

## Developing Teachers' Capacity for EcoJustice Education and Community-Based Learning

By Ethan Lowenstein, Rebecca Martusewicz, & Lisa Voelker

### Vignette

In the summer of 2009, a group of teachers, community activists, and university professors came together in a Summer Institute on EcoJustice Education and Community-Based Learning held by the Southeast Michigan Stewardship Coalitions at Eastern Michigan University (EMU). A series of workshops were organized to help participants examine the interwoven foundations and educational implications of social and ecological violence. They read and discussed a passage from Val Plumwood's book *Environmental Culture* (2002) in which she interrogates what she

calls "the illusion of disembeddedness"—our hyper-separation from nature and its connection to a more general "logic of domination"—and they watched a film called *Race: The Power of an Illusion* (2003). Following the film, the group engaged in a silent "chalk talk,"<sup>1</sup> filling the board with their responses to the question: "What does the study of race as an illusion have to do with our desire to teach for stewardship and ecojustice?" Below is a sample of their comments:

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- The language that we use to rationalize racism relies on the oppression of nature. Some races are "wild," "uncivilized," etc...

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- Start by teaching how to appreciate differences instead of devaluing them.
- OK—how do we teach instead to undo anthropocentric teaching/acting?
- Anthropocentrism—other types of dualistic thinking. Helping students become stewards for the environment will hopefully lead them to realize the hierarchical nature of other dualist principles.
- I really like this concept [arrow to anthropocentrism].
- Drives home the importance of not thinking dualistically.
- Stewardship is seen as part of the healing process from "ages of dominance" and oppression. It is a way of creating a new wholeness and being less concerned with the pieces.

This silent conversation was followed by a powerful open conversation among the participants reflecting on the series of activities they had experienced. Together, they shared further insights, questions, and their emotional reactions to the issues explored. As might be expected there were varying levels of analytic insight, but lots of energy in their reactions. One thing was sure, we were embarking on an important journey together. In this article, we lay out the primary aspects of EcoJustice Education as a model of teacher education and school reform by examining the complexities of teacher professional development as they encounter these ideas, focusing on the work of the Southeast Michigan Stewardship Coalition.

### **Context**

The world is facing enormous ecological and social problems—top soil loss, overfishing and acidification of our oceans, loss of potable water and access to safe food sources, and global climate change are just the tip of the iceberg. Furthermore, there is an increasing gap in world-wide control of resources as modern industrial cultures (the United States, Canada, Europe and Japan) representing about 20% of the world's population enjoy 83% of the world's wealth gleaned from nature and human labor. Meanwhile three billion people, nearly half of the people in the world—many of whom once lived on land now controlled by corporations—are forced to work for less than two dollars a day, hardly enough to feed themselves.

In our own country, young children from Black and Latino families are suffering from high rates of asthma, lead poisoning, obesity, and nutrition-related diseases as their families are forced to live in impoverished conditions disproportionately close to toxin-belching incinerators and in urban areas classified as food deserts. How many of us consider the lack of access to potable water in our own cities and world-wide, or the Texas-sized mass of plastic floating in the North Pacific as we drink from our bottles of "spring water," often sucked out of our own aquifers and yet more expensive than gasoline?

It seems obvious that anyone involved in the education of our future citizenry should be asking (1) How did we get here? (2) Who are we within all of this? and (3) What can we do at this point to understand and address such a challenging and complicated situation? (adapted from Bhaerman & Lipton, 2009, p. 45). Teacher educators have become fairly adept at addressing the social justice issues implied by these questions, focusing on the ways schools and our larger social systems reproduce racism, sexism, and economic inequalities. Curriculum and instruction and social foundations educators are just beginning to take seriously ecological issues. On the other hand, whereas environmental educators have been working on issues related to environmental degradation for years, their approach has for the most part bracketed out any relation of these problems to underlying socio-cultural questions, preferring instead to introduce students to the study (and management) of nature primarily through the application of science and math. This dualism between social justice education and environmental education is a reflection of a deeply rooted cultural problem that hyper-separates humans from the more than human world and promotes the general idea that humans have the right to manage, exploit, and control both other creatures and “other” humans (Plumwood, 2002).

### **EcoJustice Education**

An emerging framework for analyzing the deep cultural roots of and intersections within social and ecological violence, EcoJustice Education analyzes the destructive effects of a worldview organized by a logic of domination, and offers teachers and students ways of responding in their own communities. Modernist cultures, like ours, are organized by patterns of belief and behavior that naturalize hierarchized relationships, giving more value and purpose to some humans over others, and to human communities over the natural systems we depend upon. These beliefs are passed down through language, specifically through participation in and passing on of the centuries old symbolic systems structuring modern industrial cultures. As C. A. Bowers (2009) tells us “words have a history” (p. 11). The ways in which groups of people use their inherited language determines the way their relationships are created and maintained. Language is what we use to imagine, interpret, and act upon the world.

Bowers (1993, 1997) uses the concept “root metaphors” to describe a set of well-established analogs (in the form of words and other signifiers) that are passed down over many generations and become the codes through which we think and see the world and everything in it. “Root metaphors are the buried ideological sources from which the culture draws strength and reproduces itself intergenerationally, often over hundreds of years” (Martusewicz, Edmundson, & Lupinacci, in press). For example, European colonizers defined the indigenous people they came into contact with as “savages” or “like animals.” Such metaphors shaped deeply held beliefs about the land and the people rationalizing exploitation and even extermination, the cultural and ecological effects of which are still with us.

When a group of root metaphors combine, intersect, or begin to depend upon one another, they form a closely woven tapestry of exchanged, internalized and shifting meanings that we refer to as “discourse.” In the example above, specific metaphors used to describe indigenous peoples were founded upon a discourse of anthropocentrism (the notion that humans are superior to all other forms of life), which winds around assertions of Eurocentric and ethnocentric constructions of race. We could do a similar tracing looking at gender-dominated discourses. Some of the dominant discourses that help to shape the patterns of belief and behavior among participants in modern, industrial cultures include:

- *anthropocentrism*—the belief that humans are superior to everything else on earth and have unchecked dominion over it;
- *ethnocentrism*—belief that some “races” or cultures are morally or intellectually superior to others and therefore hold the right to exploit and oppress the “lesser” ethnicities;
- *androcentrism*—the belief that men are superior to women;
- *consumerism*—the idea that consuming material objects will create fulfillment and success and therefore is a major purpose for living;
- *commodification*—the “market value” of things determines their worth (turning living things into property that can be bought and sold);
- *individualism*—human self-centeredness to the point of detriment to the community fostered by the belief that competition is a natural human characteristic;
- *mechanism*—belief that the earth and all living beings are working as pieces of a machine;
- *scientism*—reason and rationalization as the one true and superior way of knowing and therefore disregarding all indigenous knowledge that is thousands of years old; and
- *progress*—belief that “change is linear and good” and that progress requires tossing out the old and bringing in the new.

(Bowers, 1997; Martusewicz, Edmundson, & Lupinacci, in press)

In Western culture these discourses of modernity have become taken for granted ways of being that often manifest as abusive and exploitative relationships between humans and all other species, as well as between groups of humans.

As institutions responsible for preparing students for the society and its systems, schools participate in the discursive practices that reproduce these ideas through curriculum, pedagogy, school relationships, and policy. Teachers dedicated to ecojustice will teach to protect living systems and community well-being by asking students to examine and respond to what degrades them. Such a commitment grows from a recognition of the importance of biological and cultural diversity, and the need to make decisions that take into account all who will be most affected,

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including future generations and the more than human world. Such is the basis of sustainable and democratic community.

Another important aspect of EcoJustice Education therefore involves recognizing and re-valuing diverse commons-based practices, traditions, and knowledge from cultures and communities world-wide. The environmental commons include our relationships to the land, water, air and all the living creatures with whom we share the planet—while the “cultural commons” includes all those practices, traditions, ways of relating and knowing that offer community members mutual well-being, and generally create more sustainable ways of being on the planet. This aspect of EcoJustice Education asks teachers and students to turn their attention to the local places where they live and to consider which activities, beliefs, and practices in their own communities contribute to the support of living systems, and which do not. Students learn to examine social and ecological problems they may see there as they are interrelated and affected by larger cultural, political, and economic forces. When using an EcoJustice Education framework in the context of local community teachers and students are asked to identify and engage their communities’ assets—all sorts of intergenerational knowledge and skills held by other community stakeholders that could help them address those problems. This process breaks down the walls of isolation that keep students disengaged from the health of their communities.

Community-based learning (also referred to as community-based education in this article) within an EcoJustice Education framework thus engages students in (1) identifying serious problems in their communities, (2) analyzing the roots of those problems in larger socio-economic and cultural system, and (3) creating localized, healthy relationships with mentors and with each other in the context of our immediate ecosystems. According to Gruenewald and Smith (2008),

place-based education can be understood as a community-based effort to reconnect the process of education, enculturation, and human development to the well-being of community life. Placed-based [...] education introduces children and youth to the skills and dispositions needed to regenerate and sustain communities. (p. xvi)

While community-based learning asks teachers and students to turn to their surroundings and develop extensive “place consciousness,” on its own it is not enough to transform beliefs and behaviors. EcoJustice Education offers the framework that asks students to perform deep cultural analysis of the root issues that got us so far from our immediate communities in the first place. What these educational practices create is an approach to pedagogy and curriculum that asks teachers to make relevant the places, people, living creatures, and ecosystems that students are an embedded part of and to help them to make visible the undisputable harm done when we do not acknowledge the interconnectedness among all. Community-based learning relocates classrooms outside, asking students to see themselves and their learning as a necessary part of the immediate community surrounding them.

Together, EcoJustice Education and community-based learning ask students to engage in learning that is intellectually rigorous, emotionally engaging, ethically charged, and spiritually fulfilling.

This approach to teaching and to school reform requires teachers who are willing to examine their own complicity in the destructive nature of modern industrial cultures as well as the ability to think differently about where and how they teach, and even with whom. Each of these dimensions makes this approach very complicated, even while it offers teachers and schools a powerful pathway toward stronger communities. In the sections that follow, we address this complexity in a discussion of teacher professional development and a case study of three schools representing various teacher-learning and school-change trajectories.

### **Fostering Teacher Growth**

The research on teacher professional development is clear about effective components of teacher professional development. Professional development is more effective when it is focused on subject content, is continuous, occurs in professional learning communities where problems of practice and student learning are examined, and is contextualized within teaching and school contexts (e.g., Garet, et al., 2001). Professional development in ecojustice education possesses similarities, but also important differences to teacher education generally, and also transformative teacher education that assists teachers in developing social justice understandings and pedagogies (see, for example, Cochran-Smith, 2004). In particular, we seek to better understand the depth and breadth of transformative adult learning experiences (both personal and professional) that structured professional development using these approaches must take into account.

Over two decades ago, Lee Shulman (1986, 1987) made the strong claim that content knowledge, specifically the kind of content knowledge that teachers possess (i.e., pedagogical content knowledge) was underemphasized in conceptions of teacher knowledge and professional development efforts. Shulman was especially concerned that research on teaching simplified teaching as a craft and was overly focused on general teaching behaviors, not how teachers represented subject matter concepts in student contexts.

Professional development in ecojustice and community-based education is particularly challenging given the knowledge demands for teachers using this content. A central component of professional development must necessarily be a particular emphasis on helping teachers better understand ecojustice concepts and modes of inquiry and analysis first, and then to engage ways of “translating” these concepts in particular student and community contexts. What’s more, unlike subject-based professional development in traditional disciplines like mathematics, for example, teachers in EcoJustice Education must not only understand subject matter concepts like “discourse,” “the commons,” “individualism,” “anthropocentrism,”

and “ethnocentrism,” but, through the examination of this content, they must also confront their own, often deeply-seated, aims and beliefs about social and ecological relationships. The personal and professional always merge in teacher learning, but this is especially true in subjects with challenging moral, civic, and social content (Adalbjarnardottir & Selman, 1997; Bell & Griffen, 1996; Cochran-Smith, 2004; Lowenstein, 2003; Selman, 2003).

Helping teachers work within an ecojustice and community-based framework becomes not only a question of professional development, but of continued adult cognitive inter-personal, and intra-personal transformation. Given the demands of transformative teacher education, Bell and Griffin (1997) state that holding a developmental perspective is a requisite of effective social justice teacher education (Adalbjarnardottir & Selman, 1997; Derman-Sparks & Phillips, 1997; Selman, 2003). Transformative adult developmental processes sequence learning experiences in order to sheppard teachers through periods of defending prior understandings, surrendering to new ones, and finally reintegrating new ways of seeing the world in the core of their identities (Kegan, 1982 as cited by Bell & Griffin, 1997; for developmental processes regarding racial and cultural identity development, see for example, Tatum, 1997). Processes require a sequence that flows from safety and commonality, to discomfort and disequilibrium, and finally to re-formation and sustainability (see, for example, Bell & Griffen, 1997). As teachers undergo transformation themselves, professional development in EcoJustice Education asks participants to first consider, then act to engage their students in a similar process at developmentally appropriate levels. How teachers teach is heavily influenced by their perception of their own role (Hammerness et al., 2005). Ecojustice and community-based education requires that teachers change their understanding of their own role, a role that sits at the center of what it means to be a teacher.

This approach also requires that teachers perceive of their role vis-à-vis their students, the academic subject(s) they teach, and the action-space of teaching—i.e. teaching in community partnership and outside the classroom and school walls. In their new role teachers must learn how to guide inquiry, let questions emerge from students, see themselves in “co-development” with students (Nakkula & Toshalis, 2006) and community partners, and generally learn to be more comfortable with complexity and uncertainty. In contrast to the teacher knowledge demands of modal environmental education, and environmental justice education, EcoJustice Education also demands of teachers that they see themselves as cultural “mediators,” who’s role it is to help students form a critical relationship with the cultural roots of current crises (Bowers, 2001)—asking not only the question “what” and “so what,” but “why” (do these problems exist in our culture) and “how” (do we change language and belief systems to foster a healthy commons). Changes in role are especially difficult to manage given current standards and accountability demands that encourage a lock-step “coverage” of standards and a static, linear approach to curriculum development and enactment. In ecojustice and community

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based learning, teachers must develop the capacity to navigate the teaching tension between their own view of the academic subject being taught, the demands of the State, and the subject content of ecojustice and community-based learning. Learning how to navigate such tensions is central to the development of expertise in the craft of teaching (Lowenstein, 2010).

Research on teacher effectiveness shows that as teachers engage in challenging learning both in and out of the classroom, teachers require a sense of their own efficacy (Woolfolk Hoy & Davis, 2006). A sense of efficacy allows teachers to persist through difficult challenges, and in moral and civic education is especially important given the dynamic and complex nature of their work with students (Milson, 2003). One powerful lever for enhancing teachers' sense of their own efficacy is to lead them through, and model, the kinds of learning activities that they might engage in with students. Such modeling is an established "best practice" in social justice teacher education (Zeichner, 2010). As teachers work with students over time and see that their students are capable of engaging in the kinds of deep thinking and reasoning that they never thought possible, teachers' own sense of efficacy goes up and they are able to engage at the next level of challenge.

Moving from professional development theory to program design, a crucial question becomes the choice and combination of professional learning communities and coalitions necessary to support and sustain teacher learning and school change. In the sections below we first describe a case of a professional development program focused on EcoJustice Education and community-based learning—The Southeast Michigan Stewardship Coalition (SEMIS). We then look at teacher growth and school change in three SEMIS school sites.

### **The Southeast Michigan Stewardship Coalition**

The Southeast Michigan Stewardship Coalition (SEMIS) is part of a state-wide Great Lakes Stewardship Initiative (GLSI) that established regional "hubs" for community-based education across the state of Michigan (<http://www.glstewardship.org/>).

A key premise of regional capacity building is that Great Lakes fishery and wildlife habitats in Michigan will only be protected when people understand their interdependence with the ecosystems they live within and can respond effectively and ethically to protect them. The primary goal of SEMIS is to develop students as citizen stewards able to understand and promote healthy ecological and social systems affecting the Great Lakes basin and their communities. The organization does this work using an ecojustice framework to situate community-based learning that is "rooted in what is local—the unique history, environment, culture, economy, literature, and art of a particular place" ([www.ruraltrust.org](http://www.ruraltrust.org)). Schools and school systems often create a rigid separation between "academic" achievement and learning that promotes moral and civic development. SEMIS builds on the work of



other research-based school reform and professional development efforts that seek to integrate academic, moral and civic learning using community-based learning (see, for example, the Center for Place-Based Education Antioch, New England, [www.antiochne.edu/anei/cpbe/](http://www.antiochne.edu/anei/cpbe/) and the Rural School and Community Trust, [www.ruraltrust.org](http://www.ruraltrust.org)).

SEMIS operates under the assumption that even when a school's goal is "academic achievement," to reach that goal requires attention to important mediating variables such as student motivation, sense of efficacy, and trust in schools. Research shows that rich community-based learning experiences can increase student achievement (measured by test scores), motivation to learn, critical thinking, and conflict-resolution skills (American Institutes of Research 2005; Athman & Monroe 2004; Falco 2004; Lieberman 1998). Such outcomes are especially important for schools located in urban communities where there has been a history of distrust and disconnection between local culture and the culture of schooling.

### ***Participants and Leadership***

SEMIS focuses its efforts on the metro Detroit area. There are currently six participating schools. Four of these schools are in the city of Detroit, one is in Dearborn, and another in Ann Arbor. Each school is asked to form cross-grade teams of 2-6 teachers. A pre-requisite for SEMIS involvement is the active participation of school principals. Community partner membership is at 15 organizations and growing. Examples of community partners are Great Lakes Bioneers Detroit, Michigan Coalition of Essential Schools, the Ecology Center of Ann Arbor, Southwest Detroit Environmental Vision, the River Raisin Institute, the Greening of Detroit, and East Michigan Environmental Action Council. Community partners bring both knowledge of place and programming that deals with specific community problems.

For example, Southwest Detroit Environmental Vision is located in a primarily Latino section of Detroit and focuses on environmental and economic issues affecting that community. They work to remediate blight and illegal dumping in the neighborhoods, engaging residents in cleanup activities, economic development, and general environmental education. Most of SEMIS partners offer programming designed to assist teachers in schools with project development, and finding curriculum materials to use in the classroom. A Steering Committee consisting of representatives from EMU, community partners, and teachers serves as leadership of the Coalition. This group plans and implements PD, advises the Director on matters pertaining to coalition membership, budget, administration, and overall governance of the Coalition. Currently the Steering Committee is engaged in strategic planning to go to scale.

### ***SEMIS Professional Development Content and Processes***

SEMIS brings a coalition of teacher teams (2-6 teachers per school) and community partners together for an intensive four-day summer institute, and four

one-day seminars spread throughout the year. Support of school professional learning communities and community partnerships is sustained between whole group coalition seminars by “liaisons” who meet with individual teachers, teacher teams, school administrators, and community partners in school and community sites to help teachers with curricular integration and school-community projects.

SEMIS professional development workshops and school- and community-based support follow a scope and sequence with a three-pronged focus: (1) an understanding of ecojustice “big ideas” and deep cultural analysis (e.g. the problem of “hierarchized thinking,” learning principles related to Earth democracy, ideas of sustainability and stewardship), (2) opportunities to work in coalition and form the partnerships needed to develop and enact ecojustice curriculum, and (3) an engagement in a set of inquiry- and problem-based curriculum development processes (see, for example, Coalition of Essential Schools, Antioch New England) that help teachers “translate” ecojustice content within student and community contexts. Early on in the process school teams develop “essential questions” that they used to anchor school inquiry—e.g., “What is community?” “What does it mean to be a steward in the 21<sup>st</sup> Century?” They then work with their essential question to identify community assets and problems and create stewardship projects that use community assets to address the problems they’ve identified.

An additional focus of SEMIS, unprecedented in Southeast Michigan, is to help community partners form a coalition that shares some common assumptions, language, and goals as they work in the service of schools. In terms of professional development and teacher assistance, the SEMIS model assumes that an asset-based approach to teacher and school change is necessary given that schools and teachers have different needs based on their school and neighborhood contexts and that no one coalition member has the resources necessary to differentiate support in diverse professional development and project implementation goals. For example two schools in Southwest Detroit might face similar issues but have different school contexts.

One school might need the help of Southwest Detroit Environmental Vision (mentioned earlier) that focuses on neighborhood clean up, and another might need the help of an organization like the Greening of Detroit, that focuses on tree planting and gardening. To add an additional layer of complexity, it is likely that teachers within each school have different developmental needs. One teacher might need direct modeling of pedagogical strategies, another might need to increase her subject content knowledge, a third might need help connecting projects to community resources. In this way school-based projects emerge dynamically through a process that is localized in community and school assets, interests, and needs.

We argue, and it has been our experience (and challenge!), that each prongs of SEMIS program design—content, partnership, and curriculum development process—must be attended to and balanced in order to create professional learning environments that support teacher development, school change, and sustained instructional enactment. A brief outline of a summer institute can give a sense of

how safety, risk, challenge, contextualization, integration, and self-efficacy are sequenced and balanced to support growth.

**SEMIS Summer Institute on EcoJustice Education  
and Community-Based Learning, 2010:  
Connecting Places and Purposes**

The 2010 summer institute focused on water issues involved a visit to a center for outdoor education where teachers learned about watersheds, visited the Rouge River, and participated in hands-on inquiry activities that they could easily transfer to their own student learning contexts. They watched the emotionally wrenching and troubling movie *Blue Gold* (Bozzo, 2008) about the commodification of water. Dispersing throughout the nature center participants reflected silently on the question, “What are the connections between global contexts and local issues?” They were asked to keep this question in mind through the rest of the institute. Teachers then discussed a short book called *Water Wars* (Shiva, 2002) using a text-based discussion protocol.

During this discussion participants were asked to use a bookmark they had been given as a quick reference to focus their discussion. The bookmark listed ecojustice concepts on one side and ecojustice questions for inquiry on the other. Shifting gears, participants engaged in an “artifact dig,” of potential curriculum source materials. The dig included sources like the “Story of Bottled Water” with Annie Leonard (2010, <http://storyofstuff.org/bottledwater/>) that could be used with students across multiple grade levels. Using these sources and others, and integrating concepts from the week, teachers then worked in cross-school teams by age level to create lessons. Later they returned to school-based teams to contextualize lessons within their school’s essential question and specific community-based projects.

As the week progressed, several community partners presented to the group on issues focused specifically on water, with the aim of deepening content knowledge, and demonstrating models for what this knowledge looks like as it’s translated into pedagogy. Finally, the entire group visited the Buhr Park Children’s Wet Meadow Project. They talked with an expert early childhood educator and witnessed how decades of pre-school education, community-based learning and coalition building had lead to the transformation of a public city park into an educational site for preventing runoff through the planting of wet meadows. If a teacher of 3-5 year olds could engage in substantive problem-based, EcoJustice Education, then so could they and their students. Many workshop participants reported in a final session, that they had found the week’s experience to be transformative.

## **School Stories**

Teachers are positioned differently given community, student, and school contexts. Teachers in a school in Detroit that sits right next to a brownfield and who’s

neighborhood streets are littered with illegally dumped tires will have different entry points and experiences with ecojustice and community-based learning than teachers in a school in Ann Arbor (a college town), or a Catholic school in Dearborn Heights (a wealthy community outside Detroit). We briefly explore cases of individual teacher learning and school change from the three varied contexts just noted in order to tease out similarities and differences in teacher change processes and the enactment of ecojustice and community-based learning.

The cases are theoretically grounded in important teacher learning domains and professional development processes explored earlier in the paper. Cases are designed to highlight how teachers experience a change in role over time, how knowledge of content (and its translation for students) impacts their understanding of ecojustice teaching, and how communities of learners form and evolve to support ecojustice and community-based learning projects. Cases also note nodal moments in teacher transformation. It is important to note that these are anecdotal narratives, designed to elucidate the complexity of the work, and bring professional development themes discussed earlier into focus. The stories we tell here do not in any way represent the totality of individual teacher or school efforts.

***Ann Arbor Learning Community:  
Without a Place, What's Our Project?***

Just weeks after the start of the year, and a month after the teachers' first SEMIS Summer Institute, a multi-age group of students and their teachers at Ann Arbor Learning Community, a K-8 charter school in Ann Arbor, Michigan, were walking around the industrial park where their school is located. As they walked, they recorded observations and questions about their neighborhood—They were working on “community mapping,” an activity required of all SEMIS partner schools. They had never engaged this way before and had no clear idea of what to expect or where it would lead. The students noticed lots of different companies. “Maybe we should write letters to them introducing ourselves?” suggested one of the teachers. A student in the second grade observed that the trunks of some trees appear to be damaged by kids' play during recess. “How can we protect these trees?” Students noticed that there was a creek by the school. Although the community mapping activity had raised some very interesting questions, as a team, charged with developing a cross-curricular project, the teachers began to panic with one question on their minds, “now what?!”

This next question turned out to be a difficult one given the school's history. Ann Arbor Learning Community has environmental stewardship as part of its mission but has had difficulty enacting this mission consistently, partly because the school has changed buildings several times, and partly because of staff turnover. One question that immobilized the AALC team initially was the question of whether to engage in projects on the school grounds in light of the perceived probability that they might eventually move again. Another question was in getting “buy-in” from other staff.

Initial ideas focused on building-wide projects and were eventually nixed. Statements like, “Let’s get a greenhouse! But, wait a second, what if we move? Forget that.” were typical to initial discussions. Selections of community partners, a requirement of SEMIS, were understandably difficult given the lack of agreement on a project. In part, it was the school’s essential question, “How can we be responsible to both each other and the land?” that eventually allowed the team to move past a concern about the school’s impermanence. During one team meeting a teacher stated quite firmly, “It doesn’t matter if we ultimately move! Let’s think about our essential question. Even if we move we will still be acting responsibly to the land.” These discussions took months. Meanwhile teachers were “running with it” in their individual classes, integrating ecojustice content and stewardship projects into established state-mandated subject topics. We spotlight one teacher’s efforts here.

Some days after the original community mapping activity the 4th/5th grade teacher, Tracey Marchyok, took her students to the shores of the Creek to explore further. That summer SEMIS had paid for Tracey to go to a Michigan Environmental Education Curriculum Support training sponsored by the Michigan Department of Environmental Quality (DEQ)—a SEMIS community partner. This training uses an interdisciplinary approach to get students engaged in exploring major environmental issues and is aligned to State standards and benchmarks. Though the teacher had never done an open-ended inquiry around water issues before, she had seen herself in the role of “guide on the side” for years and she was able to adapt the MEECS curriculum resources to her classes’ particular project, the school’s unique “place,” and the powerful student questions that arose from place-based exploration.

These questions included, “Why don’t we drink the water from the creek?,” “If pesticides are sprayed on lawns what effect does it have on the creek?,” “Why can’t we find macroinvertebrates in the creek?,” and “How much water does my family use, and how does this use compare to families in other parts of the world.” Tracey used curriculum materials and strategies from MEECS (family water use surveys, handouts on macroinvertebrate identification, and so on), and invited a guest speaker from the Huron River Watershed Council (a community organization that she already had a relationship with and that had been involved in the planning process that launched SEMIS) to teach about the watershed. Near the end of the year, Tracey’s students took the 2<sup>nd</sup>/3<sup>rd</sup> grade class of a SEMIS team member on a guided tour of the creek. Tracey reflected with pride on her individual and collective journey with her students and school,

At the beginning of the year it was really unclear how I was going to do this. I’m glad I gave it a chance. The uncertainty I faced at the beginning of the year was a necessary part of the project development process, but it was really difficult. It may be helpful as other schools go through this process to help them understand that the uncertainty is part of the process. (Personal communication, Tracey Marchyok, April 28, 2010)

When asked by her liaison what next steps she would like to take with her students in the coming year (she has some of her students for a second year), she wondered how she could get her students to be empowered politically. The liaison suggested a partnership with the teacher activist who had facilitated the Buhr Park Children's Wet Meadow Project. The liaison also suggested ways Tracey could deepen her use of an ecojustice framework in the project. While her work is an example of a strong place-based project within a conventional science-based environmental education framework, she has yet to follow up on some poignant questions to get her students exploring the cultural roots of the Creek's problems. He prodded,

When your students asked whether the pesticides from lawns in the industrial park surrounding the school ran off into the Creek, and the class discovered they did, maybe you could ask them why? What in the way that we talk and think about the world, allows for us to take such practices for granted? What might we need to change in the way we think about the world in order to act more sustainably?

Tracey has most recently reflected that other teachers at her grade level should have access to the MEECS curriculum, just like she had. The Principal, who attended the SEMIS institute on water issues, finding it to be an incredibly powerful learning experience, has come to the same conclusion from a different direction. The school had experienced a bad flood at the end of year. She had been impressed with the Buhr Park Children's Wet Meadow Project's ability to minimize runoff. Maybe AALC could tackle that problem as a community? This place-based problem, coupled with her own growing personal commitment and understanding of ecojustice issues through SEMIS, has led her to ask whether SEMIS could help provide the MEECS training on water issues with the whole staff. After only a year of participating in SEMIS, professional development supports were propelling the school on a promising (and sustainable) trajectory toward rigorous ecojustice and community-based learning.

### ***Environmental Justice in Action:***

#### ***Next stop—Ecojustice: Hope of Detroit Academy***

On a recent class excursion in a Southwest Detroit neighborhood, an eighth grade student looked up and noticed a pickup truck filled with tires. "Hey! That looks like a dumper!" he exclaimed with nervous excitement to his fellow students and his community mentor. "I knew I couldn't fail these students now," recounts our partner from Southwest Detroit Environmental Vision. She remembers that she was nervous, but "I had to practice what I preached." "Let's get the license plate number." The driver of the pickup truck noticed the students and started to make a run for it, but not before they got the license number, a number that they reported to city authorities who successfully traced it. Recounting the incident, the community mentor reflected on the impact of SEMIS on her sense of efficacy, "Before SEMIS I would not have had the courage to do that" (Observation notes, SEMIS PD workshop, June 28, 2010)

Nor would she have had the opportunity to collaboratively construct the context for that action to take place. Two years ago, on a community mapping walk in the neighborhood with several students, she and the teacher had listened as the students talked about their place: "In that house the lady has a great garden in back." "That one over there has a big ugly dog!" "Hey, see those tires? Why do we have so many tires? And what can we do about that?" It was just the beginning.

As part of their work with SEMIS, the middle school science, social studies, and art teachers with the support of several community partners and the liaison to the school developed a program called "Tires to Mud Mats." The project, now in its second year, connects the community mapping experience to a state standards aligned brownfield curriculum (provided by Creative Change Educational Solutions, a SEMIS partner) used by the science teacher to examine the ecological and economic impacts of toxins in their community. Hope of Detroit Academy is surrounded by burned out, crumbling factories, and soil-polluted lots that are unfortunate targets for illegal dumping. Trash of all varieties litters every alleyway and vacant lot.

Taking the students' enthusiasm to heart, this team created an ongoing project where students study the life cycle of tires, interview owners of used-tire businesses in SW Detroit, locate piles of illegally dumped tires, pick them up and deliver them to Cass Community Social Services, a program that hires homeless men to make mud mats out of discarded tires. Visiting this agency ahead of time, students learn how mud mats are made, and what it means to the men who work there. They talk about the problem of homelessness in their city at the same time they are confronting the degradation of their own neighborhood. Detroit Public Works and Detroit Public Schools support the project providing a truck and driver for collecting the tires, and a bus to transport them from dump site to dump site as they work to reclaim their neighborhood. Talking to a News7 Television reporter, one young girl said with a smile, "Doing this project, I've learned that anything can make a difference!"

In October 2009, several students from this group made a presentation at the Michigan Alliance for Environmental and Outdoor Education (MAEOE) conference with their teacher and community mentors discussing their brownfield project and "Tires to Mud Mats" experiences. They were proud! The teacher asked them to talk about what they learned: "It gave us the confidence to believe that we can make a difference." "The domino effect will happen. Others will want to do this too." "We feel that we are helping people." For Tracy Durandetto, the science teacher, it was a moment she'll never forget: "I started crying! Oh my goodness, they really got it! I was so blown away." (Reflection notes, MAEOE Conference October 2009).

Getting out into the places that matter to them to do work that is meaningful and connected to rigorous concepts and a relevant curriculum, both teacher and students blossom. More, they begin down a path of political activism and stewardship that is the foundation for healthy sustainable communities. Ms. Durandetto's sense of herself as a teacher able to provide these sorts of learning opportunities for

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her students was a joy to witness. "I love what I do!" Teaching is often separated from community and school leadership as well as scholarship. Ms. Durandetto is in the process of integrating these multiple roles more centrally into her personal and professional identity.

At the end of their MAEOE session, the students were asked if they have questions now that they've been through the project. One shy young man looked up and said, "Yes. I want to know why this happens in our neighborhood, but not in the suburbs." That question represents a powerful opportunity to push the cultural ecological dimensions of these students' learning, from a strong environmental justice project where students learn the science of pollution as they clean up messes dumped on them, to a deeper ecojustice framed examination of the roots of these problems. With further support from SEMIS coaches these teachers, students, and community mentors have an opportunity to develop the analytic skills required to understand and respond to complex cultural, economic, and political roots of the problems plaguing their community. From a developmental perspective, Ms. Durandetto's increased sense of efficacy, the integration of important dimensions of ecojustice and community-based learning into the core of her identity, and her mastery of some dimensions of pedagogical content (brownfields, tire to mud-mats project), positions her to deepen her integration of ecojustice concepts, analysis, and dialogue with students. Whether she is able to do so in the coming year, is both a SEMIS program design question—what kinds of knowledge, coaching, and resources does she need at this point in her learning trajectory—and an empirical one—what is the evidence of ecojustice student learning outcomes?

### ***Divine Child High School—Building Critical Capacity for Change***

Rolls of paper were strewn across library tables as kids sprawled over them, engaged in a community mapping activity that had been planned as a two-day lesson but had somehow morphed into two and a half weeks. The learning environment was so comfortable that some students had even taken off their shoes. This was indeed a rare scene at Divine Child High School, where a more formal academic tone is the norm. Johnny Lupinacci, the teacher of a new Social Justice course, was asking students to learn in a new way, but also change the way they thought about themselves in relationship to their community. As part of his class, students would later be asked to physically go to a part of the map they created and volunteer for a social or ecological justice organization that held personal meaning to them.

Meanwhile several other DC SEMIS team members, who shared many of the same students, were applying an ecojustice framework in their classes. According to one DC teacher, discussions of the concept of "individualism" at the SEMIS Summer Institute in 2009 fostered a deeper understanding of the ecojustice concepts among team members (Interview notes, 8-11-10). That understanding was a nodal moment for at least one individual on the team, who saw this discourse as the crux of the ecological problems we face. As a team, there was some agreement to focus on this

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concept across courses. From a place-based perspective, individualism made sense as an “entry-point” concept because of the school’s student context and the ways individual achievement and college readiness play out in shaping the teacher and student culture at this school. The DC team’s focus on “individualism” across their courses ultimately succeeded in building a critical mass of student leadership.

For example, before engaging with SEMIS structured projects, “students used to see the ‘community-service’ requirement of the school as something to check off for their college applications. Now all those kids who work with SEMIS teachers had a transformed view of what service is: they cared about what they were learning. They began saying to themselves, ‘this is something my friends and I do.’ In contrast to a year ago, there is now social capital attached to doing service” (Interview notes, 8-10-2010). Perhaps the crowing achievement of SEMIS at DC was that a volunteer student leadership group of 25 students formed two working groups and began to meet on Saturdays to plan. The first group decided that the biggest problem at DC was that the school structure could not yet support community-based learning.

One product of this working group was a revised school schedule that included weekly time for community-based learning. The Principal saw the plan as so well thought out that a copy of it is now hanging prominently on the wall of her office. The other working group was heavily influenced by a conference that DC SEMIS teachers and students had attended run by Great Lakes Bioneers Detroit (a SEMIS partner). At the conference students had gone on environmental justice and urban agriculture tours of Detroit. A powerful ecojustice question began to emerge from these students: “What would a school food garden at DC look like that addressed the root causes of the social and ecological crisis?” For months this student group has been meeting with a SEMIS partner, the Greening of Detroit, to discuss creating a garden at DC.

When asked what he had learned during DC’s two years of SEMIS participation, Johnny, a graduate of Eastern Michigan University’s EcoJustice Education Program and member of the SEMIS Steering Committee, reflected, “I bring an ecojustice framework to whatever I do so that wasn’t new to me. What I did learn in the past two years was how a healthy school, university, community partnership can work. This partnership triad is rare and teachers are used to universities doing things to them not with them.” Johnny continued, “Our goal at DC from the beginning was to create the conditions and structures at the school, the student leadership capacity, and staff buy-in to create real school reform around ecojustice and community-based learning principles” (Interview notes, 8-11-10). There is evidence to suggest that Johnny, the SEMIS team, and the schools are well on their way.

## **Conclusion**

In this article we have sought to provide an overview and rationale for Ecojustice Education and community-based learning, professional development, and school

change. We used the concrete case of the Southeast Michigan Stewardship Coalition (SEMIS) to describe a program with this particular focus and several vignettes that charted varied learning and school change trajectories. There are many promising directions for further research. More in-depth analysis of teacher learning processes should be conducted with the ultimate aim of creating a developmental model for teacher growth and school change in Ecojustice Education and community-based learning. Such a model is badly needed if we are to create, put into practice, and evaluate the kinds of program designs that correspond to the dire social and ecological needs of our historical moment—a critical moment, unfortunately, where response time is of the essence.

## Note

<sup>1</sup>A “chalk talk” is an activity designed by the National School Reform Faculty that asks a group of learners to engage a question together by writing on a chalkboard or large sheet in silence. In the case of the summer institute referred to here, in addition to two professors from EMU, participants included teachers from five schools—elementary, middle school, and secondary—and about 25 representatives from non-profit community organizations, all from around the metro Detroit area. Imagine a large whiteboard covered with a web of comments, with lines and arrows indicating several conversation “threads.” We’ve included just a small piece of the overall board.

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