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# **Program Development at the Outback**

Exploring Place-Based, Experiential Education through a Campus Farm.



# Paul Kearsley

in partial completion of the Masters in Environmental Education

w/ Dr. Nick Stanger Huxley College Western Washington University Spring 2017

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# Section 0.1 Acknowledgments

Learning is a collaborative process.	Section	<b>6.1</b>	The Positio
This particular process was also a bit protracted, labor-intensive, logistically challenging, ephemeral, bureaucratic, dirty, smelly, questionably legal and consistently overwhelming.		6.2	The Potentia
Needless to say, I could not have done it alone. Following people were instrumental in this effort and should this project bear fruit, they will be the first to try it out.	Section	7.1	Reflection
Jack Herring, Steve Hollenhorst, John Tuxill, Kamea Black, Andy Klein, Diane Knutson, Ed Weber, Kate Darby, Gigi Berardi, & Gene Meyers.	Section	8.1	Conclusion
Tommy Thompson, Albert Strasser, Della Mueller, Max Parsons, David Stein, Maddie Price, Tyler Mead, Zach Martin, Rose DeLorie, Tim Keal, Jacob Gerstner, Olas Perpich, Megan Johnson, Alyona Gudima, Julian Tennyson, & Jud Daffern.	Section	9.1	Bibliograph
Thank you to my Family and Friends. Sorry I have been so busy these past three years. I hope these 30 pages make some sort of sense for my absence.		9.2	Appendix

Special Thanks to Dr. Nick Stanger- Thank you for your guidance, support, ideas, humor, practicality and willingness to bend the system into something like a panarchic potato chip.

And finally, I would like to dedicate these past three years of work to my beautiful wife, Jane Campbell. Throughout this whole process we built a home, found a farm, broke a back, had a wedding, ate breakfast and lived every day together. Thank you for understanding, challenging & inspiring me.

# Section 1.1 Introduction

When teaching about systems thinking, the first idea I present is that everything is a system. When teaching about design, the first idea I present is that everything has been designed. I have been pleased to find that environmental education also embodies this ubiquitous perspective.

### Context

This project began nearly five years ago. While working as an entrepreneur, landscape designer, and educator I grew very comfortable in a range of different disciplines. My work was practical, engaging, and valued by many different audiences. While considering my future career, and the potential to expand my reach, I began to look for a more refined niche. Ideally, this position would have a strong relationship with a piece of land, a consistent stream of eager and interested students, and a degree of creative freedom through which we could explore, learn and teach.

In time, my searching led me to the Outback Experiential Learning Program (*The OELP or The Outback*) at Western Washington University (WWU). The Outback has been an element of the WWU campus since the 1970's. The space is a student-led farm, which provides opportunities for learning about sustainable living, and agriculture. The Outback has been considering a strategic transition for a number of years, moving from the current status as an exclusively studentrun program, towards the integration of a non-student staff position to foster long-term growth and development of the project. This paper represents a strong promotion for the development and piloting of a staff position in order to improve the programmatic offerings and develop the educational site to it's fullest potential.

I was introduced to the field of Sustainable Design as an undergraduate at WWU. While studying Industrial Design, I was compelled by the application of my newly learned design skills to fundamental problems regarding the human experience. The Sustainable Design Minor was an excellent introduction to the foundational ideas and theories of contemporary sustainability.

Immediately following my undergraduate studies, I spent two years in an intensive place-based apprenticeship program. The site was the Bullocks Homestead on Orcas Island, WA, and the curriculum focused on off-grid homesteading and sustainable design. This education showed me the invaluable lessons of working with your mind and body while applying theory to bio physical, technical and social systems.

After two years on the homestead, I founded and managed an edible landscape contracting business in Bellingham, WA. with two of my fellow apprentices: Homestead Habitats LLC. I also founded a sustainable design consultancy with two of my mentors: Terra Phoenix Design LLC.

Education has been a primary goal In both of these businesses. Much of my work involved the transparent communication of our design process as well as collaborative installation and long-term relationships with clients regarding maintenance and care for the spaces we were developing. This was an engaging and important component of our practice that differentiated us from many other companies. It was also very challenging and equally rewarding.

Since 2009, these professional experiences have shown me the need for more designers, entrepreneurs and practitioners who can apply sustainability theories as valuable and marketable services to meet real world needs.

With this in mind, I have focused my graduate studies intensively on place-based, experiential education in sustainable design and urban ecology for college students and young adults. Developing and achieving a long-term staff position in the OELP offers the highest potential and capacity for a pedagogy of this nature.



# 1.2 Definitions

Throughout my education and professional career I have seen a wide range of terms emerge, evolve and disappear. My definitions have also changed as my understanding of and relationship to these ideas has matured. To be clear, the following definitions represent my perspective at this time regarding these most relevant topics.

#### **Environment:**

The dominant American perception of the "Environment" The seminal book Cradle to Cradle critiques the modern presents a world out past the edges of the man-made urban fixation on sustainability and "Eco-Efficiency". and suburban construct. Embedded within this definition "(Eco-Efficiency) ... works within the same system that is the notion that humans and their creations are distinctly caused the problem in the first place, merely slowing it down separate from the "Environment". The words "nature" and with moral prescriptions and punitive measures. It presents "wilderness" both suffer a similar treatment. William Cronon little more than an illusion of change." <sup>3</sup> addresses this issue in his notorious writing "The Trouble with Wilderness" <sup>1</sup>;

Indeed, modifying our consumption and disposal are necessary steps towards a better cultural relationship with "One of my own most important environmental ethics is that people should always strive to be conscious that they are nature; it is important to be "less bad". However, this strategy part of the natural world, inextricably tied to the ecological falls short of doing actual good. systems that sustain their lives. Any way of looking at Environmental discourse rarely transcends the line between nature that encourages us to believe we are separate from humans as destructive consumers and humans as creative nature -as wilderness tends to do- is likely to reinforce producers. It is not widely acknowledged that humans can environmentally irresponsible behavior." rebuild topsoil, improve biodiversity and regenerate healthy watersheds. In fact, people have been doing these tasks across Though it has at times proved contentious, my preferred cultures, through generations and over centuries.

definition of "environment" comes from the visionary designer Since it fits the current cultural concept of my work the Buckminster Fuller. In his writings Bucky defines the universe term sustainability will be used throughout this document. as everything, and the environment as everything other than However my specific goal as it relates to Ecological Design the self<sup>2</sup>. By this definition and in the context of this writing, is to move beyond the ideas of doing "less bad" and cross every pixel, byte, page, the author and the reader are all a over into discussion of regeneration, co-creation and having part of nature, each individual existing within its own unique mutually beneficial relationships with our environment. This is environment. synonymous with the term "Permaculture".

### **Environmental Education:**

As I perceive it, Environmental Studies addresses the The lower-case d is intentional. It represents my effort to relationship between human cultures and their environmental make design a more accessible practice. conditions. Teaching within vague parameters such as I have been teaching design through WWU since 2013 and these turns Environmental Education (EE) into a malleable find that many people believe that only designers design. To perspective through which one can address a wide range begin my courses I often solicit a definition of design from of topics. It can encompass hard science and the STEM my design students. Their responses are generally vague agenda, systems thinking, place-based or experiential explanations regarding problem-solving, aesthetics and the education, and it can provide profound lessons in philosophy, Adobe Suite. We work through the various applications of the term and end community and oneness.

Understanding EE as a perspective instead of a prescription up with a definition both definite and ambiguous: Design is the creates a flexible and versatile educational toolkit that crosses organization of parts into a whole. This definition encompasses a broad range of disciplines and possesses a profound a wide range of processes from plate tectonics to cooking potential for depth. breakfast. Design-based learning is an integral component of In respect to the ubiquitous nature of EE, it is important to my teaching philosophy and the democratic, inclusive, allencompassing definition is the basis for that pedagogy.

note that teaching our children how to treat their environment is a foundational component of all cultures. Ancient mythology was imbued with lessons of the seasons and the stars. Recycling programs and phone apps for identifying bird calls both demonstrate the cultural significance of our relationship to our environment. Likewise, by not addressing our cultural relationship to our immediate ecology, we demonstrate a societal disregard for these systems, which is a lesson in and of it self.

#### **Ecological Design:**

#### design:

Additional Terms:

- The Associated Students-
- A student run organization providing services and programs for WWU students.
- AS Student Coordinators-
- Half-time student employees who manage the OELP.

#### System-

Parts organized into a whole.

# **1.3 Educational Philosophy**

Our education is an ongoing and ever changing process that begins at birth and only resolves when we pass away. As a lifelong student, my educational philosophy is subject to this same relentless revision and hopefully refinement.

### Praxis

My teaching practice reflects my own learning process. For many reasons. I have grown accustomed to learning through a very tactile, hands-on application of theory followed by intentional critique and personal reflection. Drawing, design school, apprenticeships, entrepreneurship, etc have all reinforced this process. It is not always pretty, but it makes for strong connections and meaningful lessons.

As an instructor, I have had great opportunities to teach in the way that I learn. Most of my courses are hands-on and skill-based. Subjects of this nature (such as drawing) offer immediate feedback, which provides opportunities for correction and calibration during the learning process. This feedback allows for intentional, meta-cognitive reflection from the learner and through my experience, can yield remarkable results.

It is understood that this type of learning is ill-fit for conventional academic discourse. So often, higher education is little more than a process of transmitting information. Students develop familiarity and eventually mastery of a subject by reading, understanding and interpreting the works of other masters. Eventually, their work is referenced by the next generation of students and the cycle continues. Personal narratives are too subjective to withstand the rigor of conventional academic scrutiny.

But space exists for a less conventional and more personal approach. Many educators are advocating for a process of learning through experiential application and personal reflection. The value that personal experience can bring to research based fields is poignantly presented in Cynthia Chambers' "Path with Heart".

"Narratives are crucibles that hold the events, as well as the pathos, logos and ethos at work in each story. Through stories teachers/researchers record significant events, and like the originative meaning of re-cord, through stories those significant events are passed back through the heart again."<sup>4</sup>

This document records my personal narrative as I learned my way through a Masters of Environmental Education. Significant works from the canon of EE certainly influenced my path and I will give credit to the masters, where credit is due. In tandem with the conventional processes of higher education. I was learning through the direct and intentional experience of applying theory. Indeed, I was teaching college level drawing courses throughout the extent of my masters program and would often immediately apply new concepts from my course work to the lessons I was teaching that week. These experiences provided immediate feedback which led to more questions and meaningful connections. The cycle persisted for nearly three years. Through this process I was

able to learn in my preferred manner of applying theory, receiving immediate feedback and then correcting and refining my practice for a better result. My personal experience with my drawing students has revealed great value in this process, which no other study, researcher or article could have revealed.

As my masters project has developed. I have been able to integrate both academic and experiential lessons in education into new EE curricula. This context has proved more challenging because the feedback often takes many weeks, months or even years. Opportunities for learning with immediate feedback do exist though these often involve large transformations in the landscape, created through a group learning experience. The capability of 20-35 adults all collaborating and participating in an ecological context is often novel and empowering for young adults. Working inside of a space through clearing, planting or building is often a remarkable learning experience for students as evidenced by their often impressed reactions. Smaller scale participation can also have immediate feedback, and the associated reflection, though these either require more substantial background knowledge, more intensive facilitation, or a lot of student focus and intention.

Categorizing this educational approach is simplified by Lucie Sauvés "Currents in Environmental Education." Any pedagogy will likely embody a range of her listed typologies and it is difficult at first to single out the most appropriate fit. That is until one reads the explanation of the Praxic Current:

"This current emphasizes learning in action, by action, and for the ongoing improvement of action. It is not a matter of developing knowledge and skills beforehand, in view of potential action, but rather of placing oneself into a situation of action and learning through, by, and for that project. Such learning calls for reflexivity throughout the project. Praxis essentially consists of integrating reflection and action such that they feed one another." 5

My teaching practice is a direct reflection of my preferred learning process, which is certainly praxic in nature. Try it out; see what happens; learn from the feedback; improve next time. By design, this approach was deeply integrated, into my masters study and has come to define my educational philosophy. New concepts were applied to existing lessons, experimental courses and ongoing administrative projects. This led to the continual development of my practice and refinement of my goals. With such an intentional and intensive emphasis on experiential learning, my primary source for this project is my own a reflexive narrative.

# 1.4 Learning Process

This project plan is a multifaceted representation of my educational philosophy. It embodies both my learning process and teaching practices in a self-reflexive cycle rich with lessons.

#### The Swale Trail:

I have been organizing large group-work projects for nearly a decade. These involve between 10-50 participants all collaborating on the same common tasks. This work has been conducted in private workshops, community gardens and within the OELP.

I am also a strong advocate for the value of visual communication and use this language intuitively.

While preparing for the first day of my Ecological Design I course, I found myself wanting a concise visual explanation of our tasks, work flow and group dynamics. After a quick conceptual sketch, I created this project plan. It is a concise explanation of how 30 students will all co-create a 50ft causeway through a muddy abandoned roadway. Please review the plan for the details of the day.

Prior to class I worked with 6-8 students to go over the specific tasks, location of tools and materials and general work flow. This plan was copied and handed out to 30 new students to be completed as their first lab session. We covered the basic process. then broke into teams and conducted the work. With the help of my volunteer leaders, we were able to accomplish all of this in the scheduled class time and demonstrated to the group, their collective potential as a creative force of nature.

In terms of Sauvés Praxic Current, two different levels are at play. First, is the experience of the students. They have not been studying hydrology, trail building

PROJECT PLAN. 6 LOGGERS. - STAGE AND SET N SAH 6 CHIPPERS. H + CHIPS. \* BE SAFE. τ 16" + Love DRAIN PIPE FIRST nor local wetland plant

- 30 STUDENTS → 2 TEAMS OF 15 → 3 WORK GROUPS. - INSTALL Z. ZS ft SECTIONS OF ELEVATED WALKWAY + WATERETENTION SWALE 4 DIGGERS 5 BRUSHERS - COLLET ~ 40ft · COLLECT + BUNDLE TRENCH ACROSS TRAIL of 6" O Loss. FOR DRAIN PIPE. 6-8 4' LONG 1' 0-BUNDLES OF STICKS TRENCH ALONG TRAIL THEM INTO TRAIL LAY BUNDLES ALONG FOR LOGS. SIDE TRENCHES. TRAIL BETWEEN LOGS -> FILL GODS INTO SWALE. LAY BUNDLES ALONG - LAY PIPE + LOGS BERMS FOR SWALE. - CLEAK FILL AND COURS BRUSH. 5 PLANTERS. DIG SWALE AND LOUDE 10 + COLLECT ~ 24 TOTAL HAULERS BRING CHIPS BRUSH + BERM. OF THE FOLLOWING: TO TRAIL. COUSE - SLOUGH SEDGE TO 6" THICK . - SWEET WOOD RUFF - IRISES 2 RAKERS GRADE DIET - WOOD SORREL - TRAILING BLACKBERRY - FEENS. CLEAN SITE, CLEAN TOOLS, CLEAN.UP () THANKS. OUER FLOW IS PREPAING FOREST GARDEN TRAIL CONNECTION. LIDOD CHIPS STO TOF BUNDLE TRENCH FILL HERE FIRST. PLANT INTO SWALZ FILL .P Koresney 4.16

communities. They were simply placed into a collective experience where each one did the best they could. We reflected on the process at the end of the session and returned to space next week for a similar installation. Second, I have never used a document of this nature

during a group work project. I simply thought it might help. The final result was an incredibly effective group process which now serves as a benchmark in my EE career. I am working to integrate this type of planning into all of my future collaborations and hope to normalize the plans as effective educational tools.

# **1.5 Teaching Foundations**

Throughout this masters program a concise explanation of my particular approach to EE has been a useful tool. This approach can be summed up in three basic tenets; we are a part of the environment; our relationship can be mutually beneficial and the necessary work is interdisciplinary systems design.

### We are part of the environment.

"The Death of Environmentalism" <sup>6</sup> describes the separation of humans and nature as a foundational concept which undermines the goals of the environmental movement.

"... As a community, environmentalists suffer from a bad case of group think, starting with shared assumptions about what we mean by "the environment" - a category that reinforces the notions that a) the environment is a separate "thing" and b) human beings are separate from and superior to the "natural world."

Modern environmental discourse continues to enforce this separation, advocating for the study, preservation and protection of a separate "thing". Standard practices in environmental education are also complicit. These activities often involve taking children and young adults to the remote wilderness to show them an "environment" fundamentally different than the one they live in every day. The intention is to create a meaningful connection to nature, thereby producing an ecologically conscious citizen. The unintended consequence may be that revealing the contrast between their urban or suburban existence and an unmolested ecosystem reinforces the cultural mythology of our "otherness".

Much attention is paid to understanding what types of activities create a human connection to nature. Flipping that guestion around would ask, "What activities contribute to *our perceived separation from nature?* They are countless and hiding in plain sight. Environmental Education should facilitate profound wilderness experiences as well as look for these daily instances of separation. This perspective creates endless opportunities for illustrating our daily ecology as well as our environmental inter-being. "Where did breakfast come from? How many species were involved in this meal? Where will breakfast go?" These are simple entry points into big conversations about food production, energy, waste management and consumer choices. Moreover, they highlight the foundational relationships between us and our ecosystem, regardless of our cultural context.

Beyond these entry level questions are some simple actions, such as growing some herbs, keeping egg laying hens or cultivating some potatoes. Composting the eggshells, and potato scraps can be done with a worm-bin in an apartment, without access to land. These are all entry points for rich conversations regarding botany, economics, cultural heritage and social studies all of which relate to a homegrown country skillet. The cultural mythology of our separation from nature loses its foundation when we consciously acknowledge our daily ecological relationships.

## Our Relationships can be Mutually Beneficial.

This separation ideology is supported by a cultural dearth of productive and healthy human-nature connections. Many typical suggestions for good environmental stewardship amount to little more than consumer choices. Buying organic, buying local, buying Fair Trade, buying compact-fluorescent bulbs, buying hybrid cars, and buying recycled products are the premiere recommendations for lowering one's carbon footprint. Likewise, conserving water and saving energy are mere derivatives of buying and consuming less. On the other side of the exchange is how we dispose of consumed goods. Beyond conventional garbage services, alternative choices for waste disposal are generally limited to recycling when appropriate, composting if it is available, noflush urinals and low-flow toilets. Table1.4 provides additional examples.

Our cultural narrative rarely empowers us with options to participate in the ecosystem. Stories of mutually beneficial relationships between people and their landscapes are not widely known. Research into the subject quickly yields diverse accounts which are positive, practical and encouraging.

Farmers of Forty Centuries, by Hiram King <sup>7</sup> is an agronomist's record of Chinese agriculture in the early twentieth century. His interests were in the cultural practices that have sustained the worlds largest populations since nearly 2000 BC. Their economy and prudent resourcefulness are humbling and inspiring.

Sustainable Drastian

#### Table 1.4

Common Recommendations for Reducing your Ecological Footprint.						
Disposal	Consumption	Production				
Recycle	Buy Organic	Grow a Garden				
Compost	Buy Local	Inderrepresented				
Reduce Waste	<ul> <li>Buy Fair-Trade</li> </ul>	Practices				
Go Paperless	Conserve Water	Create Topsoil				
<ul> <li>Stop Junk Mail</li> </ul>	Conserve Energy	Create Habitat				
	Buy a Hybrid Car	Grow Biodiversity				
	<ul> <li>Switch to CFL's</li> </ul>	Grow Bee Fodder				
	Buy Solar Panels	<ul> <li>Irrigate with Gray-</li> </ul>				
	Re-useable	Water				
	Shopping Bags	Repair Things				
	Drive Less	Start a Cottage				
	Go Veggie	Business				
	• Go Vegan	• Learn a Craft				
		Build Community				



Just Enough, written by Azby Brown 8 is a similar account of Edo Period Japan and their national, multi-generational response to an island-wide ecological crisis. The book includes a range of practical recommendations adapting the

The separation ideology is rooted in our contemporary affinity for reductionism. Understanding a whole via a thorough assessment of it's individual components is certainly a useful The People of Cascadia, by Heidi Bohan<sup>9</sup> is another process. However, without consideration of the original whole, there is a risk of not fully understanding the role of any individual part. Systems thinking addresses the "whole" as well as its represented in contemporary higher education. Certain fields address systems thinking in the context of their own work, such as electrical or business systems, though few transcend Modern accounts of people as creative environmental the boundaries of the institutional disciplines. Indeed, the entire structure of our higher education is built around the unique, dis-integrated perspectives of highly specialized fields. Transcending these fields is a direct affront to cultural expectations of specialization and expertise. In order to create mutually beneficial relationships in a system, or synergy, it is necessary to understand the existing components as well as the intrinsic properties which emerge from the particular arrangement of the whole. Irrigating bee fodder with gray-water provides a simple example. In order to design the system, one needs to know building systems their soil preferences is necessary for the biological aspects of the system. Finally, treating domestic gray-water on-site is often in violation of local building and/or health codes and so an awareness of the legal landscape is a must. This simple example emphasizes the need for holistic perspectives and collaborative design. From an Environmental Studies perspective, these Examples of modern humans living in intimate relation with components involve individual people, communities, resources, biomes, infrastructure, cultural norms and the entire range of academic fields. Interdisciplinary systems design is therefore the medium for creating synergy in the context of

traditional practices to our modern context. historical account of a culture living in symbiosis with their environment. Her work is a beautifully illustrated depiction of the material economies and seasonal behaviors of the First Nations of the Pacific Northwest. Douglas Deur's article on "Kwakwaka'wakw Clam Gardens"<sup>10</sup> presents a more academic unique context. It is a valuable perspective which is under perspective on similar cultural practices. agents are equally interesting, sophisticated and heartening. The permaculture movement, which is synonymous with my definition of ecological design is full of inspiring examples. My mentors, the Bullocks Family of Orcas Island Washington are a well known permaculturalists. By design, they have rehabilitated a 20-acre wetland over the course of 25 years. Their work provides habitat for migratory birds, mammals, and long-displaced reptiles and amphibians. One of the most remarkable experiences in my masters program was bringing students to the Bullocks Homestead in the early spring of 2016. A small population of painted turtles was returning to their imprinted spawning ground while our group of 30 students and the plumbing trade. Familiarity with insectary plants and was visiting. This happened to be the family's back patio, which overlooked the marsh they had restored. Here, they raised the young pet store turtles for 5 weeks before releasing them into the wild. Students were awed by the notion that the Bullock family and the turtle family shared an annual springtime rite. sensitive species hold great educational potential for our cultural perception of nature. These examples go beyond the role of humans as consumers and empower people with the ability to positively impact the environment we all share.

human-nature relationships.

## The necessary work is Interdisciplinary Systems Design.

# Section 2.1 Methods

I remember crossing paths with Seth Vidaña during my undergraduate studies. He was a graduate student, working to create an Office of Sustainability for WWU. He intensively developed the concept throughout his studies and following his graduation, was hired into the newly formed position of Campus Sustainability Manager. It struck me as a practical use of the graduate program and I set out to emulate his process.

## Integration

#### My master plan is and has been the formation of a nonstudent, staff position in the Outback Farm. It is the sole reason I entered this masters program. Every course, every project and every assignment would be in service of that ultimate goal. The process of integrating all of my work was relatively straightforward. Every assignment, regardless of it's parameters had a predetermined focus and additional constraints. No course work was seen as separate from the larger mission and upon reflection the sum total of these projects is an impressive body of work. I am not sure if this list is necessary, but I think it is worth noting that every single credit I earned in my graduate studies has been integrated into my culminating project.

### ENS 585

### Environmental Education Foundations-

Here I developed the basis of my teaching platform via a facilitated Inquiry Process. These Educational Foundations are listed in section 1.4. This course orientated me within my peer group who seemed interested in my perspective and contributions. However, I felt as though I was from an entirely different school of thought. My professional background and intensive focus on ecological design were uncommon, though appreciated and this pattern continued throughout my studies.

#### ENVS 587 Fall 2014

### **Conservation Psychology-**

I conducted a series of interviews with all seven of the previous AS Outback Student Coordinators. These discussions focused on the pros and cons of student leadership, from their firsthand experience. We also discussed the Outback's contributions to student well-being and personal development. This research provided valuable insights into the history of the space and it's associated programs which certainly informed future conceptual development.

## ENVS 582 Curriculum in

**Environmental Education-**This course provided an opportunity to design and develop a 10-week curriculum for a course I titled Ecological Design I. The facilitated Fall 2014 development allowed me to integrate my foundations, as well as previous professional work into a unique teaching and learning experience. The curriculum focused on systems thinking, design process, sustainability concepts and basic hands-on techniques and practices in ecological design.

### **ENVS 500** Assessing the Outback-

#### This self-directed independent study provided a platform for researching the long and interesting history of the Outback. I also continued my investigations into current programming associated with the OELP. This was the first instance that I used the

# independent study option to

further develop my master plan. The flexibility of this masters program was a big part of its appeal.

### ENVS 500 Human Ecology Practicum-

This was the initial trial of the curriculum developed in ENVS 582. While I was completing the curriculum course, I began the administrative process necessary to pilot the class. In collaboration with John Tuxill of Fairhaven College, we successfully ran a 10-week the curriculum developed in course with over 25 students. This was the initial instance Winter 2015 of my praxic approach to both learning and teaching and this course gave me a brief glimpse into the potential I was working towards.

### ENVS 595 **Teaching Practicum-**

I co-facilitated a 2-week, 72-hour Permaculture Design Course (PDC) with instructor Dave Boehnlein and Alderleaf Wilderness College. We had 22 students from all over North America.

Though I had much experience working in the context of a PDC, this course took a different tone as I integrated elements Winter 2015 of my masters studies into an already familiar format. The result was a successful milestone in my teaching career.

### ENVS 500 Urban Agriculture Workshop Facilitation-

For this independent study, I designed and ran a three-part "Introduction to Permaculture"

workshop series through the Outback. Much of this material was familiar, though it was a good exercise in course administration and the resources and processes Spring 2015 available at the university. A secondary goal of this course was to generate interest in the second offering of Ecological Design I to be held in the spring of 2016.

#### ENVS 595 Spring 2016 **Ecological Design I-**

I ran the second version of ENVS 582. This course was hosted by Huxley College and listed as ENVS 397K, which is an experimental designation. Running a course a second time is a great opportunity to refine the individual lessons. the 10-week arc and the Summer 2015 intensive logistics associated with hands-on experiential education. The refinements proved successful and I have continued to work with students from this class.

#### ENVS 501 Fall 2016

### **Research and Projects in Environmental Studies-**

Though intended as an early course to help students auide their studies. I took 501 much later in my process. Regardless, this course facilitated the formalization of the Outback Manager Position. Materials and research from this project are currently being used in two Winter 2016 separate funding proposals for a 3-year pilot position. This course marked a significant transition from development to implementation.

# 2.2 The Beginning

During the first year of my studies the primary goal was orientation and assessment. As with any design process, I began with an open mind, flexibility and a curious process.

## Orientation

I came to the program with nearly seven years of experience working in the field of permaculture design and education. This involved everything from teaching lessons on landscape drawing, to facilitating community garden installations.

All of this took place outside of the context of the formalized field of Environmental Education. Reading works by Chambers<sup>4</sup>, Sauvé <sup>5</sup> and Orr <sup>11</sup> provided that surreal occurrence of putting new language to familiar experiences. Sauvé's 5 currents provided a range of typologies which I wrestled to prioritize. David Orr's <sup>11</sup> "Six Principles of Environmental Education" resonated deeply with my prior teaching experience.

#### AHE 578 Winter 2017 **Program Development in** Adult & Higher Education-

**ENVS 588** 

**Education-**

an assessment of

Fall 2016

Assessment. Evaluation &

I designed and conducted

administrative personnel with

long-term relationships to

the OELP. Their feedback

was coded and quantified

into a series of collective/

community goals for the

and content of the 501

created simultaneously.

space and program. This

project informed the concept

materials, which were being

Research in Environmental

This course provided a platform for the development of an Extended Education program to be run through the Outback. Though not directly related to the Outback Manager Position, the Extended Education program could provide an alternative method for utilizing the space as a supplement to the master plan. This is what I like to think of as "Plan B".

#### ENVS 691 Spring 2017 **Environmental Education Field Project-**

My field project has focused on two primary routes for the formation of an Outback Manager Position. Currently both proposals are in the application process and appear to be well received. The culmination of three vears of work and over 45 credits of study is daunting, relieving and fulfilling all at once.

### The Lobster Hunter-

"Will it be delicious?"

His first principle states; "All education is environmental education", which parallels my preference for holistic perspectives. His last principle states; "The means for learning are as important as the content." Sauvé's Praxic Current embodies this principle as well and both of these permeate my learning process and teaching practice.

The conclusion of my first year was the implementation of the curriculum I designed in ENVS 582 via Fairhaven College. As a final step in my orientation, I applied these newly learned theories in the context of higher education which solidified the value of my unique perspective.



Occasionally, teachers will challenge their students to incorporate drawing into their assignments. This was one such case. Since the challenge of drawing was easily met, it became an opportunity to explore and imbue the work with additional meaning. This one was from the beginning of my masters program. I tried to capture the feeling of unknowing; "Will this work?" "Will I find what I am looking for?" "Am I good enough?"

## 9

# 2.3 The Middle

This year involved extensive administrative "research". Though this work was not explicitly credited, it was a necessary process for understanding how to develop the position. A scheduling conflict slowed down my overall project. However, the slower pace allowed time for a more protracted administrative strategy.

### Contextualization

A small group meeting during the fall of 2015 loosely resembled the Outback Governing Council, which serves as an advisory board for the OELP. At the table were both Associated Student Outback Coordinators, two college Dean's and an Outback alum/potential community partner. In advance of this meeting I developed a "decision package" as a concise budgetary proposal for the position. The meeting confirmed that everyone at the table saw a staff position as a critical step for moving forward. This felt like progress, however the institutional context was about to come clear.

Following this initial collaboration... nothing happened. The group was unable to schedule another meeting for weeks and then months. People were busy and though this position seemed like a good idea, it could not be prioritized. I pursued individual conversations with the college deans in an effort to better understand the impedances. As with most projects, the issues were administrative and financial.

OELP within the University, there was no clear channel for programmatic development.

The proposed position addresses all three of the of these issues, however its absence serves as the primary impedance to its inception; a chicken and an egg.

Though I did not find Fields of Learning until 2016, Laura Sayre <sup>12</sup> concludes in her comparative evaluation of 15 highered student farms:

"... student farms seem frequently to have gotten started thanks in large part to the persistent efforts of a single, dynamic individual with a vision of how a student farm could fit into their campus community."

Though the Outback is a long-standing element of the WWU campus, it's programmatic structure is hindering its own maturation and my personal project may be instrumental in the transition to a more effective educational resource.

The Outback serves a wide audience and is integrated into a number of different programs in the University. Details of these relationships are outlined in section 5.3. During my second year, a number of things became clear regarding management of the site and program. First, decision making responsibilities are diffused across a broad range of stakeholders. Second. all of these stake holders are preoccupied with other responsibilities, making the OELP a small fraction of their scope of work. Third, the rapid turnover of the primary stakeholders, the AS Student Coordinators, is out of sync with the working time frame of the institution.

This was my first-hand experience with the problem I had come to address. Without a consistent pointperson primarily responsible for the representation of the

#### Urban Ag Workshops-

I offered this workshop series in the Outback during the winter of 2016. The content was an adaptation of similar classes I had run as an independent educator. Again, my masters studies provided new perspectives on the pedagogical approach and led to refinements of the

original structure. One of the biggest changes involved refining the overarching narrative. Personal research and readings I had been doing coalesced into a unique arc, integrating anthropology, horticulture and urban agriculture. This arc provided an intriguing historical context and a deeper meaning for the urban agriculture movement.

This series also provided a reminder of the extensive administrative work associated with organizing a independent workshops which was a big reason for seeking a more consistent teaching position.



# 2.4 The End

Following two years of researching the OELP, teaching in the space and investigating potential paths forward the third year was characterized by efforts towards implementation. Again, this has been a praxic process, "learning in action, by action and for the ongoing improvement of action." <sup>5</sup>

### **Development**

During the fall of 2016 I was enrolled in both ENVS 501 Research and Projects in Environmental Studies and ENVS 588 Assessment, Evaluation & Research in Environmental Education. Each course focused on a primary project and I integrated them both into my larger master plan.

The 501 project has been designed to facilitate the thesis development process for masters candidates in the environmental studies program. My work was in the "project" category and the course facilitated my formalization of the Outback Manager Position proposal.

The previous years administrative issues only reinforced the need for such a position. However the financial impediments remain. Given the disparate stakeholders in the OELP, no one been well received and we are awaiting the results. group would benefit directly enough to warrant the expense of a new position. The AS already supports three student coordinators. Fairhaven is providing an operating budget and capital for large site developments. The limited involvement

Another key funding issue is a well-known programmatic With this in mind, I used the 501 project to develop a For my 588 project, I conducted a more refined assessment Following the development of the Logic model I conducted Ecological Design students enjoy a campfire during their spring field trip to the Bullocks Homestead.

of the Outback and its associated programming. This was represented as a Logic Model, which is often a graphic representation of a programs context, inputs and outputs. Logic models are a tool used by funders, managers, and evaluators to assess the effectiveness of a program. The Outback Logic Model can be seen in section 5.3.

of all the other stake holders is not promising for substantial financial support. trap associated with developing new positions. Grant-based funding is an obvious resource, however using grant funding to pay salaries is a major red-flag. Proposals without long-term funding models included are less-appealing because of the potential dependence upon on-going grant support to maintain kev personnel. distributed support system which would generate a vested interest in a range of stakeholders. This strategy involves dividing costs via a tiered sponsorship structure for primary, secondary and tertiary OELP stakeholders. At the time, this represented a potential and practical long-term funding model. Outlining this structure and finding conditional support from primary stakeholders became a primary focus. a series of loosely structured narrative interviews with administrative personnel who have had long-term relationships to the OELP. The major takeaways from this assessment where the collective perceptions of the Outback as a singular and unique experiential learning space; as a resource to the Bellingham community and the distinct need for clear programmatic goals, organizational structure and staff support.

### Implementation

The simultaneous creation of these two projects facilitated a direct integration of their concepts and content. Using materials from the 501 proposal I began soliciting support for my plan in earnest during the spring of 2017, only to be diverted down another unanticipated funding route. Somewhere between this committee recommending to that committee which then offers suggestions to this office who advises on this budget which may be integrated into an appeal to Olympia, a budget proposal is moving forward. In parallel, Kamea Black and I have submitted a proposal to the Sustainable Action Fund, which uses student fees to promote sustainability on campus. Each proposal covers the cost of an initial pilot position for 2 and 3 years, respectively. Each has

# Section 3.1 The Outback

After years of experience in similar educational spaces, I have a strong emotional reaction to the layers of student projects that cover the 5-acre Outback Farm. The great sense of hope and wonder is met with an equal sensation of anxiety and sadness. The untapped lessons of this educational landscape can be deafening at times.

## Historv

The landscape of the Outback Garden embodies a rich history, dating back far beyond colonization. The land itself is within the territory of the Straits Salish Peoples, specifically the Lummi and/or Nooksack Nations. Following the displacement of the Indigenous people, the landscape was logged a number of times throughout the nineteenth century. In the 1850's it was the initial mining site for the Bellingham Bay Coal Company. June and Farrar Burns homesteaded on the site during the early twentieth century (1935-1939). Their original cabin still stands and was renovated by the WWU Physical Plant in 2006. The entirety of Schome Hill was turned into a city park in 1922 and into the Sehome Arboretum in 1967. The expanding campus of Western Washington University ultimately encompassed the land, and in 1972 the Outback Farm began.

Since its inception the Outback has been a primarily studentlead experiential learning site, focused on agriculture, human ecology and sustainability. It has included pigs, goats, ponds, a barn, and various alternative energy systems.

In recent years, the Outback has been adopted by the Associated Students of WWU. Since 2007, the AS has supported a half-time student coordinator to manage the various responsibilities of the landscape and associated programs. In that time the site has seen considerable development including the formation of a Community Garden, a Market Garden, a Forest Garden and various ethnobotanical plantings. Construction projects have included an amphitheater, a substantial greenhouse and a beautiful



The Outback has both native and managed landscapes

outdoor classroom. These most recent developments seem to have coincided with a recent resurgence of interest in sustainable agriculture.

The "Good Food Movement", to borrow a term from the famous urban farmer, Will Allen, is thriving today in the form of young farmers, local markets and school gardens. Food is an obvious bridge into human relationships with the environment and growing food may serve as a simple accessible means of engaging citizens in environmental stewardship. As an interactive garden/park the Outback functions as a bridge between wild and managed nature <sup>13</sup>. It is an urban agricultural laboratory where motivated students can explore their connection to the environment, personally design a small piece of earth and ultimately develop long lasting perspectives that support whole healthy persons.

### **Campus Farms**

Published in 2011, Fields of Learning <sup>12</sup> is an effort to contextualize the Student Farm movement in American Higher Education. The collection represents evaluations of 15 campus farms from across North America. The Outback Farm fits into this movement of ~100 unique student farms in highered institutions and is indeed mentioned in the book. These farms represent an invaluable resource for profound, placebased, interdisciplinary education.

In their assessment of campus farms, Sayre and Clark outline a range of themes that provide both challenges and opportunities to programs of this nature. A primary concern is the difference between student versus faculty/staff management. A common pattern in the development of these sites and programs is the transition from chaotic studentled development period into a mature, fixed form of staff management. The OELP has been in this liminal space for nearly ten years. Students and administration alike have made a range of efforts to transition from a student-led program. The TAP analysis conducted by the AS in 2010, an appeal to the AS by the Outback Coordinator in 2012, a SPAC assessment by the AS in 2014 have all surmised that the most critical need for the OELP is long-term staff involvement <sup>13, 14, 15, 16</sup>.

Fields of Learning <sup>11</sup> offers a range of anecdotal insights regarding the development and management of place-based, experiential learning programs. The conclusion of the book provides a set of 10 steps for the development of a robust and meaningful academic resource. These ten steps have been a valuable example for the methods of this paper. Some of them have already been accomplished (Step 3. "Hunt for Land", Step 4. "Know the Context"). Others are explicitly addressed (Step 2. "Identify Allies", Step 5. "Seek Funding", Step 11. "Cultivate partners and supporters beyond campus").

# 3.2 Site Assessment

As a landscape designer, I spend a lot of time assessing land for its growing potential. I survey sites, produce maps and write reports for both domestic and international clients. In my professional opinion, the Outback is an outstanding piece of real-estate. It is an elevated, sheltered, south-facing valley with a perennial stream, city water, a healthy ecology and unlimited project potential.

#### **Design Projects:**

Initially, I wrestled with the notion of using my professional design experience to create an official master plan for the Outback Experiential Learning Program. Though alluring at first, I decided against it for a handful of reasons. If I designed it, the plan would be perceived as *mine*. There is a deep rooted sense of communal ownership in the Outback community and the prospect of some know-it-all grad student, hi-jacking the space seemed like a threat to the legacy of the program. Likewise, just because a plan has been made, does not mean it will be created. Had I spent a year or two developing an in-depth master plan with detailed explanations of the site and systems, there is no guarantee that it would ever manifest. Indeed, without a staff position to guide the project through the years, it would likely suffer the fate of so many other well intentioned student contributions.

Instead, the order of operations became; make a position to facilitate development across multiple years. Then use that longterm planning capacity to co-create a master plan in collaboration with all of the various stakeholders. Through this process, many folks would feel ownership over the vision and with the help of a consistent Outback Manager could participate in it's implementation through a diversity of channels. Without a comprehensive master plan for a site, excessive

development runs the risk of precluding future opportunities. With that in mind, I have worked with students to develop some simple improvements to the overall landscape.

An early project was improving access to the Forest Garden.

This space was developed as a perennial polyculture by Karl Wolschlager and Nick Spring in 2008. It was planted with fruit trees, berry bushes and a collection of edible species. It has continued to attract students in spite of the windy, narrow, uneven pathway in. My students created a ~150' walkway over a mucky abandoned road. We created



seasonal ponds and planted the space with shade tolerant edible species. We have also installed an outdoor kitchen, 500 gallons of rainwater collection, a lumber rack, a covered workbench and a whimsical entry arbor.

These were all simple upgrades to existing infrastructure, working towards a more functional and legible whole.

# 3.3 The Base Map

This map was produced in collaboration with a student who was interested in cartographic skills. It was printed and laminated and has served as a handy tool for orienting students within the educational landscape.



# Section 4.1 Teaching

The Outback Manager concept is explicitly and intentionally not a faculty position. Even still, teaching is and has always been the primary goal. Throughout my masters program, I was employed as an instructor at WWU and as a student, created further opportunities for teaching the material I am so interested and passionate about.

# **Enabling Autodidactic Designers**

As an instructor, my primary goal is to no longer be needed by my students. I can clearly remember one of my best days as a teacher. I was late to my course on account of the spacetime vortex at the hardware store. The class was already buzzing with activity when I arrived at the Outback Farm. Students were building gates, planting shrubs, preparing garden beds and installing new plumbing. It was the first iteration of the Ecological Design I course that I taught through Fairhaven and Huxley College. After checking in with each student team and answering a few small questions I realized that my students no longer needed my guidance and they were now comfortable working and learning on their own. Without the need for my facilitation, I simply grabbed a wheel barrow and started working alongside them. To me, this memory is an excellent example of students actively applying the basic concepts of sustainability through tangible and meaningful, student-centered projects.

Learning how to teach myself was the most prominent lesson from my apprenticeship at the Bullocks Homestead. We were constantly encouraged to engage with a variety of media. There was an extensive library, all types tools and resources and no shortage of projects. Plants needed care. Machines needed repair. And improvements to existing systems were always appreciated. We were welcome to engage with all of it and supported through a range of educational means, the most important of which was self-motivation.

This deviates from a more typical student experience in conventional education where learning is characterized as the transmission of knowledge from an expert to a student. This unilateral relationship is the primary educational model and though students need to take responsibility for their own comprehension and performance, most of that is administered and judged by an instructor. Unilateral transmission can be an effective and appropriate teaching method such as answering trivial guestions regarding latin plant names. But for a deeper understanding, students need to relate concepts to their existing mental frameworks.

I have designed and taught college level drawing courses since 2013. Each course begins with a discussion about meta-cognition (thinking about thinking), and the "flow state". I impress upon my students that thinking about your own learning can refine your personal process and lead to more engaging and effective habits <sup>17</sup>. Likewise, learning itself can induce the "flow state," a concept popularized by Hungarian psychologist Mihaly Csikszentmihalyi <sup>18</sup>. The term refers to a totalizing and immersive mental state often associated with autotelic or intrinsically purposeful activities. The flow state has many unique characteristics and may be induced by a number of different tasks, from sports, to crafts, music, reading and I believe, engaged learning.

Csikszentmihalvi outlines three different conditions that have to be met in order to induce the flow state:

- One must be involved in an activity with a clear set of goals and progress. This adds direction and structure to the task.
- The task at hand must have clear and immediate feedback. This helps the person negotiate any changing demands and allows them to adjust their performance to maintain the flow state.
- One must have a good balance between the perceived challenges of the task at hand and their own perceived skills. One must have confidence in one's ability to complete the task at hand (\*)

The parallels between Csikszentmihalvi's flow state and Sauvés Praxic Current are numerous. Both concepts are deeply embedded in my own environmental educational practice which prioritizes teaching via immediate participation and feedback from the environment in pursuit of better humanenvironment relationships.

Much of this is cached inside of the constructionist learning model which advocates student centered, discovery learning. During these processes students use existing mental models and understanding to acquire more knowledge <sup>19</sup>.

Place-based, design-focused experiential learning offers a lot of potential for facilitating these connections. The existing mental models are often as simple as looking at some plants, or handling a simple tool. The landscape of the Outback embodies many key concepts such as watersheds, microclimates and biomes. Facilitated participation in these systems via simple tasks such as digging, weeding and planting provides easily accessible points of connection between existing mental frame works, the physical environment and novel theories and concepts. Nesting all of this inside of a transparent educational process encourages self-aware, self-motivated integration of theory and practice via direct participation in our shared environment.

Over the years, my students have enjoyed a hands-on, boots-on, interdisciplinary approach to understanding their personal role inside of their local ecosystem. I have watched this pedagogy reveal empowering new perceptions of key issues regarding social and environmental justice. The focus of my teaching is to ground my students' conceptual understanding into real world systems; teach them the skills necessary to engage with and improve those systems; and, develop the sense of agency that is needed to become an active, innovative citizen with a healthy relationship to their culture and environment.

# 4.2 Curriculum Design

I have had a number of opportunities to design curriculum as an instructor at WWU. The initial steps of the process are speculative assertions based on past teaching experience. These ideas are tested in the field and provide another instance, in the macro-scale, of "learning in action, by action and for the ongoing improvement of action". <sup>5</sup>

### **Ecological Design I:**

In line with my strategy for integrating projects across my masters program, I developed an opportunity to teach the curriculum I had designed in ENVS 582. Implementing the curriculum dramatically increased the value of an otherwise theoretical exercise.

The first iteration of Ecological Design I was through an administrative hand-off that I orchestrated with Dr. John Tuxill of Fairhaven College. The course was well received by the 25 enrolled students whose end-of-quarter feedback consistently referenced expanded skillsets and improved confidence.

The second iteration was refined in a few ways. I had included four teachers assistants who I worked with prior to class to prep for projects. The second iteration did not have this cohort of support. I was able to create a similar community within the student group, but it was much more effective to integrate it from the start. Refinements to the narrative also changed the course. These were minor additions including new readings and presentations. I have learned over the years that small seeds planted in the beginning of a course can have a marked impact on student perceptions 6-7 weeks later. This course was also deemed successful and following its conclusion, a small group of students took on the development of a student club in order to maintain the practical learning community the course had generated.

Schedule Overview the upcoming content and projects

### COURSE CALENDAR

Week Wednesday Class Time Introduction Ice Breakers & Intros Mar 30 Course Overview Apr 1 Definitions, Principles, etc. Agroecology Primers I 2 Apr 6+8 Systems Foundational Concepts Systems Thinking Prime Apr 13+15 Designing in Context

Site Assessment Paperwork, Footwork 4 3 Minute Site Assessmen Apr 20+22 Assessment Techniques Design Process 5 edbacks, Apr 27+29 Methodologies, Products, etc. 6 Starting Points May 4+6 Schematics As-Builts Project Introduction 7 Assessment May 11+13 Mapping Staging etc. Sample Projects Bullocks Homestead 8 May 18+20 Terra Phoenix Common Threads

May 25+27 10 TBD June 1+3

TBD

9

Project Feedback 11 Pres June 8+10 Strengths & Weaknesses

The third iteration is still in progress. Remarkable support from two co-teachers has made this experience dramatically better than the previous two. The course is also much larger, ~40 students, which certainly affects both the student and teacher experience, in this case not favorably. The

### **Ecological Design I**

This class will begin with the customary introduction and overview of

As the quarter proceeds, the majority of this course will take place in the "lab". We will begin with a tour and simple work projects to get familiar with the space. A series of "Agroecology Primers" will give students a baseline of skills for working in a productive landscape. "Medium Work Projects" will involve simple planning and design and set the stage for the "Facilitated Team Projects". These will be more intensive installations, designed and implemented by each of our working teams. The schedule leaves ample time for this work and includes a range of overflow projects if there is a need.

#### Lab Time Friday Meet the Outback Site History & Tour Intro to Work Projects Trail Swale & Forest Gardening Agroecology Primers II Annual Production, Fruit Tree Annual Production, Fruit Tree Pruning, Composting, Perennia Pruning, Composting, Perennia Using the Outback nple Work Projects (continued) Trail Swale & Forest Gardening Medium Work Projects I Medium Work Projects II TRD Implementation Techniques Medium Work Projects III Urban Ag Field Trip Alley District Re-Patch Whatcom Middle School Facilitated Team Projects I TBD Facilitated Team Projects II Facilitated Team Projects III TRD Facilitated Team Projects IV Facilitated Team Projects V TBD Clean Up & Picnic Enjoying Our Hard Work Next Steps Good Byes



Students planting out an edible parking strip at the RE-Patch in Bellingham's Fountain District

#### Work Projects

- Introductory Trail Swale
- Access Development
- Forest Garden Maintenance
- Brushing & Pruning
- Assisting Coordinators
- Agroecology Primers
- Annual Production in Common Threads Beds
- Hot Composting
- · Perennial Production in the Forest Garden
- Fruit Tree Pruning

#### Medium Projects

- Boof Bunoff Treatments
- Entrance Drainage
- Produce Sink Installation
- Team Projects
- Pond Restoration
- Orchard Restoration
- Others
- Overflow Outlets Gardening Tasks
- Access Development
- · Forest Garden Maintenance
- Brushing & Pruning
- Assisting Coordinators

#### **Course Materials**

- Clipboard
- Boots
- Gloves
- Dry Clothing
- Warm Clothing

P Kearslev 2016

narrative has also been refined and is taking form as a salient and empowering message for young adults. The experimental status allows for a third iteration of 397K. My hope is to polish this into a meaningful learning experience which the faculty of Huxley College deem valuable enough to continue offering.

# Section 5.1 Administration

The administrative assessment of the Outback that I conducted during the fall of 2016 provided a number of valuable insights. Two particular issues embodied self-perpetuating circular logic; first, the vague goals were too easily met, which qualified the program as a perpetual underwhelming success; and second, the lack of structured management was impeding the formation of structured management.

### Context

Administrative tasks are often labeled a necessary evil. I approached this project with that typical mindset, yet over the past three years I have learned that these can be a creative process like any other. And, as with most skill sets, it gets easier with practice.

The unique nature of the Outback makes the administrative work particularly crucial as well as challenging. Laura Sayre explains this relationship well during her intro to Fields of Learning:

"(Student Farms) are absolutely unique: liminal spaces on the border between community and institution that are relatively insulated from the market, powered by the energy and enthusiasm of twenty-somethings, and enriched by the intellectual resources of academe'."<sup>5</sup>

The Outback embodies all of this. The Community Garden offers plots to over 30 neighborhood residents who are seeking a place to cultivate. The Educational Garden provides students the space and resources to learn through handson agricultural processes. Their produce is not sold, but often shared with the Bellingham Food Bank. Skill-based workshops are frequently hosted and open to both students and the public. Students and instructors alike acknowledge the unique potential of the space, though only a small population are compelled to fully engage. I believe that many of the barriers to participation could be overcome with effective administration.

During my integration of learning and teaching, I found myself doing a large volume of administrative work. I organized, publicized, and registered students for my first two iterations of Ecological Design I. Each of the three classes has involved a 3-day field trip to Orcas island, including van rentals, ferry reservations, budget requests and camping arrangements. What I have learned from these experiences is that effective administration is key for programmatic development and success. When managed well, these systems maintain a smooth flow of information, resources and responsibilities and thereby enable a safe and seamless learning experience.

The production of the Logic Model, presented in section 5.3. provided a macro-view of the Outback as a system. The context, inputs, outputs and goals were all clearly displayed in relation to each other. A small bit of research revealed an aggregate program budget of nearly \$50,000 per annum. This analysis addressed three different time-frames for the anticipated outcomes; guarterly, year-to-year and multi-year. When viewed from the guarter-to-guarter shortterm perspective, the OELP provides a range of learning opportunities. It continually attracts a community of students

interested and involved in the site and programming. Likewise, from the long-term perspective, the OELP continues to operate and develop as a student run program. The year-to-year midterm goals present a different picture. A negative feedback loop severely limits programmatic development. A distinct lack of institutional memory as well as accessible administrative resources and responsibilities leaves student leadership consistently under informed and overwhelmed. This cycle has led to a degree of stagnation where the program is indeed meeting its listed but it is not continually maturing into a more refined resource over the scope of 3, 5 or 10 years.

Changes within an institutional scale take time. Far longer than the duration of typical student involvement which generally lasts for one or two years. Interviews I conducted with the former AS Coordinators thematically claimed that administrative work was overwhelming and keeping them from the hands-on experiences in the landscape, which was often the reason they applied in the first place. These themes also showed up during the interviews I conducted with key Outback administrators.

Pursuing the formation of an Outback Specialist has certainly involved nearly three years of administrative problem solving. It began with semi-formal appeals to two different colleges. These were appreciated in their intent, but neither was approved. The next version was an intricate arrangement of distributed funding, outlined in section 6.2. This holds the greatest potential for long-term funding, however it has been placed on hold in favor of the third and current effort. This involves both an application to the Sustainable Action Fund as well as a one-time budget request to the office of the provost. Each of these models has required a fair degree of legwork, meetings, research and correspondence and I believe the necessary work has far exceeded the capacity of a part-time. undergraduate student coordinator.

A major responsibility of the Outback Specialist position will likely involve this administrative work. Budget access has always been a challenge for student coordinators. A small discretionary budget for the position will streamline the wide range of small purchases necessary for a site of this nature. As I mentioned before, this all gets easier with practice. A long-term staff position will have the scope necessary for developing additional administrative tools for tracking purchases, student use of the space, for collaborating with community partners and facilitating academic involvement. Ideally, this role provides support and mentorship for student employees, so that they might learn within an existing framework, instead of continually reinventing/discovering these processes. And, if it is well facilitated, they may even come to enjoy this necessary evil.

# 5.2 Budgeting

There is a persistent perception in our culture that ecologically responsible choices are a luxury only accessible to populations with the necessary means. This perspective is disenfranchising and counter productive. Instead of solutions that few people can do with thousands of dollars, I prefer solutions that thousands of people can achieve with with just a few dollars.

#### **Resourceful Design:**

Throughout my work in the Outback I strived to embody a resourceful perspective. Though the Outback has a small operating budget, I worked very hard to accomplish projects without accessing the limited resources of the student program. Likewise, finding alternative mechanisms for financial support involved extensive institutional paperwork so the financial strategy became, "make do with what we have".

This type of limitation can be restrictive, or it can be an earnest example of real-world problem solving. During my administrative interviews. John Tuxill offered a really compelling perception of the Outback Farm:

"The rest of the University is largely planned and reflects a large bureaucratic institution. The Outback is different. It is organic, a bit ramshackle; it runs on a tight budget. But those are limitations that many people experience in their day-to-day lives and that are not reflected in the rest of the University."

and it strongly reflected my experience working within the space. During my first large group project, outlined in section 1.4, we created over 50 linear feet of improved trail, three ephemeral ponds, improved access to the forest garden, provided hands on learning experiences for ~25 students, planted locally appropriate species and spent less than \$10 on a single 16 foot length of drain-pipe.

Tool List Current Supply Garden Fork Pitch Fork Manure Fork 12 Tine Fork Broad Fork (U-Bar)

Hard Rake Leaf Rake

Spade (Shovel) Short Handle Shovels Narrow Trenching Shove Square Shovel Short Handle Square Sho Scoop Shovel . Post Hole Shovels Garden Spade

Planters Hoe Garden Hoe Scuffle Hoe (Hula Hoe) Edger

Pick Maddock

Hand Pick Hori Hori (Garden Knife Loppers

Anvil Shears Shears Pruning Saw Pole Saw Bow Saw

Wheel Barrow

\*Does not include shipping \*Represents base line costs, though there are better deals available

There exists a vast resource network in and around Bellingham. With the stupendous generosity of Richard Neyer, we borrowed a capital. The attached tool list truck from the WWU Recycling was a collaboration with Lily I appreciated this perspective Center to collect materials from the abundance of the urban waste stream. Student projects have incorporated dozens of yards of free manure *(fertility)*, free wood chips, truckloads of cardboard (biodegradable weed barrier), free seeds (Bellingham Food Bank), free starts (Joe's Garden), free plant material (WWU Gardeners), mushroom with practical examples which spawn, lumber, large woody debris, tools, graywater infiltrators, rain water

	Price (Amo	azon)	Brand (Quality, yet affordable)	Number	Need	Ideal		Cost	
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	Ş	28.85	Forgecraft, 5-Tine		2	2	6	Ş	57.70
					1	0	1		
					0	0	2		
					2	0	2		
					-	0	10		
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	\$	22.99	Bond, 24 Inch Spring Back		1	2	5	Ş	45.98
	ć	17.00	True Temper, Feels Dound Daint		-	7	10	ć	110.00
	Ş	17.00	The Temper, Eagle Round Point		3	/	10	Ş	119.00
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	\$	18.56	Bond, Garden Wiggle Weeder		2	4	6	\$	74.24
			,		3	0	3		
	\$	23.30	Truper, Pick Mottock, Wood Hand	l.	0	3	6	\$	69.90
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					9	0	12		
					13	0	13		
					7	0	7		
					0	0	4		
					2	0	4		
					1	0	1		
					3	0	3		
	\$	149.86	Jackson, M6T22		3	3	8	\$	449.58

Total Estimate<sup>3</sup>

\$ 1,118.26

collection tanks, bike powered pumps and more.

Programmatic development certainly requires financial Morgan, the 2016 Student Coordinator and was fulfilled using the Outback's budget, to improve the Outback's capacity. However, many of the most authentic examples of appropriate technology are simple systems that are intrinsically low budget. Exposure to these types of solutions provide students may be adapted to their own lives or scaled up into future professional projects.

# 5.3 The Logic Model

The logic model was one of many different programmatic assessment templates available. It is a practical format and its creation yielded a number of insights. Specifically, the extent of the budget, which amounts to approximately \$50,000 per annum.

OUTBACK EXPERIENTIAL LEARNING PROGRAM (OELP)							
LOGIC MODEL INPUTS:		OUTPUTS:	OUTCOMES:				
	SOFT ASSETS:		SHORT-TERM (Quarterly):	MID-TERM (Annually):	LONG-TERM (Multi year):		
CONTEXT: The Outback Experiential Learning Program is a student run 5-acre farm on the campus of Western Washington University. The site and associated programming provides learning opportunities in sustainable land-care for Western students and the wider community. This model represents an effort to better understand the effectiveness of the OELP Program. SITUATION: -Founded in 1970's as student led organic farm. -Operates as such for ~25 years. -Threatened by development in early 2000's	PROGRAMMING: Personnel -3 .5 FTE AS Student Staff Positions -Fairhaven Faculty Advisor -AS Program Advisor -6-10 Work Study Students Outreach -Media & PR (Posters, Website, AS Publications)	ACTIVITIES: -Student/Community Workshops -Hosting AS/Work Study Positions -Hosting Classes/ Class Tours -Hosting Independent Study Projects -Hosting Service Learning ( <i>LEAD</i> ) -Hosting Community Garden -Hosting Summer Camp ( <i>CTF</i> ) -Hosting Events -Hosting Bees -Wetland Rehabilitation PARTICIPATION: -Students ( <i>ISP's</i> , <i>Tours</i> , <i>Etc.</i> ) -Staff ( <i>AS Positions</i> , <i>Work Studies</i> , <i>Advisors</i> ) -Volunteers ( <i>Work Parties</i> , <i>Comm</i> <i>Garden</i> ) -B'Ham Community ( <i>Workshops</i> )	STRENGTHS: STUDENT LEARNING -Job Skills via AS Employment -Workshop Attendees -ISP Participants OELP COMMUNITY: -Small Land-Based Community -Limited WWU Partners -Occasional B'Ham Partners -Occasional B'Ham Partners CHALLENGES: -No Strategic Plan (~5 years) -Limited Institutional Memory -Lack of Training -Lack of Technical Support -No short-term Program Assessment	STRENGTHS: OELP COMMUNITY -100's of students exposed to site (Workshops, classes, ISPs) CHALLENGES: -Student Coordinators overburdened with work load -Work Study students lack orientation and training (safety, tool use, horticulture) *NEGATIVE FEEDBACK CYCLE -OELP Coordinator Position has 1-year Turnover -New Coordinator overtaxed with maintenance of existing systems -Year-to-year growth is severely restricted here	STRENGTHS: PROGRAMMING -Ongoing Educational Garden -Ongoing Community Garden -Ongoing Forest Garden -Multi-year wetland rehab -New Infrastructure OELP COMMUNITY -Life Long Passions (Tom Thornton, Bay Renaud, Nick Spring, Matia Jones, Melanie Swanson etc.) CHALLENGES: -No Strategic Plan -Degrading Infrastructure -No multi-year programs -No multi-year partnerships		
<ul> <li>-Defended and designated as Educational Space in WWU Master Plan.</li> <li>-Incorporated into Associated Students Programming. (To attain Non-Student Staff Position, ala the Recycle Center.)</li> </ul>	BUDGET: -\$5000 Fairhaven Annual Budget -\$9260 AS Outback Manager Salary -\$8614 AS Assistant Manager Salary -\$6801 AS Forest Garden Mgr Salary -\$2850 Work Study Students x8 Positions -\$52,475 Annual Operating Costs +One Time Capital Investments (F.a. \$35,000 2016 Fencing Install)	BUDGET: -\$0 Workshop Revenue -\$0 Community Garden Fees -\$0 Tour Revenue -\$0 Grant Awards -\$0 Fundraising <b>-\$0 Annual Revenue</b>	BUDGET: ~\$12,000 Quarter (Budget + Staffing) -Small purchases Encumbered (Consumables, Maintenance, Incidentals, etc.) -Earning is Encumbered	BUDGET: -Budget Drives Spending	BUDGET: +\$300,000 Since 2010 -Lack of Strategic Plan impedes capital investments		
-Student Run/Student Centered.	HARD ASSETS:		CONCLUSION:				
<ul> <li>Providing experiential learning opportunities for students.</li> <li>Students learn about, develop and implement sustainable land-use practices.</li> <li>The OELP also provides job-related skill building and community networking opportunities for students.</li> </ul>	PLANTS: -Seeds & Starts -Manures -Consumables (Row cover, straw, etc.) WATER: -Irrigation (~35,000 Gallons per Month) -Stream (Storm-water/ Burns Creek Flow) INFRASTRUCTURE & ACCESS: -5 Acres of WWU Campus Real Estate -Class Room -Tool Shed & Tools -Community Garden Beds -Green Houses -Amphitheater -Fencing -Burn's Cabin (Historical Building) -Trails	PLANTS:         -Educational Garden Produce         (1500 Lbs/ year)         -Community Garden Produce (~50 Plots)         WATER:         -Stream (Outflow + Irrigation Runoff)         INFRASTRUCTURE & ACCESS:         -Ongoing Infrastructure Development         (E.g. Amphitheater, Classroom, Fencing, Greenhouse, etc.)	<ul> <li>In it's current pattern of operation, the OELP is currently meeting its stated goals.</li> <li>From the quarter-to-quarter <i>Short-Term</i> perspective, the OELP provides a range of learning opportunities. The Outback continually attracts a community of students interested and involved in the site and programming.</li> <li>From the multi-year <i>Long-Term</i> perspective, the OELP continues to operate and develop according to student determined needs and capacities.</li> <li>The year-to-year <i>Mid-Term</i> goals are impeded by a <i>Negative Feedback Loop</i>. The quick turn-over of the primary program coordinator (<i>AS Position</i>) is a well recognized limit on year-to-year continuity and the development of the site and programming.</li> <li>Financially, the OELP is not designed to produce earnings. The annual budget of ~\$50,000 per year represents a minor expense in the scope of WWU, The AS and Fairhaven College. However, compounded over the long term operation of the program these expenses gain significance.</li> <li>Development of the site and program are severely limited by the lack of <i>Institutional Memory, Strategic Plan</i> and long-term non-student staff position of Outback Manager.</li> </ul>				

# Section 6.1 The Position

The formation of this position was the original intent of my entire masters pursuit. During the beginning of this endeavor, I struggled a lot with the concept of the means and the ends. Reflecting on the means thus far. I have indeed learned far more than I had anticipated. And I feel confident that I will walkaway with some element of my original vision in the end.

## Purpose

Based on the recommendations presented in previous assessments of the Outback, as well as the observed success of other university farms, this work is advocating for the creation of a 3-year Pilot of a half-time, non-student Specialist position for the Outback Experiential Learning Program.

The specialist designation is in anticipation of a diverse and unique set of responsibilities, including but not limited to repairing irrigation systems, diagnosing plant pathologies, collaborating with faculty and community partners and working with a team of 8-12 student employees.

The half-time designation reflects an economy of scale. A skilled specialist providing effective facilitation and technical support could streamline the existing student staff and budget to meet the demands of the 5-acre landscape and programs. Beyond the focused administrative and technical responsibilities, the most effective additional work would be building capacity as an instructor by recruiting and training future student employees via a ~25 student course comparable supplants the intrinsic value of student direction. The OELP to ENVS 397K Ecological Design I.

This three-year study would serve as a proof of concept for the long-term existence of this position.

This research and document will assist in the development and implementation process, the creation of specific measurable goals for the position, as well as a detailed job description, outlining specific roles and responsibilities. Themes within this work will reflect the larger goals of the OELP and likely include:

- Increasing student awareness of the OELP;
- Increasing student participation in the OELP;
- Facilitating place-based experiential education;
- Teaching sustainable land-use skills;
- Promoting a culture of safety in the Outback;
- Increasing academic use of the OELP;
- Exploring long-term academic involvement;
- Exploring site-based research;
- Exploring additional funding sources for student projects on-site;
- Increasing community use of the OELP;
- · Facilitating organizational partnerships;
- Improving maintenance and "curb-appeal";
- Developing site infrastructure;
- Facilitating the ongoing meetings of the Outback Governing Council.

Following the initial 3-year pilot position, the ultimate goal will be long-term (7-12 year) performance-based, institutional, financial support for a non-student staff position of Outback Program Specialist.

The proposed Program Specialist position will facilitate the mid- and long-term development of the Outback into an invaluable resource for Western Washington University.

Long-term continuity is a crucial component for any campus garden <sup>5, 20, 21,22</sup>. Programs designed as exclusively student-run are severely limited by the rapid turnover of key personnel. Adding additional student positions increases capacity, to a degree, but does not contribute to long-term continuity in program and site development.

With programs of this nature, there comes a point in development when the need for organizational maturation has reached this point. Indeed, the formation of a non-student program specialist has been on the table for nearly 10 years <sup>13,</sup> 14, 15, 16

Since merging with the AS, the OELP has undergone two major assessments, occurring in 2010 and 2014. These processes analyzed the goals of the OELP, and the efficacy of its existing programming. One recommendation in particular arose from both assessments; the need to implement a non-student supervisor position that will oversee and support existing student employees.

Now, the OELP is presented with a unique opportunity. In 2007, the program was adopted by the Associated Students and has seen significant development for the site and program. Along with growing societal interests in sustainable food production, students are increasingly interested in hands-on experiential education as it relates to human-scale sustainable systems <sup>5, 22</sup>. In addition, interdisciplinary studies and systems thinking are emerging as key components of sustainability studies <sup>23</sup>.

Piloting the initial 3-year trial is a practical investment for a number of reasons. The OELP is a small-scale demonstration site and with professional facilitation it could host a variety of sustainability projects both large and small. These opportunities would reach many students as well as the Bellingham community. This non-student position will dramatically improve the performance of an existing campus sustainability resource, promoting a broader reach for the OELP as well as deeper, more sophisticated connections between students and the space.

# 6.2 The Potential

Throughout this process, I explored the various mechanisms within Western Washington Universities institutional machine. Again, learning through doing led me to the results presented below. It is understood that this is an unconventional funding structure. But if it weren't a scrappy and unique student-led effort, it wouldn't really fit the Outback ;)

## Support

After clarifying the need and outlining the goals and responsibilities of the position, securing financial support will be the next critical step. The Sustainable Action Fund application, and the one-time budget request are designed to cover a 2-3 year pilot. Developing structure for on-going support would be a primary goal of the pilot position if the position proves valuable.

Similar positions on campus, such as program specialists and instructional/classroom support technicians etc, generally term support, as no stakeholder bears the entire burden. receive an annual salary of ~\$50,000 <sup>24</sup>. As stated in The First Tier (~\$8,000 per year) section 6.1, the specific need at the Outback is not for a full • Fairhaven College- (Manages & Develops Site) time employee (FTE). Given the nature of the site and the • The Associated Students- (Manages Staff & associated programming a half time employee (.5FTE) would Programming) be the most effective staffing arrangement. Beyond half Huxley College- (Peripheral Academic Involvement) time, an NTT instructor contract would facilitate larger scale • Facilities- (Maintains surrounding grounds, assissts with student training and thereby build programmatic capacity. infrastructure developments) The manager would be providing administrative and technical support for the extant student positions. Faculty would Each of the primary stakeholders contributes ~\$8,000 facilitate any additional academic development and/or use of towards the initial pilot position. Their collective total covers the site. Therefore a 2-3 year pilot of .5FTE for a professional ~\$32,000 the majority, over 80%, of the annual salary and or classified staff position as OELP Manager would cost estimated payroll burden. ~\$36,000 per year, for 3 years, or ~\$109,000. This includes a The Second Tier (~\$3,000 per year) conservative addition of a 30% payroll burden.

Over the past 3 years, traditional sources for funding have been thoroughly explored. Members of Fairhaven's faculty and administration developed a budget proposal and presented it to the state legislature, where it was denied. A smaller proposal was developed and presented as an emergent budgetary item for WWU provost's office, where it was also denied. A primary goal throughout my process has been developing and securing long-term (7-12 year), performance-based, institutional, financial support for an Outback Manager.

The following strategies represent less conventional funding options, but given the unique nature of the site and program, they seem like practical routes forward.

- Distributing the cost via a tiered sponsorship structure for primary and secondary OELP stakeholders:
- · Applying for an Sustainable Action Fund Grant (currently underway);
- · Appealing directly to the President and
- Seeking funding off-campus.

The overarching strategy has been the pursuit all of these A distributed support system generates a vested interest options, seeking matching support from each to limit their in a range of stakeholders. A matched funding system helps upfront investment while overcoming the startup challenges of to overcome the initial start up costs. And the current human long-term programmatic development.

### **Tiered Sponsorship**

This strategy has been prioritized as it represents the most likely long-term model for support. The Outback currently serves a wide audience and is managed by a diverse team. It is impractical to ask one college to fund a position that serves so many others. Instead, by distributing funding across three tiers of stakeholders, the contributions will be directly related to the degree of involvement of each supporting entity. This concept represents the most feasible future strategy for long-

- University Residences- (Outback is surrounded by 1360 dorm students)
- Student Employment Office- (Supports ~8 work-study positions)
- Dining Services- (Promotion of Real Food Challenge on Campus)

These three groups would contribute \$3,000 each towards the cost of the position to improve the site and programming as it relates to their existing responsibilities. Their collective contribution would be ~\$9,000, nearly 30% of the annual salary (minus payroll burden).

### The Third Tier (~\$1,000 per year)

- The Office of Environmental Health & Safety- (Risk Management)
- Biology Department- (~200 Student Labs per guarter)

These two groups would contribute \$1,000 annually towards the cost of the position to improve the site and programming as it relates to their existing responsibilities. Their collective contribution would be ~\$2,000, or 6% of the annual salary (minus payroll burden).

resources available for this effort present a unique opportunity in the long and interesting history of the OELP.

# Section 7.1 Reflection

In my pursuit of teaching environmental ed, my path was divided and I have followed both routes in parallel. One focus has been the development of a long-term staff position within the OELP. The other has been the development of a unique Ecological Design curriculum. Both have provided valuable professional experience and my aim now is to unify the two into a synergistic whole.

## Challenges

Obviously challenges were expected in this process. They are an integral part of the educational process. As such it becomes difficult to separate the individual struggles from their associated successes.

with the entire program. I entered the campus-based track on a three-year trajectory. This kept me outside of the three separate student cohorts which passed me by during my studies and led to some feelings of isolation. Though I had many fine peers, it was difficult to integrate into an on-going learning community which I highly value. Relationships with peers are a great platform for exploring course material outside contentious field. The ethical frame work I teach consists of: of the facilitated classroom context. I wanted to continue compelling discussions beyond our scheduled time, but given our different and very busy schedules, these were often left unresolved.

Layering in my unique edible landscaping approach also contributed to a self ascribed black sheep identity. Though my peers and instructors valued this perspective, few had fully internalized many of the ideas. I spend a lot of time describing the context of permaculture courses and permaculture communities (This population has fully embraced the Teaching Foundations I outlined in section 1.5). Indeed, much of that material was distilled from my permaculture teaching experience. Conversations in that context are all building upon a mutual understanding which did not have a strong presence in the in the campus setting. I often felt compelled to adopt my teacher role during class conversations, but resisted the impulse the best I could.

This lead to another type of frustration throughout my studies. I often felt that the conversation was not being pushed far enough; to be clear, not being pushed far enough in my preferred direction. I felt singular in my belief that we can directly improve our daily ecology. I felt incredulous while reading books and articles that clearly lacked creative and positive solutions. It was challenging and required an intentional effort not to co-opt the conversation, walk the class out to the Outback, tool-up and start educating ourselves on, and through, positive changes in our immediate environment. This is all contains strong elements of egotism and after intentional personal reflection it provided substantive lessons regarding my particular orientation to the subject matter. Checking these egoic thoughts will certainly make me a better student and educator. In addition, I had an outlet for these frustrations which were focused into the development and delivery of my Ecological Design classes.

But, all of this has been a familiar theme throughout my education. I was distinctly "farmy" within my design school cohort. I was distinctly "designy" during my farming apprenticeship. It is only fitting that I was distinctly both of those things during my graduate studies.

### Meaning

One of my primary goals as an educator is to make meaningful learning experiences. There has been a lot of substantive work over the past three years which has provided me with genuine lessons regarding my relationship to my environment. Some of my challenges had to do with my unique relationship my relationship to my students and my facilitation of their relationship to their own environments. But what does that mean in a bigger context? How does this work contribute to the greater good? Ecological Design differs from other design practices on account of it's ethical foundations. These reflect the most common ethical concepts used in contemporary sustainability statements and effectively sum up a broad and

- Care of the Planet
- Care of People and;
- A Careful Process.

### Care of the Planet

This ethic obviously underlies the entirety of environmental education. Even still, there is room for a range of interpretations. The majority of our required reading materials provided throughout the five courses of this masters program were still mired in the language of "doing less bad" 1, 25, <sup>26</sup>. This language only reinforces the separation ideology and lacks creative, proactive participation. This perception was shared by many students within my department. Direct feedback from my own students, many of whom have been studying within Huxley College for 2-4 years, frequently confirmed that this defeatist language permeates the majority of environmental discourse within the institution. After 4 years, this disheartening rhetoric takes its toll on the enthusiasm and inspiration of future environmental leaders. I understand that comments such as these require substantiation through a meta-study coding the most popular articles assigned environmental programs in higher-education, systematically quantifying each authors qualitative perspective. This would warrant an entire masters thesis unto itself.

The most salient piece here is that the concept of mutually-beneficial human-nature relationships needs more representation in our current cultural discourse regarding the environment. We need more examples of humans creating and maintaining these relationships, both historically and within our contemporary context. And, we need more working professionals within the fields of environmental science and environmental studies, who have had first-hand experience with this potential. These are the creative individuals who will be directing research, informing policy and monitoring the results. Without exposure to the positive potential of human culture, they will simply be working to slow our inevitable selfdestruction. Place-based experiential education is a critical

# 7.1 Reflection (continued)

tool for introducing these positive productive world-views to young adults. David Droppers outlines this potential in his writings on experiential education in higher ed:

"Experiential education moves more focus from the subject matter to the learner, with more equal contributions to the learning process from the educator as well as the students. Students enjoy a more relevant curriculum, as well as cognitive and affective gains beyond traditional classroom lectures." 27

Grounding their academic work in first-hand experiences will give them valuable insights into how these concepts can be scaled up and adapted to professional practices. And finally, these experiences go beyond the concept of simply understanding the environment and create meaningful connections to the systems that we are so intimately dependent upon.

Composting provides a great example. It is an easy idea to support and many municipalities are developing citywide composting services. Indeed, Seattle and Portland have both mandated residential composting within the last 5 years <sup>28, 29</sup>. The policy-makers and system-designers responsible for the creation of these cultural institutions will be far more successful in their pursuits if they understand the basics of the carbon-nitrogen ratio and the soil-food-web. Building a compost pile, feeling it heat-up over the course of a week to deep connection to and reverence for the natural world.

Developing the intellect is a primary focus of academic epistemology. There is an effort to expand this scope for the inclusion of other ways of knowing. It was a prominent an untouchable temperature of 150 degrees Fahrenheit, then theme throughout the EE program and the landscape of returning in 6 weeks and feeding the results into a productive environmental studies. Duer's interview with Kwaxistalla garden is a meaningful educational experience that provides a regarding traditional resource management skills of First \ Nations communities presented a profound demonstration of In addition, the very actions that demonstrate these an "other way of knowing" <sup>10</sup>. Their intensive management of relationships are in and of themselves, improving the local shellfish "gardens" was creating improved yields within and environment in meaningful and measurable ways. Students around the beds as well as greater biological diversity. Though composting excess animal manures, invasive weeds their practices were not derived through the modern scientific and shredded paper to create healthy usable topsoil, are process, they represent a profound understanding of their reclaiming waste resources, sequestering carbon and creating coastal landscape. habitat. The landscape itself directly reflects the mutually It is practically appropriate to learn other ways of knowing beneficial potential. Personal participation in the environment, through place-based experiential education. Indeed, it to improve the environment can create meaningful changes becomes an implicit part of each lesson. Describing to a within and connection to the environment. student the nuances involved in different land-management

tasks is a valuable primer. However, the same conversation I have used my masters project as well as the Outback after an afternoons worth of work takes on a different Experiential Learning Program to create these experiences character and depth of understanding. We can discuss the for Western students and the Bellingham Community. And unique resistance each particular weed species expresses in I will continue with this educational practice long-after the opposition to being pulled. We can discuss how to listen to a completion of my masters degree. screw gun and why gloves might be better than a broom for cleaning out the bed of a truck. These types of knowledge may not be explicitly valued in the academic context, however they represent a valuable learning process and depth of knowledge that can transcend disciplines and professions.

### **Care of People**

Environmental and Social Justice are inextricably linked. Over exploitation of natural resources is often contingent upon the oppression of marginalized communities. Working with privileged populations of American college students may not seem like typical social justice work, but the placebased, experiential context offers great potential for culturally subversive education.

Oppressive constructs operate via the exploitation of cultural differences in race, ethnicity, gender, class, able-ness and education. I understand that my work has not explicitly addressed racial and ethnic oppression. As outlined above, the Outback and associated programming have incredible potential as educational and cultural resources and could provide unique opportunities to underrepresented populations. I have not had the capacity to integrate racial justice into my work, though it is a compelling aspect that I hope to address in the future.

The hands-on experiential work does implicitly address a range of other cultural power structures. These include societal expectations regarding education, labor, gender roles and class. The following topics are easily integrated into the hands-on place-based educational work I have been focusing on.

# 7.1 Reflection (continued)

# 7.1 Reflection (continued)

These particular examples also address pervasive cultural relationships to physical labor. Our current culture has a pattern of undervaluing and even deriding occupations that work with their hands. Gross encouragement for teenagers to attend college as opposed to learning a trade is a pervasive example. As such, working with ones hands and body is not a typical feature of higher education. Handing a college student a shovel as a part of their upper-level coursework invites conversations regarding other ways of knowing, as well as social expectations regarding education, class and livelihoods. The generation and demographic of contemporary college students is not often taught the basic means of production and many of my students show great humility regarding their practical ineptitudes. Teaching students through the use of hands-on, bodily skills gives them a brief glimpse into the value of other ways of knowing. The Outback is a platform for many different systems and their associated trades. Garden carpentry has proven to be a rich learning experience for many students. Plumbing irrigation systems appears simple at first, but requires nuanced technical know-how and skill. Stone-work, nursery-work and electrical-work are also potential platforms for introducing students to timeless bodies of knowledge and applied systems theory. Brief experiences with these various trades show students the depth of skill associated with each and gives them a first-hand understanding of, and respect for, the merits of non-academic careers.

Gender stereotypes are also prevalent during work of this nature. Young men and women are all subject to the pervasive narratives of appropriate or attractive gendered behavior. Land-care, in its various techniques can flip these expectations in subtle yet meaningful ways. Discussing the nuances of various ornamental flowers with a group of young men and building a lumber rack with a team of young women are genuine examples of such instances.

The Outback provides a meaningful context for addressing economic status as well. There exists a cultural perception that ecologically responsible behavior is a luxury. Many of the consumer choices associated with sustainability (Table 1.4) are inaccessible. Organic, local foods, American-made electric with chestnut trees; freeways lined with timber production vehicles, residential solar energy systems and sustainable hobby farms are far beyond the means of most citizens.

Tuxill's guote in Section 5.2 captures the Outbacks essential economic statement. The space exists in stark contrast to the moneyed landscape of the institution. It embodies a grassroots community effort to make do with what we have. Demonstrating practical, accessible systems empowers students and site visitors to take these techniques home and do what they can within their own means.

These examples and many others present the Outback's unique potential for exploring Social Justice issues. Though my focus has been on environmental education, I have strived to demonstrate the connections between environmental and social exploitation and the potential for mutual solutions.

### A Careful of Process

This third ethic parallels my third Teaching Foundation: The necessary work is Interdisciplinary Systems Design. Engaging students in holistic, problem-solving to integrate various fields of study will be critical for developing systemic solutions for systemic issues.

Practitioners of this process are not specialized experts. They are generalists, comfortable in a range of different fields. Reflecting on my own education, I strongly identify as a generalist. My BS was an even mix of diverse fields; a quarter liberal arts, engineering, environmental studies, and art & design. Following my undergraduate studies, I apprenticed under generalists and learned everything from grafting fruit trees to wiring off-grid, photo-voltaic electrical systems. The businesses I have founded offer a diversity of services in integrated site and systems design. Even my career as an educator is broad in scope. I have taught in six different programs while at WWU. During the spring quarters of 2016 and 2017, I was simultaneously teaching in three different colleges.

From my perspective, the work is all fairly similar. A systems-thinking approach helps to break down the perceived barriers between fields and reveal common patterns in analogous processes. Urban gentrification and ecological succession both demonstrate a system changing its conditions and adapting to the new environ. Emergent hierarchy in socioeconomic strata parallels complexity found in organismal biology. Thinking of this nature is just one of the processes which make this interdisciplinary systems design so essential for solving our complex environmental and social problems.

The low hanging fruit is ripe for the picking. Imagine the City of Bellingham coordinating an effort to incentivize residential gray-water treatment to offset summer-drought irrigation demands. Every time you wash your hands, your dishes, or your laundry the water is sent through a branching network of pipes, into a basin filled with aerobic decomposers. Waste nutrients are broken into accessible organic forms and taken up by a plum tree planted nearby which turns the waste water into delicious summer snack fruit. Imagine bike trails lined supporting a local economy of tool and furniture fabrication. Imagine taking a hot shower knowing that all of this energy came directly from our local galactic blast furnace. Imagine a city-scale marketing campaign promoting the installation of edible herbaceous perennials, each front yard housing twodozen specimens with edible leaves, growing fresh greens year round, which intensify their leaf production in response to the daily harvest. That is, the more you pick, the more it grows.

Self-propagating systems of this nature will be foundational throughout our cultural adaptation to an uncertain future. Showing these young adults that they are capable learners who can acquire new skills through their own self-directed and systematic learning is an empowering cultural process.

### Community

The work of Yuval Noah Harari has been highly influential and influence. This energy-intensive, macro-industrial-system severely limits the ability of an individual to interface with our built environment. Likewise, the separation ideology leaves This abstraction of the built and isolation from the grown impedes our capacity to interface and removes our sense of Between our time as foraging bands of hunter-gatherers and agency. Harari's work outlines another important component of the modern social landscape; the exaggerated importance of the individual and of the empire. This comes at the expense of the immediate human-scale community. This community is composed of immediate family, friends, neighbors and extensions thereof. For generations, this served as the primary social fabric. An individual was an integrated part of this community. They were responsible for the well-being of other members were held accountable for their own actions. Harari notes that a person can conceptually manage ~200 The dawn of agriculture often overshadows this extensive unique relationships, and up to ~600 individual identities. Beyond this scale we rely on our shared mythologies to facilitate larger more complex populations; an empire is formed. These shared beliefs allow for large aggregations of humans to collaborate with unbelievable capacities. However, Due to direct dependence on the local ecology, and the in the same manner as the abstraction and isolation outlined above, we are less able to have an intentional and meaningful impact on the population of the empire. The modern, energyintensive, macro-industrial-system exaggerates this problem to the nth degree. Potential outcomes from social actions are either inconsequential individual acts or unrealistic heroic deeds. Without a prominent human-scale community to interface with, we lose the immediate feedback necessary for by the extremes of the spectrum.

in my most recent Ecological Design I narrative. His book parallels the journey I present in my 10-week course. Here is a many unfamiliar with and disassociated from our local ecology. concise approximation of the narrative: the neolithic revolution, many humans existed in a horticultural species which readily lent themselves to propagation and present upon the bands return generation after generation. For thousands of years before we discovered the intensive processes necessary for cereal agriculture, we lived inside of period of human development. Current historical narratives highlight our eventual dominion over nature, promoting the separation ideology and further disassociating us from our environment. lack of refined energy resources, pre-modern cultures were

<u>Sapiens</u><sup>30</sup>, offers a unique historical perspective which landscape. This ecology was composed of those edible wild thus primitive domestication. Simply imagine a band of early humans carrying ripe fruits in their arms and in their bellies. As they moved towards the next seasonal foraging grounds. these fruits would be transplanted through the landscape and an inadvertently cultivated forest garden. not capable of such extreme alienation as we experience today. Prior to industrialization, production was limited to a human scale. Prior to electrification, daily behavior reflected seasonal changes in daylight. Prior to refrigeration, fresh food was grown locally. And prior to globalization, work was conducted within the context of the regional economy. The pre-modern environment, both natural and built was composed learning about social participation. Social change is disarmed of much more simple and accessible systems. A person could understand a brick and mortar structure. They knew This is the context within which we are weeding, digging local trades people such as the butcher and the carpenter. Though they may not have been skilled themselves, they could and learning. In parallel to this narrative I present a practical understand the relatively simple, human-scale systems that and transparent demonstration of their potential. I show my students that they are indeed highly capable interdisciplinary composed their immediate environment.

Our modern western environment is far more complex. The systems designers. As young adults they can confidently advent of industrial processes has distanced the consumer learn and work within local, human-scale systems. Ecological, from the means of production. We no longer understand technological and social constructs are all immediately accessible and transitioning between disciplines can be a fluid how a thing is made, nor how to repair it. Reinforced and practical process. By building competency in various concrete walls with integrated structural steel prop up our fields they can gain confidence necessary to develop or buildings. Vast power-grids transmit energy across entire mountain ranges. Pipelines move petroleum to refineries. reclaim their sense of agency. Exposing them to the collective potential through Fossilized hydrocarbons are processed into polymers collaborative group projects builds a sense of community. which are developed into textiles and then turned into a pair of running shoes. Our food travels hundreds of miles in Many student comments acknowledge the remarkable sense of community that consistently forms within the context of the refrigerated vehicles. It is then processed, packaged and frozen in complex manufacturing systems. These products are Ecological Design courses. Showing these young adults that they are capable learners redistributed to their point of sale where they are purchased using electronic banking systems. Funds are transferred who can acquire new skills through their own self-directed and systematic learning process is empowering. And when enough between digital accounts stored in water-cooled serverfarms. To a typical citizen, this represents a bunch of abstract of them understand their individual and collective capacities, it technical concepts of which we have limited understanding has the potential to become very subversive.

# Section 8.1 Conclusion

A summative assessment of my own learning would reveal a (trans)formative process. The change was not a remarkable discovery, nor a shift in direction. It has been a systemic maturation. Beliefs I've held dear have been reinforced and hardened. Connectivity has increased across my conceptual framework and the result is a refined and more resilient educational philosophy.

My unique approach to this program has been fun. The additional layer of integration across my entire body of work has been both challenging and rewarding. The separate paths of developing a position and a curriculum have each provided valuable lessons and opportunities which certainly justify the process.

The programmatic development of the Outback has been an nebulous goal. The potential of that landscape to teach the students of WWU and serve the community of Bellingham is remarkable. The necessary development is clearly continuity through professional staff. If given the opportunity to develop that potential, I would simply do my best, which has improved a good deal since the beginning of this journey.

A unique component of place-based, design-focused, experiential education has been facilitating students as they explore a wide range of their own capabilities. Cataloging botanical names, handling tools and exploring novel world-views have all been important lessons in their personal development.

As these lessons and topics overlap, I believe they gain the confidence necessary to participate in the various systems that compose their environment; that is they expand their sense of agency.

Working with students in this space has provided valuable insights regarding my teaching practice. I am drawn towards a longer-term relationship than the typical college course provides. Through an ongoing staff position, or even consistent courses held in the Outback, there is potential to shift from a professor to a mentor. This is a class of teaching that deeply interests me and will likely shape the next phase of my professional career.

This project has shown me that there exists a great enthusiasm and desire for my particular teaching practice. It is my intention to do the best I can to provide students with these learning experiences. And it is my hope that they will use these experiences, skills and values to further propagate the same. And in time, we will have a more resilient and healthy community.



### **Future Lessons-**

After a successful day during the third iteration of my Ecological Design class, I sat down and drew up what we had accomplished. The tasks were simple; composting, nursery work, brush-clearing, terracing and transplanting a few of our favorite species.

I have been intrigued by this drawing since the night I made it. It is in one of my usual styles and a subject matter that I am very familiar with. However, it seems like there is new potential here, as if this could be the beginning of a simple educational language. It might help students to better learn through their work in the Outback. If taught to students, it may eventually help others understand them and support their cause in the future. We will just have to try it out and learn as we go...

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