

**“The great work of repairing”:  
An Argument for Ecoliteracy Education at Gulf Park**  
(Essay by Tamara Bangs)

The day is beautiful. The sun is shining, making everything glisten due to the rain the night before. In front of the library, beside the grape arbor, two students sit at a bench and contemplate the intricacies of organic chemistry. At a small table a few feet away, another group of students is discussing *Walden* by Thoreau, as the bees buzz around the lavender flowers of the eggplants. Already, the eggplants have produced many dark purple orbs, which are to be used by the cafeteria for eggplant parmesan tomorrow. Across the campus, a student group harvests potatoes planted in early spring. Some of the potatoes will be sold at the campus farmers market and some will go to the local soup kitchen. On the north side of the campus, a group of student workers weed the community garden and turn the compost bed. The pathways around campus are lined with indigenous plants, integrated with edible vegetables releasing scents of natural goodness. One cannot help feeling alive and connected to everything around them. Where is this place? Is it some Ivy League campus that only the wealthy can attend? No, this is the University of Southern Mississippi Gulf Park Campus . . . as it *could* be.

The following essay argues that the University of Southern Mississippi Gulf Park Campus could be a part of a nationwide movement to include environmental education, or “ecoliteracy”, in the curriculum, in part, by transforming the grounds into a working, sustainable, hands-on learning environment. Research has shown that environmental studies have positive effects on self-efficacy, a person’s sense of place and increased stewardship towards their community. Furthermore, environmental education develops a population that is eco-literate, which has become necessary as we face the potentially catastrophic effects of climate change, ocean acidification and ecosystem degradation from pollution and overuse of resources.

While climate change is at the forefront of the crisis, there are

many examples of humanity's damaging effect on our environment, such as The Pacific Garbage Patch, a mass of granular plastic and other trash that is possibly the size of Texas (Pyrek), and the disappearance of bees, which pollinate ninety percent of all plants and seventy-five percent of all agricultural crops around the world (Winfrey). Awareness of such problems is key to understanding the world we live in.

As David Orr, a professor of Environmental Studies at Oberlin College, puts it, "The generation now being educated will have to do what we, the present generation, have been unable or unwilling to . . . They must begin the great work of repairing, as much as possible, the damage done to the earth in the past two hundred years of industrialization" (Chapman). Besides raising awareness, the inclusion of service learning through hands-on agriculture projects on campus has many other benefits. Students who participate in such projects report a heightened sense of place and become stewards of the campus and surrounding communities (Lawrence). USM Gulf Park needs to begin this "great work of repairing", to offer a complete education, one that includes the study of our environment, and our place in it. Ecoliteracy will equip USM students to deal with the ongoing ecological crisis.

Across the country, many higher learning institutions are taking steps to provide a complete education by including environmental education to their curriculums. In "Green Destiny: Universities Leading the Way to a Sustainable Future," Christopher Uhl and Amy Andersen outline what an environmental education should consist of;

"A quality education should help students develop a comprehensive understanding of and respect for their ecological dependencies. Such ecological literacy is at least as fundamental to living fully and wisely as the capacity to read and write."

In their article, they give the example of Florida Gulf Coast University in Fort Meyers Florida, where all students are required to complete an ecological literacy course before graduating called, "The Colloquium: A

sustainable Future.” FGCU’s Quality Enhancement Plan (QEP), gives an overview of the Colloquium course;

The Colloquium examines the diversity of the local and global communities including cultural, social, political, economic, and ecological differences. It also examines ethical, historical, scientific, and health issues related to sustainability (10).

The Colloquium” course structure is interdisciplinary, ensuring that all students possess environmental knowledge in whatever career path they choose. FGCU also gives a definition of sustainable education in their QEP:

Education for sustainability, sometimes known as education or sustainable development, is an emerging field based on the concept of sustainability. Sustainability is commonly defined as meeting the “needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987) Sustainability education is learning and working to secure a future that is economically, ecologically, and socially sustainable (Commission 17).

The incorporation of environmental education into their curriculum by FGCU ensures that students will be ecoliterate and have a broader understanding of the living planet. This knowledge will allow students to consider the environment in their lives and careers.

Along with formal environmental education, many campuses have incorporated hands-on, place-based learning areas on campus grounds. Studies have shown involvement by students in planning, growing, and developing campus grounds to have positive effects on a person’s sense of place. Sense of place is defined by Marianne Krasny and Jessie Delia in their article, “Natural area stewardship as part of campus sustainability” as, “...the bond between people and places or the degree to which a place is important to people, and place meaning,

that is the symbolic meanings that people ascribe to settings.” Basically, a person with a sense of place will have a feeling of his role in the environment, community and personal relationships. Bonds such as these not only create a sense of place, they may even be said to create the place itself.

In other words, to create a sense of place on campus through eco-friendly grounds-development does more than give students a feeling of attachment to the campus and the environment. On some basic psychological level, students will be creating themselves in the image of a sustainable place, projecting their work and desire onto their living surroundings, and in turn being mirrors of those surroundings themselves. They would create what Mississippi philosopher James Inabinet calls a “niche,” a place where a particular living being may flourish (Inabinet 39). In “The role of university food gardens in higher education sustainability,” S. Klein, accordingly, emphasizes that community gardens are places where people grow, not just vegetables and fruit. “The garden creates an atmosphere that lends itself to open discourse on varying value systems and sustainable life-style choices, as well as the broader issues of sustainability around the globe; Klein says. “Students are able to learn not only from classroom instruction and internships, but also through working with students from a variety of academic disciplines”. Participants, Klein, argues, felt the garden created “a space for hope” in sustainable action while also preparing them “to live sustainable lives” by decreasing their footprint in the conventional food system. Community gardening projects are a valuable resource for furthering a sustainability curriculum within higher education.

Along with a sense of place, community gardens have the potential to affect an individual’s outlook and attitudes in all aspects of life. In his essay “Theorizing Community Gardens as Pedagogical Sites in the Food Movement,” Pierre Walter states that participants “begin to shift seeing the environment as an object or a place, to a view characterized by the interconnectedness of humans and environment.” Hands-on learning experience with a connection to nature has countless benefits for student’s achievement while attending college

and provides lifelong skills and environmental knowledge. Many campuses are transforming their grounds into sustainable, placed-based educational gardens or growing laboratories.

The University of North Carolina Campus Community Garden (CCCG) for instance, grows vegetables that are donated to the housekeeping staff and other low-income staff at the college. The CCCG website touts the cooperative learning experienced by students, and it also lists opportunities for community involvement and compost donations. The goal of the CCCG, also found on their website is:

“to grow vegetables and fruit so that all employees have access to fresh, sustainably grown produce through the shared efforts of staff, students, faculty, and local residents and to serve as a learning community for developing gardening skills, healthy living, social responsibility, and interdisciplinary academic pursuits” (Hill).

Through community outreach and skills and knowledge acquired from the placed-based learning, students at CCCG prepare to be lifelong stewards in their communities.

The University of South Alabama (USA) began their community garden in the spring of 2015. The food produced from the garden is donated to the Salvation Army on a weekly basis. Students, staff, and the community, who are all encouraged to participate in the learning experience. South Alabama’s commitment to sustainable food production appears firm. They state, “We are committed to using organic growing techniques to provide a venue for alternative growing practices in the Mobile, AL community” (Alabama). USA also has a designated area to drop off recyclables at their Maintenance Recycle Facility. The drop off site takes plastic, glass, aluminum, paper and cardboard from both on and off campus. USA’s triple commitment--to ecoliteracy, place-based education and community involvement--gives students valuable tools to make positive and sustainable choices in their lives and in their communities’

In Mississippi, educators are beginning to understand the importance of including the environment in hands-on, practical situations. “Coastal Roots: Connecting Students with Sustainability in Mississippi and Louisiana,” by Christine Coker explains the Coastal Roots program started in 2000 by Louisiana State University. The program, “enhances learning areas such as plant growth, wetland issues, conservation, and hands-on habitat restoration, and includes the installation of a small container nursery for the production of coastal plants in schoolyards.” In 2008, Mississippi State University’s Coastal Research and Extension Center adopted this program. The goal of the program is to engage elementary school children in hands-on learning in the restoration and growth of native plant species. MSU facilitates the construction of the nursery; participating schools do their own research. Woolmarket Elementary was the first school to take part in program in 2008, and by 2011 five additional elementary schools were added. Coker describes the benefit of hands-on, place-based learning: “Through instruction and hands-on activities, the student is able to acquire detailed information about potential environmental problems and an understanding of their impacts.” Educators are beginning to understand that to understand our environment, a student must actively engage in the environment. Coker relays the objectives of the Mississippi Coastal Roots program thus: “The Coastal Roots program has many benefits to students. The program addresses the importance of physically interacting with the environment, a component that has been absent in environmental studies.” The MCR program stresses that environmental studies cross into all areas of education, enhancing learning in every subject while simultaneously teaching students about the living world and their place in it.

At the University of Southern Mississippi Gulf Park students have expressed their interest in including hands on environmental learning by beginning the clean-up and restoration of the existing campus green house. Spearheaded by the Eco Eagles Club, the project also had participants by the Geographic Honor Society, Plant, and the Biology Club. Local news station WLOX covered the event, interviewing students on how they felt about the green house

restoration project. Lacy Lawler from the Geographic Honors Society quoted, “I like that it brings a bunch of our student organizations together and that we’re working together. I like that it betters our campus. It’s something students coming up behind us can get involved in and use.” The goal of the Eco Club is to create a more sustainable campus with plans to incorporate composting of cafeteria waste (Phillips).

USM Gulf Park campus is perfectly situated to address and facilitate the need for place based environmental studies. The campus resides on fifty-two acres, with much of that land being undeveloped green spaces. As with the previous examples of universities that have taken this challenge of providing hands-on learning experiences, small, well-situated areas provide many benefits to a student’s growth and education, along with opportunities for community outreach. The already rich educational experience offered by USM Gulf Park could be enhanced with new and exciting learning experiences to foster eco-literacy. The campus could be transformed by students and staff into urban gardens providing living laboratories by biology, science and chemistry departments along with being a cooperative learning experience.

In his essay “Think like a Mountain,” Aldo Leopold tells the story of the ecology of a mountain. The wolves who lived on the mountain were killed by ranchers who believed that by killing the natural predators, they would protect their cattle. After the ranchers decimated the wolves, the deer, no longer culled by the wolves, expanded and proceeded to eat all the vegetation from the mountainside. Without the natural vegetation, the mountain eroded, “washing the future into the sea.” Leopold concludes that the cowmen “has not learned to think like a mountain.” The lack of knowledge and understanding of the place of edible vegetation in the mountain ecology led the cowmen to ultimately destroy the mountain. This is a challenge that we face today.

The idea that there is an ecological crisis, however, is nothing new. The earliest prominent use of the phrase “ecological crisis” is in an essay by historian Lynn White, “The Historical Roots of our Ecologic Crisis” . . . from 1968! In 2016, the International Geological Congress declared that we have entered a distinct geological era, the Anthropocene Era, a “period of time during which human activities have had an environmental impact on the Earth; regarded as constituting a distinct geological age” (Webster). Ecoliteracy equips us to deal with this crisis, the crisis of the Anthropocene, by helping us understand how everything in our environment from the smallest organism to humans is all connected or “our ability to understand the basic principles of ecology and to live accordingly” (Capra). Without some degree of ecoliteracy, USM graduates would be like someone given the challenge of building a home with no saw or nails. Worse we would be like Aldo Leopold’s cattle ranchers, watching, clueless, helpless, as the mountain eroded into the sea.

Mainstream educational practice has largely excluded environmental education and its practical applications, leaving students without tools to face “our ecologic crisis”: the many challenges of climate change, pollution, ecosystem collapse and ocean acidification. Educators are beginning to realize that the solutions for the future must begin with students and communities working to create sustainable solutions and learning to coexist in our environment. The inclusion of environmental education into university curriculums would ensure that upon graduation, students possess the knowledge to apply sustainable choices in their lives and careers. Hands-on, placed based activities, such as campus gardens, would give students practical knowledge, increase self-efficacy, and a sense of place and help develop an attitude of stewardship. The USM Gulf Park Campus could be transformed into a living laboratory to be used for enjoyment and education by all departments and majors. And graduates from USM Gulf Park would be able to tackle the “great work of repairing” this earth, our only home.



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