

Utah State University, Logan UT, 7/05, Continuing Education - Level I Educators License, 4.0

3. School:

Colorado College, Colorado Springs CO, 9/96 - 5/00, Biology, MA, 3.45

4. School:

Objectives: In three sentences or less, please summarize how your post-graduate career objectives will have a positive impact on the environment.

My post graduate career will have a direct, early, and positive impact on environmental quality through systemic organization of youth led service projects in public schools. I will co-create a new paradigm for ecological teaching and learning that incorporates multiple public and private stakeholders and results in youth led project based learning with an environmental focus that is economically and developmentally feasible. These projects will directly reduce energy use, water consumption, solid waste disposal, and transportation emissions, as well as increase habitat diversity and human health in and around schools.

Other Considerations: Please state briefly any additional considerations you feel the Selection Committee should know while evaluating your application, including financial needs. Also, please note if there are other fellowships or awards you are applying for that may impact your ability to accept a Switzer Fellowship if awarded.

As a Switzer Fellow I will be able to extend my research for an entire year and financially invest in course work and internships that will sustain innovations and interventions that I research. With this award, I will be able to take a sabbatical from my current employment and be mentored through organizational leadership and change management organizations that will help me implement school reform. The network of Switzer Fellows working outside of education will expand and diversify my research community and help me coordinate actions to improve environmental quality through youth led projects. I am currently employed while pursuing a master's but my vision for an action research project requires a full year of planning and researching. Action research projects typically create knowledge, implement change, and improve performance but my current course sequence will terminate my action research before the implementation stage. The Switzer Fellowship will give me time to apply the reflection and implementation plan from my action research. With time and financial resources for this stage, I will conduct a market analysis, comprehensive review of management principles, and develop a business plan for an outdoor learning campus that meets the needs of the issues I investigate.

Personal Essay: Please submit a 2-3 page essay that offers insights into your personal motivations, and how your academic experience will be applied to environmental improvement. Please refer to the website guidelines for information

I discovered my vision to combine education reform and environmental literacy when I was a wilderness therapy instructor with adjudicated youth in Montana. In the privacy of the wilderness, teenagers whispered their stories about sexual abuse, needles producing euphoric highs and generational poverty. I spent my own youth at a high school with over 70 percent students of color, but in my classes on the accelerated track there were less than five percent racial minorities. As an undergraduate, reflecting on my privilege in the accelerated classes and the rift that continued growing between me and my peers shocked me into action and intensified my passion to affect change in society. I co-founded a community service program called the Colorado College Learning Initiative in the Mountains that paired college students as “enviro-mentors” with at-risk middle school youth. Upon graduation, I spent the next ten years as an educator using the wilderness as a landscape for transformative learning. All of these experiences shaped my understanding of environmental literacy and the external and internal development that occurs with individuals and groups of people as they learn to “read” the natural world.

Spinning bow-drills to make fire, hiking to access water, collecting edible plants and learning about native cultures, our wilderness therapy program taught traditional academic standards. Students received credit in physical and life sciences, math, reading, and social studies. During the 60 days these adjudicated youth spent in the Montana backcountry, we practiced “leave no trace principles” and completed service projects for the National Forest System. Our work had positive impacts on habitat restoration and land management and our living was sustainable. The improvement of environmental quality and the increase in knowledge of ecosystem functions are indicators of external development in environmental literacy. We also witnessed a positive impact on the internal development of individuals in our groups. They demonstrated tremendous emotional growth as they restored trails, planted trees and shrubs, and learned about the ecosystem that supports their lives. Statistics show that only four out of ten students returned to the juvenile justice system upon graduation from this program. Compared to state detention centers with a recidivism rate of seven out of ten for the same demographic, it seems clear that there is a profound psychological healing effect when humans reconnect with the wild and natural environment. This aspect of learning about the environment and acting in service to it informs my definition of environmental literacy.

When I transitioned to a career as a high school teacher in Utah, I mapped out our state Biology and Earth Systems standards with this definition as a guiding principle. Unfortunately, while teaching science for ninth and tenth graders at East High School in Salt Lake City, the structure and culture of learning were not designed to support service projects during the school day. Using my curriculum map to cultivate environmental literacy was more difficult than I had anticipated. With 210 students in the six classes I was required to teach, the logistics of teaching outdoors through inquiry and ecosystem restoration projects felt impossible. My vision of developing environmental literacy to improve the quality of our ecosystems and to establish a culture of learning that would facilitate the internal development of at-risk youth was very challenging. However, school leadership recognized the value of my vision and promoted me as an administrator to work one third of my time as a ninth grade Dean of Students.

In this position, I advocated changing the structure of the large high school to facilitate more team teaching and project-based learning. As a leader of our school redesign committee I collaborated with students, parents, teachers, community members and district personnel to initiate a federal grant application that would create Small Learning Communities (SLCs) within our large 2,000 student high school. Our student body was characterized by a diversity of socio-economic classes with over 30 different first languages spoken at home and a population of racial minorities that grew from 20 to 40

percent over five years. Over one third of these students were failing and dropping out within their first two years of high school. As a result of our research and advocacy we changed a group of student schedules to pilot a model for ninth grade teaming. By year two this model was expanded to incorporate the entire freshman class of 500 students. This modification of a traditional high school design facilitated interdisciplinary project-based learning. Unfortunately, we were not awarded the SLC grant, and human resources to reduce teacher::student ratios as well as financial resources to expand the project scope became limiting factors. As a result I left the classroom environment to work as a teacher and student advocate through various environmental education programs.

Currently I work with schools to catalyze a culture of learning that supports both internal and external human development by helping teachers develop curricula that use natural settings as a classroom for learning. Using the environment to integrate curricula can increase rigor and scaffold both low and high performing students to succeed as part of their external or academic development (Lieberman 1998). In addition, authors and advocates like David Sobel, Louise Chawla, and Richard Louv describe how spending time outdoors in wild or semi-wild places has a significant effect on internal psychological development and is the most significant indicator for shaping stewardship behavior (Chawla 1998; Louv 2008; Sobel 2008). I am committed to increasing resources in schools and currently I am studying leadership and community organizing skills to galvanize diverse stakeholders and improve school culture. As an educational leader in Maryland, I am working to help schools embrace this holistic approach through service projects that benefit the environment, community and students.

In 2009 I became the Green School Coordinator for the Maryland Association for Environmental and Outdoor Education. I manage certifications of schools that demonstrate a culture where student led action projects result in direct and positive impact on the environment. My goal is to increase the Maryland Green School certifications from ten percent to seventeen percent of all schools in the state by using social-networking tools to coordinate and develop environmental literacy. I collaborate with over 240 educational communities to decrease energy use, water consumption, solid waste disposal, transportation emissions, and to increase habitat diversity and human health in and around their schools. Over the last six years, schools in the process of becoming Maryland Green Schools have restored over 11 acres of native plant habitat in four Maryland counties. Two counties have used this schoolyard habitat acreage as part of their compliance with storm water management regulations (Mullin 2010). In addition, a research study of the work I am coordinating indicated that Maryland Green School designation significantly correlates with higher reading achievement in fifth and eighth grade and higher math achievement in eighth grade. A qualitative description from a fourth grade Maryland Green School teacher reveals that there is also a holistic culture of learning that transcends the boundaries of the school walls. “The children and parents -- and community--have learned to look at this world a little differently...These projects have helped to bring the community together for a common cause with wonderful results and a feeling of success in working together” (Clavijo 2004. p. 3).

Drawing from past leadership skills and sharpening my focus through action research, I am committed to a professional career promoting environmental literacy that correlates with improvements to environmental quality and serves as a model for state and nationwide school reform. Fritjoff Capra, an esteemed physicist, systems thinker, and author explains that environmental literacy is not possible without educational reform because interdisciplinary projects that are ecologically oriented are only successful in true learning communities (Stone and Barlow 2005). The state of Maryland describes environmental literacy through indicators of knowledge that deepen the understanding of classroom based

ecological learning standards in addition to psychological and sensory experiences in outdoor spaces (MDNR 2009; MSDE n.d.).

Combining these aspects of internal and external growth to indicate performance in environmental literacy helps create a holistic culture of learning. This atmosphere facilitates change because it transcends the disciplines and social barriers that normally inhibit reform in educational settings. In addition to the benefits for human learning, the components of environmental literacy also result in direct benefits for the water, air and habitat around a school. Authors in the *Journal for Environmental Education* describe that when students learn through environmental issue investigations and action projects there is significant improvement in environmental quality. Reflecting on the last 40 years of environmental education they also advocate for the involvement of non-traditional public and private sectors as stakeholders in education (Duffin et al. 2008; Hungerford 2010; McBeth and Volk 2010; Potter 2010; Short 2010). Leaders in educational reform networks like Expeditionary Learning and the Coalition of Essential Schools have trained me to coordinate multiple stakeholders through project based learning as a “best practice” in teaching. Working on my graduate degree in Ecological Teaching and Learning, I expect to align my desire to improve the quality of education, increase environmental literacy and positively impact the ecosystems that support us.

I am applying to the Switzer Fellowship for assistance in sharpening my leadership skills and networking with people who are dedicated agents of change in their professions. I want to deepen my experience as a critically reflective practitioner by collaborating with Switzer Fellows as I pursue a Master of Science at Lesley University. My action research over the next year will center on the hypothesis that developing a strong sense of place through experiences in wild and natural settings will lead to an ecological identity that can motivate a lifelong conservation ethic regardless of cultural heritage. This general hypothesis has been alluded to by visionaries like Rachel Carson, Aldo Leopold and E.O. Wilson as well as other authors and researchers trained in conservation biology, philosophy, and psychotherapy (Esbjorn-Hargens and Zimmerman 2009; Kellert and Wilson 1996; Macy 2007; Sobel 2008).

Developing a personal and collective identity through environmental literacy is a topic found in professional dialogue about the No Child Left Inside Legislation and the Children in Nature Network. I was inspired through work done by a previous Switzer fellow, Sara St. Antoine, when she explained her evolution of understanding related to effectively shaping environmental stewardship behavior. She explained in a webinar that “We need to get back to the wonder more than the worry [of nature]. I think it is the wonder of nature and the discovery that is really what sustains you through a lifetime of commitment” (St. Antoine 2009). Acting on this inspiration my vision is to collaborate with other Switzer fellows to intervene in our school systems and integrate a new paradigm of teaching and learning that will transform our citizenry with a long overdue ecological restoration ethic.

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