussion.

We convened a conference educational software for kids. program that purported to but in this program, all of the interchangeable. You could put mountain. Joseph Chilton broke into sobs when he saw teaching children that you a living system to any other



Zenobia Barlow and Jeannette Armstrong

seeds and come back to harvest ment in the culmination of that raised about manufacturing or frame of reference in which to

once where we were shown There was a creative-writing teach children about ecosystems, elements of the landscape were a river next to a desert next to a Pierce, the author of *Magical Child*, this, because the program was can marry any element of element without consequences.

Natural systems are interconnected in such an intricate pattern that the idea that you can just put anything anywhere is terribly destructive. Yet, in many ways, we've based our whole culture on it. We are floating, disconnected, inter-changeable. If a relationship doesn't work out, we get a divorce and find another person to fill the gap. If a place doesn't work out, we move somewhere else. We connect parts to other parts at random, and then we wonder why we're in agony.

Think about how different your experience of your home — your homeland — would be if you saw it as part of a nested system. To experience oneself as part of a complex network of interrelated phenomena leads to a deep sense of responsibility for the whole pattern or network to which we owe our existence. I've come to think that the ecological pattern of nested systems was probably one of the secrets passed on in native initiations into adulthood.

I've gained a deeper understanding of this from our mutual friend Jeannette Armstrong, the Okanagan Indian writer and activist. The Okanagan people perceive their world as a series of nested systems, joining individual, family, community, and land into one dynamic whole. We tend to think of family as Mom, Dad, siblings, and maybe a grandparent or two, yet traditional indigenous people — which is what we all were for most of human existence — have an expanded sense of community that Jeannette refers to as "sharing one skin."

Jensen:

How did you meet Jeannette?

Barlow:

She agreed to make the opening remarks at a meeting between Native American leaders and a group of environmental activists and scholars. Her introduction was one of the most moving talks I've ever heard. She said, "My name is Jeannette," and then she told us her four Okanagan names and the meanings embedded in each. She said her father was a river person, and her mother was a mountain person, and that she had inherited from them a responsibility for the rivers and the mountains and the flora and the fauna of those places. Finally, she asked us to introduce ourselves. She asked us to name our grandparents and the land where we came from. "I don't want to know what you've written," she said, "and I don't want to know what you've achieved. I want to know who you really are."

There were famous people in that room, writers who'd known each other a long time, but who didn't know each other the way Jeannette meant. We'd never heard each other's stories. For six hours, people introduced themselves. It was one of the best, most authentic experiences of my life.



The next year, I invited forty people to a place in the Mendocino countryside where there would be no faxes or phones. Jeannette came back with a number of Native American leaders and conducted a four-day ceremony modeled on the four societies of Okanagan communities. The four societies are Youth, Elders, Mothers, and Fathers. According to Jeannette, the Youth are those who have “tremendous creative energy” and “yearn for change that will bring a better future.” The Elders are those who provide “spiritual insight as a guiding force connected to the land.” Fathers are those whose primary concerns are security, sustenance, and shelter, while Mothers care most about the daily well-being of the family.

Finally, among the Okanagans, there are people who listen and synthesize the ideas of the individual participants and the different societies so that everyone's point of view is somehow incorporated as they move toward consensus.

I've been in a lot of group settings over the last thirty years, and prior to that one, I didn't feel very optimistic about our ability as humans to work well together. But in those four days, I discovered how to organize. I saw people working together in a way that was productive and meaningful and collaborative. The four-societies process brought out everyone's competencies and talents in a harmonious way. We've since adapted the four Okanagan societies into what we call the “four perspectives”: Vision, Place, Community, and Action. We have introduced this process into many organizations and found that it avoids paralyzing disagreements.

Although we Westerners pride ourselves on rationality, our society isn't organized along rational lines. The Okanagans — and many other self-sufficient, sustainable societies — have very carefully organized their communities in efficient and rational ways. These communities are sustainable not because of some magical difference between them and us, but because they maximize their diversity at the same time that they reinforce their interdependence. It's not enough to think ecologically. If we are to survive, we need practical skills, real knowledge of a place, and the ability to work collaboratively with other people. Without these things, we have no chance of an ecologically viable future.

Jensen:

What are the biggest obstacles to accomplishing this in the school system?

Barlow:

As I mentioned, isolation is a problem. So often, we find that teachers in a school district have never even met one another. You can't integrate a curriculum if the people who are supposed to be doing the integrating aren't on speaking terms and spend no meaningful time together.

Some aspects of school organization that many of us accept unthinkingly need to be redesigned — the way classes are scheduled, for example. If every class is limited to just forty-five minutes, and students move from class to class without any continuity, and the teachers never meet with each other or work toward integration, then you're going to have a completely disconnected, disintegrated curriculum. If you want an integrated curriculum, you need teams of teachers working together, reinforcing the same conceptual understandings and intellectual themes in different contexts. If a school is just a factory filled with workers who don't know each other and aren't able to communicate, much less collaborate, then it's naive to think that you're going to create an ecological curriculum.

Schools need enlightened leaders who are open to possibilities and willing to work with their faculty to solve problems. We encourage the faculty to work across disciplines and get kids to connect what's going on inside the classroom to what's happening outside in the gardens, or the creek beds,



or the food-production system-penal architecture these institutions become learning can occur.

Jensen:

When I was a kid, I would I was not to have fit the lesson plan. If I sent me to another room



tem. Although the probably won't change, places in which genuine

go into class with questions answered, but that didn't was insistent, my teachers to read by myself.

Barlow:

Kids in gifted programs get to question their teachers and pursue individual interests. If we taught all kids as if they were gifted, taught them to pursue what grabbed their attention and had meaning for them, we would not have bored children. The goal of teachers should be to find out what the kids want to know, and then to facilitate a process in which they can learn it.

We have worked closely with the Edible Schoolyard at Martin Luther King Jr. Middle School in Berkeley, where an organic garden and landscape are being integrated into the curriculum. Many children who weren't excelling in the classroom have suddenly become academic superstars, because they have aptitudes — kinesthetic, spatial, musical, interpersonal — that tend to emerge more successfully outside the classroom. When you give kids rich and varied contexts, they rise to a level of excellence you might not have anticipated. So many children we label failures have simply been put in an environment that doesn't allow them to showcase their aptitudes and intelligence. We encourage teachers to stop being the experts and let the students find answers on their own.

Jensen:

I heard about one child in the Edible Schoolyard who, all semester long, sat on a hay bale and didn't do any work. The facilitator fought the impulse to insist that the child get to work. After the semester was over, the child's mother came up to the teacher and said how much that experience of being in the garden had changed her child, who had told her stories every night of how wonderful it had been.

Barlow:

We need to respect that maybe something is happening inside a child that we don't know about; that children have a right to have experiences of their own choosing. Otherwise, we're back to schools as penal institutions: everyone line up and do the same thing.

Jensen:

If you're going to order children to plant seeds, you might as well be ordering them to do their multiplication tables.

Barlow:

Right. That's not how learning occurs. In the creek-restoration project I mentioned earlier, students are encouraged to come up with their own ideas and design their own projects. It's a fundamental shift. In one elementary school, the students wanted sand on the playground, so the administrators let them arrange for it. The children figured out the volume of sand they needed and planned a big celebration for the opening of their new sand-covered playground. Meanwhile, the principal and some of the teachers realized that the students had miscalculated;

there would not be nearly rather than intervening, students have the experience of a project not being entirely successful. There was a crisis of not-enough-sand, and the students had to recalculate and order more.

Jensen:

The question underlying all we educate children for a



enough sand. But, they just let the end of a project not There was a crisis of students had to

of this is: How do sustainable future?

Barlow:

In order to answer that question, we have to ask: What's worth conserving from the past? We're obliterating place and artifacts and knowledge at an incredible pace.

Jensen:

Obliterating not just species, but our capacity to build houses or feed ourselves.

Barlow:

Yes, most kids today don't know where their food comes from. If they had to feed themselves, they'd be in trouble.

On the ranch where I grew up, slopping hogs was a part of life. Recycling was not some exotic activity. People fed hogs their table scraps and in turn ate the hogs. It was just how they lived. This is a part of our past that's worth remembering.

We're working collaboratively with the Berkeley schools to transform the school lunch program, procure organic produce, and teach children about food-production systems in their region. We're not only bringing salad bars into schools; we're bringing in the farmers who grew the lettuce for the salad bars, so that the source of the lettuce isn't abstract. It doesn't just come from a farm; it comes from that farm, that farmer.

Jensen:

I'll bet the children are eating more vegetables.

Barlow:

Absolutely, not only because they know the farmers, but because they grow vegetables themselves. In the Edible Schoolyard's kitchen classroom, children are preparing and eating rice salad wrapped in chard. Not only had many of these kids never eaten chard before, they'd never heard of it. But now that they grow it and prepare it with their friends, they've become chard enthusiasts. I've been in classes where the boys say, "I don't eat fruit," and by the end of the session, they're making fruit salad with pomegranate juice and loving it.

Many public-school students aren't eating well at home. The only nutrition they get is at school, but most of what the school feeds them is empty calories. We have serious malnutrition in America and epidemic levels of childhood diabetes and obesity. Part of the problem is the National School Lunch Program, which provides billions in profits for global food producers while creating a multi-billion-dollar public-health crisis.



Food can also become a means of nurturing relationships. Whenever I visited Jeannette on the Okanagan Reserve in Penticton, British Columbia, her ninety-year-old mother would stay up until the wee hours canning berries for the next giveaway ceremony. Jeannette's family practices the traditional ways, so they are always making preparations for the next ceremony. The giveaways encourage reciprocal relationships within the community.

Jensen:

What do we really want for our children?

Barlow:

We want them to have minds that can comprehend complex systems. We want them to be social beings who can cooperate and read the needs and feelings of others and help resolve conflicts. We want children to know the intricacies of the places where they live. We want children who have practical competencies, who can pick up a tool — whether low-tech or high-tech — and use it gracefully, effectively, compassionately. We want children who know to ask what is upstream and who is downstream; who care about and feel responsible for their actions. We therefore want teachers who embody all of this.

Children watch everything you do. And if they love you, they model themselves after you.

Jensen:

How could this program be expanded to a national level?

Barlow:

I've worked for several federal and state agencies, including the Office of Child Development, and there's always talk in the funding circles about "replication." It's the industrial model, the idea that you can take a design and replicate it everywhere in a cookie-cutter fashion. Anybody who has ever been involved in implementing social programs knows that replication doesn't work. It's too mechanistic. But elements of programs might migrate, adapting to the different local terrains.

When I worked for government agencies, I soon discovered that, at the end of each fiscal year, if the agency had money left over, we would fund special projects that emerged out of communities. It turned out that these projects worked best, because they came out of specific conditions in unique environments. But, paradoxically, these programs also had elements that could migrate successfully.

So instead of people looking to the Bay Area and saying, "We've got to do a school garden exactly like the ones in California," I'd suggest they look to their own places. If you've got prairies, learn about prairies. If you live in a desert, look at indigenous desert plants. Take stock of where you live, of who you are, and of what is suitable in your own ecosystem. Figure out how you can engage the children, the faculty, and the parents so that the unique programs and approaches that are appropriate to your place can emerge. The schools that succeed are those that make a conscious decision to create partnerships. This can be something as simple as teachers just having lunch together.

Jensen: Which is cheaper than computers.





Barlow:

And much more likely to turn out the kind of students who are going to succeed in life, because they'll be resourceful, curious, open-minded, and able to interact respectfully and resolve conflicts.

Jensen: Plus they'll know how to raise radishes.

Barlow:

And it's not just the students who benefit. We end up revitalizing the teachers' energy, as well. Many educators who participate in our networks tell us they had lost the fire that called them to teaching. We help re new their commitment by holding up a mirror to them and showing them the validity of their own instincts.

For all the teacher-bashing you read in the newspapers, my experience is that teachers are smart, talented, creative, kind, loving, remarkable people who face tremendously complex intellectual challenges every day. With the smallest amount of teacher appreciation — and a big dose of leaving them alone to self-organize — our schools could become nurturing and creative places.

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