

Sustainable Education from Vermont to Wales: Developing a Sense of Place and Resiliency through Innovative Interdisciplinary Curriculum

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Abstract: Environmental Study of Sustainable Places is a pedagogical experiment in multidisciplinary curriculum development on several levels: 1) we integrated our multidisciplinary backgrounds in the social sciences and the humanities—political science and international relations with art and aesthetic education—to develop and co-teach these half courses; 2) student learning outcomes, course requirements, interactions and collaborations, multimedia texts that can range from journal essays to Ted talks to articles from international press to images of environmental artists), and out of class projects, promote interdisciplinary learning; 3) the semester course confronts borders and boundaries of static college curriculum around sustainability as we examine global and local understanding of sustainability, which is a prerequisite for a residency at the University of Wales Trinity Saint David where students crossed international borders and boundaries to conduct research of sustainable policy and enculturation in Wales, United Kingdom. Students attended interdisciplinary symposiums and work collaboratively with students representing different disciplines from the University of Wales; and 4) we delicately navigated the College's curricula policy and bureaucracy to gain approval for a paradigm shift to use the concept of sustainability as a “pedagogical big idea” to assure that students would fulfill either of the Liberal Studies Curriculum requirements: Global Issues for Common Good or Artistic Experience.

Key Words: Sustainability, sense of place, interdisciplinary, Vermont, Wales, aesthetic education

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Sustainable Education from Vermont to Wales: Developing a Sense of Place and Resiliency through Innovative Interdisciplinary Curriculum¹

This article examines the impact of an interdisciplinary collaboration to help college students to move beyond their own personal and intellectual boundaries to meaningfully encounter sense of place and sustainability. Over a period of six months, we developed two interdisciplinary “half courses” to introduce students to the topic of sustainability through connecting to the local in Vermont and the global through an academic study trip to Wales, United Kingdom. As professors of political science and art education in a small, residential liberal arts college in Vermont, we were motivated by the following questions: How might an interdisciplinary approach, a combination of social science and the arts, and an on-going construction of narrative play key roles in informing sustainable education? In addition, how might a cross-cultural experience in Wales, United Kingdom, generate new visions and resilience of environmental, social, psychological, and political understanding of place? We respond to these questions by reflecting on our cross-disciplinary and cross-cultural curriculum designed for students to inhabit, analyze, and interpret sense of place in multiple ways.

As educators we feel compelled to raise student awareness of how our actions today will influence future generations and how our understanding of sense of place indelibly links to the practice of sustainability. As such, we join a broad-based movement that has brought the subject of sustainability into the mainstream of college strategic plans, curriculum reform and prescribed practices for campus operations and for individuals (Edwards 2005; Aber, Kelly and Mallory 2009; Thomashow 2014). We recognize that sustainability is a contested concept—for any given person it may refer to a code of conduct, an underlying ethical foundation, the act of leaving a legacy, practicing renewability or a 21st century “common sense” norm. We are excited and enthusiastic about embracing sustainability as a “pedagogical big idea” (Sherman 2008) that has the potential to connect previously disparate disciplines and organize thoughtfully and purposefully teaching and learning on our campus.

Yet, how do we change paradigms that generate active engagement with sustainable places, when many college students today are not prepared to approach problem-solving with systems thinking, and struggle to make the link between global and local consciousness? One approach would be to use imagination empathy to what Illeris (2012) refers to as an epistemological platform that can intervene and overcome personal and community boundaries that inhibit the practice of sustainability. Relatedly, Perry (2013) suggests the need for a reorientation of education that embraces a strong sense of stewardship, systems thinking, and focus on the importance of place. Many believe that an interdisciplinary approach to encountering sense of place promotes dispositions that help students and teachers move beyond narrowing assumptions to create new narratives of sustainability (Greene 1995; Baldwin et al. 2013). As we planned a program for students we were encouraged by Miraglia and Smilan (2009) who created a professional development course for educators that incorporated arts- based curriculum, environmental education, and interaction with place to generate what they call “affection for the natural world” (171). Not surprisingly, Miraglia and Smilan place considerable emphasis on planning and developing strategies to meet clear objectives.

¹ This paper is a variation on a talk we delivered on the panel, “Sustainability Education Across Boundaries: A Pedagogy of Complexity,” at the Annual Meeting of the Association for Environmental Studies and Sciences in San Diego, CA, June 2015.

Environmental Study of Sustainable Places

Our vision of an environmental study of sustainable places through an interdisciplinary lens emerged first after we negotiated a sense of place and purpose linked to the learning outcomes we hoped to achieve through our course. After framing clear student learning objectives we took inventory of our teaching styles and narratives, shaped differently by careers in the social sciences, education and the arts, examined our habits in how we interact with students and the physicality of the classroom space we typically create, negotiated the written and visual texts that would inspire students to reconcile their understanding of sustainable places, and choreographed delicately a course that would lead to students actively engaging in the inquiry of sustainable places through a two week residency in Wales, United Kingdom. We combined two separate Liberal Studies Requirements in the general education curriculum for our students—the “Global Issues that Impact the Common Good” and “Artistic Experience” requirements, giving students the option of choosing whether to interrogate sustainability from social science or artistic perspective in their capstone projects.

Baldwin et al (2013: 21) refer to our negotiation as "convergence" where we confronted our own narratives of pedagogical sense of place through the context of another. We both had a strong motivation to create opportunities for students to expand their world view of sustainability and by doing so “re-inhabit” their own sense of place. Perhaps, most critically, we gained trust in each other as we yielded to new habits of our own pedagogy to develop the following learning objectives for students:

- understand different perspectives on sustainable places through cultural, ecological, political, artistic, and geographic lenses,
- design, conduct and interpret archival and primary research as well as participate in the creative process to examine sustainable places,
- make connections between observations of museums, national parks, educational programs and artists in Wales and paradigms of personal and local place.

Our intent was to explore how different societies were grappling with the clash of globalization, market, green economy and sustainable development paradigms (Chasek, Downie and Brown 2013) and eventually integrating principles of environmental sustainability throughout their cultures, institutions and policies. Uniquely, we looked not only at traditional approaches to sustainable development through the lens of global governance (WCED 1987; Steffen et al 2004; UNEP 2013) but also at how aesthetic experience influences individual, community, and global perception of sustainable places (Berry 2004; Solnit 2014). We encouraged students to examine the relationship and interplay between human narratives and the narratives of nature while in Wales that included investigating such “place” needs and resources as water, fuel, shelter, and recreation and analyzing stories of successful place-based education and communities. Students’ investigation of sustainability began through a semester long course before culminating in a two week residency at the University of Wales Trinity Saint David in Carmarthen, Wales (UWTSD), where we partnered with colleagues and students from UWTSD’s Environmental Art and Environmental Studies program. Wales was chosen because of its internationally recognized transformation from a fossil fuel economy to a leader in implementing sustainability throughout its culture, education, civics, economy, and the arts (National Assembly for Wales 2000; Allen et al. 2014; Welsh Assembly Government 2015). Wales is only one of three administrations (with Estonia and Tasmania) that **has** “**constitutionalized**” a legal sustainable development responsibility.

The goal for our pre-Wales course in the spring semester in Vermont was to create a trusting community that would eventually spend two weeks in a foreign country, explore global and local issues related to sustainable places, and help students develop research projects they could bring to life in Wales. Students traveling to Wales were specifically assigned to investigate the political, economic, or artistic and cultural perspective of sustainable places in Wales, while students ultimately not participating in the eventual trip investigated sustainable practices in Japan. Our texts for the course were multimodal, full of images, ted talks, articles from the Guardian, essays, poems, and fieldtrips. In the on-campus course students worked in groups to lead discussions on such content as: evolution of sustainable development; rural and urban crossroads; from fossil fuels to renewables; interplay of natural resources and cultural identity; and sustainable activism. In addition, every week our students responded to articles from the Guardian's UK Sustainable Business Sustainability Hubs section as we assessed them through weekly current events quizzes.



Photo 1: Collaborative Collages and Contradictions of Sustainability

Students not only demonstrated their understanding through written projects but through a series of artistic responses. To build up comfort, skill development, and risk taking in artmaking we asked students to complete three assignments over the semester prior to our trip to Wales. They first created a visual expression of their sense of place with the intent to artistically convey mood, emotion, physicality, and/or paradoxes from their perception of place. From the

comfort of a family sofa to the chore of riding a tractor to the smell of a cookout on a beach, students recalled their own narrative. They gained a sense of community by sharing their risks visually exhibiting their place and appreciating and learning how others approached the similar assignment. Students then worked collaboratively to create visual collages that illustrated one or two challenging contradictions that exist when addressing sustainability. The student-generated list that sparked these collages included: wilderness/civilization; affordability/organic; individual capital/social equity; technology and material development/waste and obsolescence; population growth/production access; and inside/outside. Students completed the on-campus class with an artistic synthesis that reflected their developing understanding of sustainability. In every class we showed images from environmental artists using a visual thinking strategy to initiate observation and discourse. From photographs to paintings, to site specific sculpture to digital images we exposed students to different artistic elements, different media, and different approaches to compositions so they could expand their palette when visually expressing perspectives on sustainability.

In Wales we were inspired by attending symposiums of educators and artists across the three UWTSO campuses in Lampeter, Carmarthen and Swansea, hiking in the Brecon Beacons and along the Welsh coastal path and above the Irish sea, visiting to castles and the Centre for Alternative Technology, descending into a former coal mine, attending a Senedd (Welsh Assembly) discussion on water use, and joining **UWTSO Environmental Art students and faculty at their art exhibits. Throughout the two** weeks, our students kept journals, participated in discussion, and interacted with students from UWTSO. Twice during the program they provided an update on their research projects which ranged from philosophical and political perspectives on the Welsh Well-being of Future Generations Act to capturing visually the sense of awe and human emotion when interacting with the natural world through art and dance. In the following section we describe how the experiences in the two courses influenced our students' and our own perspectives on sense of place. We use words from student reflective papers (in italics), critique conversations in class, and our own observations from journal entries to share how our interdisciplinary approach informed our individual and collective narratives.

Interdisciplinary Discoveries

When students presented their artistic interpretations they were asked to come up with a question that reflected their emerging understanding of sustainable places. In conjunction with their artwork these questions demonstrated their links between what they researched and their understanding of place as well as provoked conversation on how their artistic choices effectively conveyed intent. An Environmental Studies major's diorama reflecting her research of ecologically conscious living spaces with the question: What would I have to give up to live in a sustainable way? A student who created a relief of discarded objects on broken glass wondered how we can better look at individual pieces outdoors as part of nature of the natural environment. What to do with tired tires was asked by a Journalism and Media Studies major exhibiting her Multimedia playground with rubber swings and flip flops. Her intent was to illustrate the contradiction of perspective: children who see tires as a potential source for play in contrast to adults who see a pile of tires in a dump as reflecting waste.

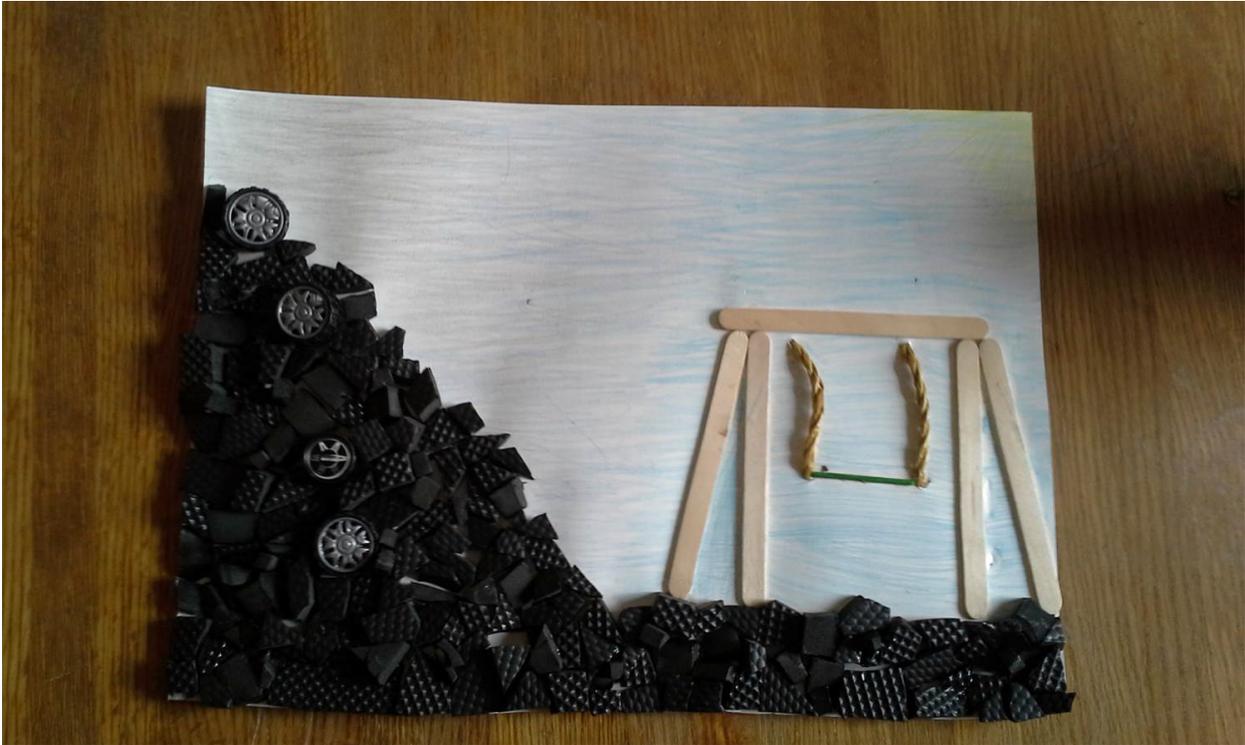


Photo 2: Artistic Interpretation of Sustainable Places

A few students expressed how inspired they were by the many images we showed of artists using natural materials to offer perspective on the environment. The discussions that followed the presentation of each art work were rich. Sparked by works of Andy Goldsworthy, Robert Smithson, and Timo Jokela, a Business major built a Fairy house out of found wood wondering *how we are drawn into such a place by looking from afar and from close by*. Another student made a graveyard of “dead” sticks. For many the focus on place cultivated an awareness of *the juxtaposition of what surrounds us naturally and unnaturally*. An Environmental Studies major when taking a photograph in the woods to show the ageless cycle **of a forest place** realized *how simple and beautiful this very moment was, It was pure silence. I connected to the natural*

world. Her intent through her visual narrative was to convey that sustainability means eliminating dominance, existing alongside nature rather than purely using it as a resource. Similarly, an Education student’s constructed terrarium illustrated her advocacy to *live a “light” life where we have less distracting us from noticing our surroundings and connecting to it*. She continued saying that she wanted to build a place to show how everyone needs a place or places we can call our home.

With a focused assignment students noted how attentive they were to observing the places we inhabit, as if we were seeing them with new lens and for the first time. As one student described it: *the best way to protect the planet is to start in visible places*. Using crayons and newspapers, this Business and Sociology double major:

chose to make a flow of green impending on a cityscape to show sustainability starts in the places we live: cities, towns, our communities. I chose newspapers for the cityscape to express the idea of using recycled materials and green crayons to create the effect of “greening” the city.

She believes that as citizens we are compelled to examine the way we construct our homes and the impact this construction has on the sustainability of the earth. One of our central questions was how our family members and community influenced our individual sense of place. Through intense discussions this shifted to how will we change our habits to re-inhabit place without the easy anesthetized misappropriation, Noted by one Environmental Studies major: *as we move further into the Anthropocene era of human change on the earth can we find a commitment for future generations.*

The program in Wales allowed students to step outside the familiar and became more aware of the interrelationship between the physical, cultural, and emotional sense of place. *Places are made up of multiple different pieces, kind of like a puzzle, each of which uniquely adds to that certain place to make it what it is* (Environmental Studies and Education major). In Wales a Gender Studies major began to investigate the relationship between the big picture panorama of a place and the subtle details which comprise this place. She recognized how easy it is to objectify and identify place rather than notice the qualities of what makes up this place. To artistically represent the multidimensionality of a particular place a Gender Studies student deliberately chose two photos: one expressing a full-view landscape, while the second being a close-up, focused on something *that caught her eye to represent that place in a more narrow sense.*



Photo 3: Multidimensionality of Place

For the Global Issues for the Common Good requirement students engaged in direct research and fieldwork that tapped into the theme of the interdependence of peoples around the world and which explored conditions that enhanced or hindered the full development of individuals and societies' relationship to place. Three students embraced the overarching framework of "environmental sustainability" as a lens through which to explore how the people of Wales are responding to the global environmental and economic crises associated with our post-industrial, late capitalist era. They investigated how policy interacts with everyday narrative. The Welsh nation is increasingly defining itself as "sovereign" partly embedding sustainable development into artistic, social, educational, economic and institutional realms. Students thus explored how Wales has managed the shift from the industrial to the post-industrial

era and also considered comparatively the potential applicability of the Well Being of Future Generations Act to debates over the environment and sustainability in the United States. These global issues projects were exhibited at the final day symposium in Wales as PowerPoints or posters sessions and received critiques and suggestions from faculty and students from UWTSO.

As students were observing and envisioning the depths of place, they opened their capacity to analyze how humans engage with the natural world. Resilience is fortified when there is an awareness of the socio-ecological relationship between place and humanity. *If each individual piece of a place were to slowly be removed from that place over time, then that place would eventually be destroyed* (Psychology major). Some students chose a particular lens to study place. A Math major was captivated by how sun light influenced her evolving image of place in Wales. From coastal walks to the village of Carmarthen she observed the Welsh sunsets visual effect on topography, structures, and people. She first took photographs to collect an array of images. From these she sketched contour lines onto black paper. Using an exacto knife she cut each silhouette then followed by applying water colors to create the sunset backgrounds.

Moving beyond our boundaries of knowing requires the release of one's imagination (Greene, 1995). Students were able to explore other narratives of place by spending time outdoors, hearing the stories of others, and engaging in artistic inquiry. By stepping outside the familiar they made connections to prior understanding and quest to discover something new. As one Journalism and Media Studies major succinctly said: playing outdoors stimulates imagination. As she suggests resilience builds on current experiences that draw upon memories of playing outdoors; the physical and emotional associations become timeless.

One construction of narrative occurs when institutions, whether schools or community, design playgrounds as place to interact with the outdoors. A Business major compared human constructed playgrounds with playgrounds that exist in nature. He was interested to look at the physical layout of a playground where there was direction on how to "play" as opposed to the openness of creating play in an undefined space. *The imagination is hindered when playing on a set playground however; I could feel my imagination running wild, like a child when we walked around Wales.* When walking on the mine tracks of a coal mine we visited he recalled his own childhood: *I felt as if I had been there before and played on those tracks being half as tall as I am now.*

Louv (2008) implores educators to create new relationships with the outdoors to combat nature deficit disorder. We deliberately integrated the outdoors into our curriculum to link the theory with experiencing place-based education. Our students repeatedly expressed how their encounters with the physical place led to a greater awareness of the human impact on place. At Llansteffan Castle *we ran around like little kids again thinking about all the people that walked those same steps hundreds of years ago* (Environmental Studies major). For one student it was hiking Pen y Fan, the highest mountain in Brecon Beacon national park, which offered a visceral sense of connecting to Welsh heritage. For another it was finding a *dirt road that led to fields and fields of cows as exploring and finding nature spots connects me to an area.*



Photo 4: Encounters with Physical Place in the Brecon Beacons, Wales

Noticing smaller cars and homes and the charging of plastic bags at Tesco extended our students' narratives of how to live a sustainable life, be respectful to the land, and connect one's personal narrative to a global perspective. An Education major focused her research on juxtaposing the positive emotions seen in humans taking part in the natural world with that of humans playing a huge role in climate change and ecosystem destruction. She reflected that her intent in taking pictures of the devastation of nature was to provoke action and use these images as a comparison after restoration.

Eight of the eleven students chose to assume an artistic experience focus for their research, while three chose the global issues framework. Notably, there was not one student on this course who was an art major or minor. Because the arts were so infused into the curriculum

of both the pre-requisite course on campus and the one in Wales, each student needed to reconcile his or her own artistic identity. The curiosities generated from lectures to site visits to hikes were transformed into images and in one case a dance performance. Students' engagement with the creative process was concurrent with their expanded understating of sustainable places. As they wrestled with finding "clarity" in their respective medium they enriched their ability to notice and observe:

What better way to move people to act sustainably than through art? You can place words in a front of an individual but they do not have to read.

Place an image in front of them, however, and they have no choice but to confront the emotions they are feeling, head on. How could I capture the authentic expression of human emotion, while showing the sense of awe that encapsulates a person who is in the natural world? How could I then convey a sense of place and perspective on sustainability? With a world full of Instagram and social media constantly depicting our lives, it's hard not to simply flash a smile. (Environmental Education and Business major)

This student's research included participation as she asked each of us how the the Welsh landscape provoked memories of as well as informed us of our evolving sense of place. Our verbal responses inspired her to take a photograph of something in the Welsh landscape to best convey that memory. Her project was a good example of the interplay between the arts and one's own narrative of place.

When the qualities to discern what one sees and the connections one makes between the known and unknown are encouraged perception of place are enhanced. As an Environmental Studies major carefully analyzed, critiqued, and edited her many photos as part of her research she reflected on how she developed the capacity to claim: oh, that's the one! Contemplation of such elements as line, color, texture, and shape occur in the context of both a "composition" in nature and in a "composition" on a painting or photograph.

Conclusion

Our experiment in interdisciplinary pedagogical integration of the social sciences and arts and of the local and the global embraces sustainability again as a "wicked problem" or "pedagogical big idea" that can shape teaching and learning on our campus. As Baldwin et al (2013) remark: "... transformative educational experiences for both professor and students can be rooted in place, once professors transcend disciplinary boundaries and embrace collaboration and experimentation (16)."

Place, resilience, and learning begin with the forming of community. By providing different lenses, experiences, and media we hoped our students would transcend their understanding of place to be personal, caring, and global. We needed to develop a place that allowed for *care, concern, forethought, compassion, selflessness, and awareness* ((International Relations major). Our challenge was to accommodate students with a wide range of knowledge on sustainability as well as many who claimed "I am not an artist." We strived to create a learning environment that responded to student's readiness by accessing prior knowledge, developing trust and support to scaffold risks and exploration, and emphasizing research that that would link sociological, political, aesthetic, and physical sense of place. When one person is passionate about sustainability it inspires others (Environmental Studies and Education major). For the International Relations major a sense of place becomes fortified when he connects with others, with nature, and with his own inner being. A curriculum of resilience transforms learning through the interplay between meaningful experiences and heightened opportunities of

exploration of what is familiar and what is unfamiliar. By feeling the awe in nature as one student remarked we built our resilience to place.

The experiences in Wales opened up many new sensations for our students to indulge in the process of encountering place, narrative, and resilience. They integrated the lectures on sustainability, policy, and nature deficit disorder, the visits to the Welsh Assembly and hikes in the countryside and coast, and interaction with Welsh students and community members an understanding of the complexity of sustainable places. Analysis on place, climate change, social justice, and economic equity moved freely between discussions on politics and artistic interpretations. As students immersed themselves in their research projects, they were encouraged to explore the spaces between convergence and divergence, permanence and impermanence, and clarity and ambiguity. Ultimately, students and faculty found ways to cross their own disciplinary boundaries to encounter and express the resilience of sense of place, affirming the importance of narrative linking memories to active engagement, experience with vision of what is possible.

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