EDIBLE LANDSCAPING: STUDENT THEMES AND IMPLICATIONS FOR
DECOLONIZATION

By

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ABSTRACT

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My project researched and analyzed Humboldt State University (HSU) student themes related to transforming traditional non-edible landscape to edible landscape as a means to address the growing issue of food insecurity among university student populations. Data was gathered by conducting structured interviews with HSU students at one on campus CalFresh Enrollment Event. Using iterative thematic analysis I analyzed the findings to formulate final themes representative of a broad category of academic departments at Humboldt State. Findings confirm that students support investing resources and time to increase edible landscapes on the HSU campus by acknowledging HSU’s commitment to the environment, as well as the need to provide for students that may be unable to sustain themselves nutritionally. I also included implications for Decolonization, the active resistance to colonial paradigms in order to repair and restore the knowledge of Indigenous populations that were supported by the final findings.

Keywords: edible landscaping, gardening, sustainability, decolonization, social work, student themes
ACKNOWLEDGEMENTS

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INTRODUCTION

In the United States during 2012, an estimated 49 million individuals were living in food insecure households. Broken down further, this number comprises over 33 million adults and almost 16 million children (Feeding America, 2014a). These figures represent the situation that we face in a country that celebrates economic advantage, growth, and independent success. As we become aware of the growing issue of food security, defined as the ability to afford and provide adequate food for oneself or family (U.S. Department of Agriculture, 2013), responses provided by our communities may be the deciding factor of whether or not someone continues to experience food insecurity. Considering this issue of food availability in an advanced society with vast numbers of fast food options, grocery stores, liquor markets and the like, perhaps urges us to return to well used methods of food growth that could sustain populations in need.

Edible landscaping is just one example of how communities can begin to address local food insecurity. Edible landscaping utilizes “food-producing plants in the residential landscape. It combines fruit and nut trees, berry bushes, vegetables, herbs, edible flowers, and other ornamental plants into aesthetically pleasing designs” (Oregon State University Master Gardener, n.d). The location and design of these gardens may vary between large agricultural landscapes, urban areas (e.g. sidewalks, rooftops, and indoors), community gardens, and one’s own backyard.

University students, an unsuspected group likely to be considered safe and privileged, are of growing interest to researchers as further evidence supports that they
are food insecure. Many authors and national organizations have already described food insecurity as it relates to school aged children (Alaimo, Olson, & Frongillo, 2001; Feeding America, 2014b), older adults (Feeding America, 2014c; Lee & Frongillo, 2001), and those living in poverty (Feeding America, 2014d). Understanding intervention strategies and responses to food insecurity requires active research to address populations of concern.

The purpose of my project was to collaborate with the grant partnership between Humboldt County Department of Health and Human Services (DHHS) and Humboldt State University’s (HSU) Altruistic Personality and Prosocial Behavior Institute, ran by HSU’s Social Work Department, to investigate themes related to increasing the variety of edible landscapes on HSU’s campus. At this time, I was unable to locate literature that recognizes the held beliefs of university populations in reference to growing concerns over our food systems. My project explores and identifies current themes that HSU students have towards transforming non-edible campus landscape to edible landscape and also includes implications this change may have pertaining to the framework of Decolonization, the active resistance to colonial hegemony in order to repair and restore traditional Indigenous knowledge. Social work, a profession that aims to assist and protect marginalized populations, also has an obligation to critique it’s own hegemonic structures rooted in colonialism as we develop approaches and interventions for populations in need such as those that are homeless or hungry (Gray, Coates, Yellow Bird, & Hetherington, 2013).
Beyond the scope of decolonizing social work, the significance of this project is heavily related to the increasing dialogue on food security, sustainability, and food systems, and how these relate to growing interest in transformative, alternative, and radical food system approaches (Hale et al., 2011; Holt-Gimenez & Shattuck, 2011). Attributes of these approaches envisioned are numerous: relational, local, economically sustaining, ethical, sacred, healthful and more (Kloppenburg, Lezberg, Master, Stevenson, & Hendrickson, 2000). These can be attained within communities that invest time and energy away from corporate industrial models to actions that contribute to the local population and the health of community environment. Gardens that climb vertical walls, rest on sun soaked ceilings, line walkways, and are tended by the neighbors are some examples of approaches.

Recent media articles have highlighted the growing concern of food insecurity amongst university students (Holt, 2012; Goldberg, 2014). Both sources discuss that between classes, part time jobs, living expenses, tuition increases, and inflation the average college student detached from familial supports is unable to supplement their nutrition in a healthy manner. With the growing knowledge that a food security issue exists discovering approaches that may ameliorate this need should be examined.

Universities that emphasize natural resources and sustainability typically have a desire to broaden their understanding of the environment and ecological systems. HSU takes pride recognizing that sustainability is a core principle of the university. This principle is upheld by the ongoing motivation, determination, and interest of the campus members (Humboldt State University, n.d). Humboldt State University’s Campus Center
for Appropriate Technologies (CCAT), a non-profit student run sustainability program, already manages allotted campus land and continues to work with the university to increase community gardens on campus. They define Appropriate Technology as technology that provides for human based needs in a manner that is least impacting to finite resources (Campus Center for Appropriate Technology, n.d.). In 2010 a student group at Humboldt State completed a project proposal to increase edible gardens at other campus locations, referencing the need to increase knowledge of food production and sustainability. Their efforts contributed to a small campus garden that is run by the Recreation Department at HSU. In their project they described significant obstacles related to administration hurdles such as concerns of waste.

With the progress HSU has already demonstrated, it is anticipated that students will voice continued support of action that bolsters localization, sustainability, and environmental awareness. It is also anticipated that certain themes related to global awareness will be derived (e.g. increased awareness of food systems, localization, poverty, sustainability, community development, and food security). I also expect that an exploration of more uncommon themes (e.g. decolonization, food sovereignty, and grassroots activism) may be identified due to the progressive attitudes of many classes and majors offered at Humboldt State University. Opportunity will be provided to discuss challenges students believe may be a result of such an implementation. Potential themes referring to edible landscaping implementation failing may be identified. Reasons listed could include lack of resources, labor, and short-term interest. Other hindering attitudes, such as pest control, vandalism, and thievery may be mentioned as well.
REVIEW OF LITERATURE

At this point in time, there is no research that I have found that specifically looks at University students’ themes pertaining to transformation of campus traditional landscape to edible landscape. However, a brief review of the literature that explains how we have reached a point of questioning the inclusion of food production among our communities proves valuable. Furthermore, latest research discoveries pertaining to food insecurity on collegiate campuses strengthens the overall need to address the concern. Finally, alternative strategies that are already being incorporated to address university food concerns reinforces the need to expand these models and review their effectiveness.

Agribusiness Development and Corporate Food Regime

The agribusiness and food sector is the second most profitable enterprise, behind pharmaceuticals, in the U.S. (Magdoff, Foster, & Buttel, 2000). In 2007 the Census of Agriculture reported that U.S. farms, a segment of the food sector, sold upwards of $297 billion dollars in agricultural goods (U.S. Department of Agriculture, 2007). Industrialized farms with the assistance of fertilizers, advances in genetic modifications, and industrial machinery have allowed for profits to soar among those with this capability. However, those that reap profits are a select few. Corporations that maintain grain production (e.g. ADM, Cargill, and Bunge) beef production (e.g. Tyson, Cargill, and Swift), maize production and bioproperty seed production assisted by chemical
corporations (e.g. Mansanto and DuPont) together hold the majority of profits and nearly monopolize production on a global scale (Holt-Gimenez & Shattuck, 2011).

The development of corporate agriculture, also referred to as ‘corporate food regimes’ (McMichael, 2009; Ploeg, 2010), has resulted in increased neoliberal policies and economic instability for citizens and small farmers, domestically and internationally. This period of development, beginning in the late 19th century and continuing today, has had three distinct stages (Holt-Gimenez & Shattuck, 2011). The first stage began (1870 – 1930’s) with U.S. settlers providing food and raw materials to Europe due to the benefits of our temperate climate (Friedmann and McMichael, 1989). Next, during the 20th century (1950s-1970s) a push under the guise of food aid brought industrial agriculture to ‘developing’ nations (Holt-Gimenez & Shattuck, 2011). This period was also known as the ‘Green Revolution.’ The egregious result of this period has been well documented, and included deepening classism, inequality, and an inability to maintain comfortable standards of living (Agarwal, 1994; Byres, 1981; Griffin, 1974).

As first world markets and consumption grew, a need increased for further economic legislation to assist growing corporate entities. Neoliberal food economic policies under the Reagan Administration, beginning in the 1980’s and continuing today, “broke down tariffs, dismantled national marketing boards, eliminated price guarantees and destroyed national agricultural research and extension systems” (Holt-Gimenez & Shattuck, 2011, p. 111). Other neoliberal economic agendas and organizations (e.g. World Trade Organization, Free Trade Agreements, the International Monetary Fund, and World Bank) have led us into the current era of food production ruled by market
power and monopoly agrifood businesses (Holt-Gimenez & Shattuck, 2011; Ploeg, 2010).

Ploeg (2010) reminds us that current recommendations to address these economic conditions are strikingly similar to previous ones that led to the initial disparity and inequity discussed. For example, the World Development Report (World Bank, 2007) suggested further investment, avoidance of protectionism, deregulation, and increased biotechnological research. These cyclic patterns that reinforce corporate hegemony have identifiable flaws that benefit corporate stake holders, yet leave negative benefits for consumers and producers by not providing security, be it food or economic.

**Food Insecurity Among University Students**

Food insecurity among university students is a relatively new field of interest that raises concerns about a population that was previously unsuspected of being vulnerable and historically was privileged enough financially to be of little concern. Literature available on the topic is relatively minimal (Chapparro, Zaghloul, Holck, & Dobbs, 2009; Freudenberg et al., 2011; Hughes, Serebryanikova, Donaldson, & Leveritt, 2011; Patton-Lopez, Lopez-Cevallos, Cancel-Tirado, & Vazquez, 2014). However, the research presented acknowledges numerous growing trends of inequity and hardship that suggest unique intervention strategies, such as campus gardening, to address the concern (Chapparo et al., 2009).

The research conducted supports that a significant percentage of student populations are effected by food insecurity. The latest article by Patton-Lopez et al.
(2014) discovered that 59% of students were food insecure based off of the US Department of Agriculture food security scale. Similar food security survey models found statistical significance ranging above 20% of the student sample (Chapparo et al. 2009). Predictors of food insecurity were significantly correlated with reduced familial support and almost twice as likely for those who were employed. Anecdotal evidence being reported by media sources identify rising tuition costs, inflation, work study competition, busy school schedules, and additional economic strain on families that make secure support difficult to attain (Goldberg, 2014; Holt, 2012).

**University Responses to Food Systems**

Numerous college campuses have already begun responding to concerns of agribusiness profit, unsustainable agricultural practices, and lack of nutritional access on college campuses across the country. These responses take on different forms within varying contexts. The College and University Food Bank Alliance (2013) is a recent effort to support current and emerging food pantry projects at different universities. Their vision seeks “to alleviate the barriers and challenges associated with food insecurity and hunger so that college and university students can remain in school, and ultimately, earn their degrees” (College and University Food Bank Alliance, 2013, vision section). Their enrollment so far totals over 50 college campuses that provide food resources and education, including Purdue University, University of Michigan-Dearborn, Portland State University and more (College and University Food Bank Alliance, 2013).
Real Food Challenge is another example of a student run initiative that is attempting to redefine the current economics of food systems in universities. Their primary goal “is to shift $1 billion of existing university food budgets away from industrial farms and junk food and towards local/community-based, fair, ecologically sound and humane food sources” (Real Food Challenge, n.d.). They have thus far been successful in incorporating higher standards of “real food”, defined as fresh, nutritious and local in the University of California college system. Current work to incorporate higher quality standards within the California State University system are still under way. (Laird & Tizareno, 2013)

Recent descriptions of campus gardens in the U.S. have described numerous benefits. Colleges with an emphasis on health and human services have used school gardens to provide therapeutic settings for working with individuals. Universities with environmental focuses have used them as hands on learning environments where students learn about organic, sustainable, and ecologically sound practices, which have been proven to effect attitudes and behaviors towards fruits and vegetables (Lineberger & Zajicek, 1999). Foods that are harvested are reinvested into the collegiate community: sold at campus farmers markets, used in college cafeterias, and donated to college pantries (George, Kraschnewski, & Rovniak, 2011; sfrydenlund, 2011; Talafer, 2013; UNM Lobo Gardens, n.d.). Multiple campus partners can collaborate resources and ideas in order to support edible landscaping (University of Utah, 2013). Talafer (2013) also recognizes the importance of gardens for student community development and sense of place among campuses.
Theoretical Framework

Colonization by Western European entities has resulted in the subjugation, exploitation and manipulation of populations that have been considered savage, uneducated and hedonistic. The aim of this exploitation that led to extreme wealth, power, and privilege for groups aligned to colonizers has also led to reduced health and well-being of colonized populations and the natural environment. For this reason the theoretical framework that I will apply to this project is Decolonization. Waziyatawin and Yellow Bird (2012) define colonization as “both the formal and informal methods (behavioral, ideological, institutional, political, and economical) that maintain the subjugation and/or exploitation of Indigenous Peoples, lands, and resources” (p. 2). Being aware of hegemonic power structures that systematically depreciate the value of collectiveness and implement processes that use racism and classism inadvertently within their institutional hierarchy are founding principles of decolonization. The authors go on to describe decolonization as “the meaningful and active resistance to the forces of colonialism that perpetuate the subjugation and/or exploitation of our minds bodies and lands” (p. 2).

Decolonization aims to restore the knowledge that was inherent within humans that lived intimately, succinctly, and sustainably with their communities and their environments. Others agree that decolonization refers to active engagement that weakens and liberates one’s self from the effects of colonialism by participating in and promoting traditional philosophies and practices (Grey, Coates, & Yellow Bird, 2008). This
framework is relevant to this project because edible landscaping is a practice that empowers individuals to return to past values and practices within the current contemporary society. Discovering interventions that promote traditional philosophies serve as a Decolonizing tool. Furthermore, implementing this method to address food security counters traditional western Social Work methods that often utilize frameworks of deficiencies based in economics and organizational structure, rather than sustainability and the health of the natural environment.

Current frameworks that are relevant to sustainability and resilience were also considered for this project. However, moving towards a sustainable resilient community is not a novel idea. Indigenous populations, prior to colonization, lived within their means holistically and sustainably until western contact. They subsisted on what was available without constructing massive disconnects within their societies (Nelson, 2008). For this reason the use of other frameworks, such as ‘regional resilience’ (Christopherson, Michie, & Tyler, 2010) were not used due to their association and foundation with colonialism. Rather, the direct choice to use a framework that challenges the dominant paradigm was selected.

Decolonization will be utilized to address implications that frame the discussion and inform the findings of this project. This framework is intended to reflect critically on current identified systems that devalue collectiveness, group cohesion, and communal strength. By citing various Indigenous perspectives I will demonstrate critical exploration that relates to decolonization of current systems of power and privilege in order to model and support ideals that encourage respect, repair, and resurgence.
I believe it to be imperative that I recognize the privilege and status I hold as a heterosexual white male with Western-European ancestry. Being able to challenge political forces or paradigms that inculcate oppression and racism into their structures does not jeopardize my well-being or status, as it may others. Nonetheless, this does not reduce my effectiveness, my thought form or my influence. If anything, recognizing my position and my passion serves as a continued motivator to step outside my normalized comforts, and take part in models that strive for equity. I come forth as an ally and not as an expert (Unsettling America, n.d.).
METHOD

My project will utilize a brief structured interview being conducted under the auspices of HSU’s Altruistic Personality and Prosocial Behavior Institute, a non-profit research institute run by the Department of Social Work at Humboldt State University. This voluntary survey will be offered and conducted with individuals that attend one on-campus CalFresh Enrollment event. CalFresh is California’s model of the Federal Supplemental Nutrition Assistance Program (SNAP) that provides supplemented income for the purchase of food to qualified families and individuals (California Department of Social Services, n.d.).

This project will use a qualitative research approach. Qualitative research attempts to discover themes and analysis that is connected more intrinsically to the subjective human experience, thus is harder to analyze using quantitative measures (Guest, Namev, & Mitchell, 2013). Qualitative analysis will be undertaken using an iterative inductive thematic analytical approach. This model of thematic analysis uses iterative steps to produce relevant constructs by repetitively discerning and refining initial impressions until a final theme is derived (Fereday & Muir-Cochrane, 2006).

Thirty-five Humboldt State University students from seventeen academic departments and all three academic division were interviewed in this study. These academic divisions or “colleges” included seven from the College of Professional Studies (see Table 1), eleven from the College of Natural Resources and Sciences (see Table 2), six from the College of Arts and Humanities (see Table 3), and 11 that did not accurately
define an appropriate category (see Table 4). Students included mainly undergraduate individuals (n=34) and a post-graduate student (n=1) currently enrolled at Humboldt State. Thirty-five students is a small portion of the estimated 7,500 in attendance and is not representative of the entire population. However, the findings do provide preliminary themes that may be expanded upon or utilized in decision-making and organizational planning.

*Table 1: Professional Studies*

<table>
<thead>
<tr>
<th>Academic Program</th>
<th>Total Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>1</td>
</tr>
<tr>
<td>Social Work</td>
<td>3</td>
</tr>
<tr>
<td>Child Development</td>
<td>1</td>
</tr>
<tr>
<td>Business Admin</td>
<td>2</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>
### Table 2: Natural Resources & Sciences

<table>
<thead>
<tr>
<th>Academic Program</th>
<th>Total Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fisheries</td>
<td>2</td>
</tr>
<tr>
<td>Wild Life</td>
<td>1</td>
</tr>
<tr>
<td>Biology</td>
<td>2</td>
</tr>
<tr>
<td>Forestry</td>
<td>2</td>
</tr>
<tr>
<td>Geology</td>
<td>1</td>
</tr>
<tr>
<td>Environmental Management</td>
<td>1</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>1</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>1</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>11</strong></td>
</tr>
</tbody>
</table>

### Table 3: Arts, Humanities & Social Sciences

<table>
<thead>
<tr>
<th>Academic Program</th>
<th>Total Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>2</td>
</tr>
<tr>
<td>Journalism &amp; Mass Communication</td>
<td>1</td>
</tr>
<tr>
<td>Anthropology</td>
<td>1</td>
</tr>
<tr>
<td>Political Science</td>
<td>2</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>
Table 4: Participants enrollment in academic programs

<table>
<thead>
<tr>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stated Academic Departments</td>
<td>24</td>
</tr>
<tr>
<td>Unknown Academic Departments</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
</tr>
</tbody>
</table>

The initial proposal of this project anticipated the involvement of students, faculty, and general staff in order to have a broader sample that was more inclusive of themes from various populations within the university. However, no participants at the CalFresh Enrollment Event were faculty or staff at HSU, thus leading to the analysis being solely from students’ perspective. Reasons for lack of faculty or staff participation is speculative, and can potentially include being uninformed, believing they would not qualify, or stigma associated with receiving supplemented nutritional assistance.

The campus community was informed of the CalFresh Enrollment Event weeks prior via flyers, paper handouts, and the HSU internet based communication system. Once at the event, participants, with the assistance of research assistants, were asked preliminary questions to discover if they qualified for CalFresh benefits. After participating in the enrollment process, participants were prompted whether or not they would like to participate in a brief interview to help inform campus perspectives related to edible landscaping.
The Primary Investigator and student research assistants were responsible for attaining informed consent (See Appendix B.) prior to administering the oral interview. Open-ended questions pertaining to this project were written in advance (See Appendix A.). Interviewers were responsible for collecting data by writing down respondents’ answers, asking for clarification when needed, and confirming responses. All research assistants were trained how to interact with the data and record responses properly in a private meeting conducted by myself in order to maintain consistency, reliability and validity.

The iterative thematic inductive analysis took multiple steps in order to finalize themes. First, an initial read through that included all the interviews was used to note a general sense of the impressions in order to normalize myself with the data. The next step consisted of re-reading each individual interview, noting themes and impressions from each separately in consecutive order. After this was completed a third consecutive individual read through was completed to refine and clarify impressions written. When the coding of the initial impressions were finalized, I grouped impressions into similar piles. Piles were organized and re-shifted until I was satisfied that the impressions fit an overall theme that was representative of the final findings to be reported in the results. Outlier impressions were removed from the data.
RESULTS AND DISCUSSION

The following are the final impressions gained after the completion of analysis. Findings are listed in rank order of overall strength of the finding, meaning the sheer number of impressions that supported each theme was used to indicate the strength. A brief discussion will follow each theme in order to increase understanding and provide more detailed information that was generalized in the creation of the theme. These discussions will also relate back to the use of a Decolonized Framework to address implications within the findings.

Collaborative Campus Involvement

Overall, thirty-four out of thirty-five participants agreed that HSU should transform areas of non-edible landscape to edible landscape. This first theme demonstrated that collaborative involvement that integrates the strengths, knowledge and interest of the entire university population would be needed to support long-term success of campus edible landscaping. Within the impressions was an overwhelming theme that collaboration among various entities at the university would be essential for edible landscaping to be successful. Collaboration, however, did not merely mean university students and staff working side by side to achieve a successful model of edible landscape. Students recognized that university departments, professors, staff, and even the administration would have to find commonalities that represent an intersection of interests that could aid the transition to edible landscapes. The recognition of these
interests if utilized properly could prove invaluable as motivators, incentives, and “buy in” for preliminary action and on going active support.

The manner of collaboration varied between different aspects of engagement. Observations were noted demonstrating that majors without environmental knowledge could be supportive. Examples consisted of Art majors assisting design, Social Work and Communication conducting out reach, and Business incorporating sales advice. Impressions identified that environmental consultation could be advised by Botany, Environmental Sciences, Wild Life, and others with a specific emphasis or area of expertise.

Furthermore, students identified that individual active support can be encouraged by curriculums and course work that provide incentives for volunteering, or incorporates lesson plans with hands on engagement. Recommendations continued citing that academic departments and the administration have a far better understanding of funding sources and methods to unify endeavors through support, publicity, and policy.

Implications for Decolonization:

I believe this theme to be very representative of a Decolonized model. Beginning to recognize the inherent strengths of the individuals within the community, how these interests intersect, and how they can be utilized to benefit the wellbeing of the community speaks volumes about cultural traditions that celebrate the interrelationship of individuals. Unfortunately, within the results no participant acknowledged how cultural foods and traditions relate to landscaping or nutritional health. This demonstrates a need to increase cultural education and information pertinent to decolonization. Studies that
combine western education and cultural tradition, such as ethnobotony, may be worthwhile.

**Perceived Obstacles to Edible Landscape Implementation**

Identified challenges were varied, but primarily resided within three categories: funding, mismanagement, and waste. The primary concern was that lack of funding would decrease incentives for individuals participation. Funding appears to be an inescapable challenge within many forms of activism, development, or change. This is understandable within a societal framework that emphasizes economics as a means to survive and also as a measure of success. However, these same students that noted funding as an issue also recognized that student volunteering would be crucial to maintain management, a theme discussed later.

Waste was a concern that was noted considerably and appears to have varying forms depending on the situation. Students may begin this transformation but lose interest, leaving gardens to rot, and subsequently creating waste that requires financial costs to repair. One reason identified that may create disinterest was disagreement among students, faculty, or the administration pertaining to planting techniques, managing methods, and location which could lead to argumentation and fracturing. Lack of planning may lead to poor management during breaks and growing seasons adding additional waste if plants either do not survive or go unharvested. The current California drought prompted some to also address water scarcity and dependency.
Realistic concerns versus those based off of societal influences and expectations should be critically examined. Some of the concerns noted that were not as strong as the aforementioned included unpredictable weather that would affect growth rates and yields, the disruption of native plant and wild life species from eradicating habitat, and an influx of homeless individuals looking for food. Weather, yes, has variation and heavily influences growth depending on multiple variables, including sun exposure, cold conditions, and water to name a few. Indeed, natural habitat of certain species and even the potential consequences of introducing certain flora into the habitat should be thoroughly examined before being considered. However, the notion of “bums” (a term used by one student) coming to the campus requires further consideration.

This impression demonstrates a poor understanding of individuals considered “homeless” within our society. When alternative solutions are being evaluated to address certain societal concerns, such as hunger, it becomes unsettling that within the same recognition of student hunger, the compassion that was present deteriorates with the consideration of others who are experiencing significantly increased levels of poverty. Acknowledging that we have a continued obligation to encourage compassionate understanding and reducing stigma among marginalized groups should be noted.

Implications for Decolonization:

Motivation derived from individual compassion, community well-being, respect, and non-tangible cultural value, such as spirituality, represent Indigenous perspectives that honor emotional, physical, mental, and spiritual health. However, when we actively participate in systems that see time, energy, resources, and wellbeing as having monetary
value we begin to operate solely from that framework. Midgley (2008) reminds us that traditional Indigenous culture that valued collectivism needed to be replaced with values that place importance on “competition, achievement, motivation, and ambition” (p. 33). Monetary benefit becomes our driving force and inspiration for participation, which only continues to serve systems of power and privilege. To reach optimal capabilities one might begin to measure value by the implications it has for the health of the planet and the community they reside in for generations. (International Institute for Sustainable Development, 1992)

Discrimination that sees community members as separate entities is an outcome of societal expectations that view individuals as either successful or failures. Rather then identify and treat root causes of systemic inequality we blame individuals for their lack of motivation and productivity. Kopenawa and Albert (2013) describe the disgust associated with Western inequality when compared to traditional community standards that are demonstrated in Indigenous Brazilian tribes. Kopenawa, a shaman and member of the Yanomani, looks at western influences as forgetting about the care and compassion needed to protect community members. By celebrating our similarities and intimate connection to one another we can begin to decolonize paradigms that celebrate difference and individualism.

**Localized Community Resiliency and Global Awareness**

Localized efforts foster community resiliency and global awareness. Localization of resources, defined as the use of local resources to increase community self-reliance,
was identified as strengthening a community’s ability to thrive by limiting dependency on outside resources, creating social networks among participants, and encouraging critical reflection of dominate paradigms. An edible landscape model could further empower individuals by redefining our roles in society. As one student described, “We become creators instead of consumers.” This transition, which recognizes the power inherent within one individual, becomes enriched by the relational experience of communal efforts within an environmentally conscious mindset. The outcome of this endeavor, as identified by students, could become an essential “movement” that carries the shared political and social implications of localized development.

An interesting observation made by students was that localized efforts not only strengthen the connection and understanding of the community but provide critical reflection and awareness of systems that are outsourced. This critical reflection can lead to questioning and challenging of practices that are held as norms. For example students acknowledged the whole process from seed to table, noting chemical toxicity, carbon footprint, and exploited labor. The ability to think globally and consider repercussions related to our privileged decisions enables our ability to design and think holistically.

Implications for Decolonization:

The report issued by the International Institute for Sustainable Development (1992), addressing Indigenous sustainability, recognized that localized efforts provide avenues that increase self-determination and self-government. The report states that economic “strategy that works towards the convergence of local resource use, demand and need would be an ideal way to counteract the historical processes of
underdevelopment” (p. 90). Self-reliance detached from hegemonic processes provides the opportunity of growth for populations that are continually dismayed by privileged enterprises.

**Direct and Indirect Benefits of Edible Landscaping**

Edible landscaping supports health and wellbeing within multiple contexts. Students easily listed the direct benefits that food availability creates for populations in need. The majority of participants recognized that edible landscaping would immediately be capable of addressing student food insecurity by increasing the variety of edible options without obstacles. Interestingly some students discussed the absence of stigma in reference to hunger solutions that do not entail paperwork, appointments, or lines. It is preferable to be perceived as someone that is contributing to a cause, gaining experiential education, or just looking for a snack.

Other impressions described the ability to gather food while decreasing financial hardship; edible landscapes could be perceived as a method that supplements student’s income. Many students noted that quality food is expensive, and that often times one may leave campus to feed themselves or feel pressured to eat food on campus they rather avoid. For example, organic selections offered at the university are sparse and fast food options that are available on a “grab and go” basis are plentiful. However, Humboldt State has been increasing the use of organic products over the years, but further incorporation of organic edible landscapes would merely demonstrate dedicated progress.
Students also recognized that besides physical well being in the form of nutrients and sustenance, they could experience cognitive benefits that support their academic achievements. Some participants recognized that when one feels unhealthy or under nourished, they are not capable of functioning in the manner they would desire. The university, recognizing the importance of academic success among the student body, can be an integral part of supporting not only their cognitive growth but also their cognitive health. This potential assurance from the university, seen by some as an obligation, would proactively address those in need.

Implications for Decolonization:

Human beings look towards their food sources for survival. By developing customs and traditions related to food foraging, hunting, and agriculture people from various landscapes and environments survived for millennia. However, the introduction of standardized diets, and forced dependency in order to survive colonization has created health epidemics for entire groups of Indigenous people such as the Pima tribe. The Pima people have the largest rates of diabetes per capita than any other ethnic group on earth. Pinpointing direct causation has been difficult but logical evidence has described rapid cultural and dietary changes, the outcomes of colonization, as being likely factors (Knowler, Pettit, Savage, & Bennett, 1980).

Projects researching the importance of traditional diets are currently being explored to discover the outcomes associated with reintroducing Indigenous cultures with traditional diets, rather than those prescribed by dominate discourse. One such endeavor, The Decolonizing Diet Project, is taking place at Northern Michigan University.
Reinhardt the primary investigator of this project, has identified the region surrounding the Great Lakes as the site where traditional Anishinaabe dietary meals derived. Research subjects are only to eat foods derived from ingredients that were present prior to colonization. This project incorporates traditional education, community participation, and scientific rational to address health implications, cultural survival and colonization. (Cedar Tree Institute, 2011)

**Desired Student Engagement and Experiential Learning**

Students acknowledged that their direct participation and support would be vital to maintain progress and eventually to see a garden become fruitful. The identified means of assistance discussed primarily were related to voluntary assistance. However, challenges that identified funding concerns conflict with the notion that students would provide free labor. Here again, the concern that potentially a project would begin and end due to lack of interest is revisited. Other past edible garden projects have noted this concern as being a priority among administrative entities that ultimately would provide approval.

The initial theme I reported describing collaboration again warrants attention. To discover an approach that fosters interest from academic departments, faculty, and students would be most desirable and practical for long-term success. If students demonstrate interest, but fail to have continued motivation sustained by the framework of their education, than lack of interest is a foreseeable outcome. Yet, students did identify
interest in internships, extra credit opportunities, and related course work. Therefore, interdisciplinary collaboration may represent a relevant catalyst that has yet to be utilized.

Student participants also recognized the opportunity that experiential learning provides. Lectures that employ the active participation of students increases engagement and provides an atmosphere that fosters learning. Similarly, experiential learning creates the same atmosphere but synthesizes other senses, such as sight, touch, and sound in the learning process. Knowing the composition of healthy soil is very different than the touch of it in one’s hands. For this reason, opportunities that encourage learning that do not fit within linear modalities should be utilized.

Implications for Decolonization:

Western forms of learning typically view instructors as experts, talking directly to a classroom with everyone facing the expert. The expert is in control and is able to lead the class in a manner of their choosing. Western constructs run rampant in this scenario. Individuals are lined up in rows and columns, called out alphabetically, and than taught one subject linearly until the course is complete. The student is encouraged to participate, but thoughts should most often relate directly back to the lesson plan.

Indigenous learning occurs in a more engaging manner. Typically this learning occurred from elders, those that have lived long lives and gained their intimate wisdom from their environments and experiences. Indigenous values, such as respect, were instilled by their relationship with each other and their environment. Fishing and harvesting brought life. Clothes were constructed from what was found and provided by the environment. Survival was dependent on ability to adapt with their surroundings.
Western education that values the written word, organization, structure, the observable and measurable fails to recognize the cultural tradition and knowledge of Indigenous people. Writing that does not include Indigenous traditions essentially erase and delegitimize them. Research that has been performed typically is unrecognizable to the group in question, which further removes and misrepresents. (Smith, 2012)

**Increased Congruency of Principles and Practice at Humboldt State University**

Impressions given by students addressed that further incorporation of sustainable practices would serve to benefit the image of HSU. Students identified the campus as “eco-friendly”, “green”, and “sustainable”, yet also referenced a desire to see an increase in practices that match our standards of environmental responsibility. Often times mission statements or principles stay fixed while the practices being undertook serve alternative priorities, such as being up to date on technological innovations, expansion, and advertisement. Here, the goal of a financial return or subsequent benefit is desired, while returns related to well-being and health are forgotten. Therefore, results that coincide with our overall environmental principles and the wellness of our community demonstrate a commitment and care to both endeavors.

Participants welcomed the increase of practices that would further support student welfare and campus community member care. They discussed university principles and preventative practices that address environmental degradation, but fail to protect the health of students faced with mounting debt, academic stressors, and fiscal calamity. Developing creative solutions that tackle concerns affecting the environment and the
inhabitants of the planet may set standards for other universities and communities to emulate. This balance would increase the pride, love, and appreciation that students, alumni, and faculty have towards their experience at HSU.

Implications for Decolonization:

Humboldt State University is situated on what used to be sacred Wiyot burial ground. Territory stretched from south of Ferndale to North of McKinleyville in Humboldt County. The Wiyot population dwindled from approximately 2000 individuals prior to 1860 to less than a hundred by 1910 (University of California Irvine, n.d.). As HSU celebrates it’s 100th year of being an established university, the institution should also recognize it’s 100 years of colonization on Wiyot ground. Happy photographs of privileged white college students engaging in extra-curricular activities and academics do not reflect the real history of this area. This action is a demonstration of how history is re-written to fit the desired dominant framework of colonialism. Matching our environmental principles and practice is one way the University can begin to demonstrate further care for the campus community. Failure to recognize and take responsibility for the broader implications the University’s history has to the original inhabitants of this area fails to begin the restorative action needed for decolonization.

**Increased Holistic Awareness and Understanding**

Participation and awareness of edible landscaping encourages a holistic understanding of the environment, rather than being viewed as an aesthetic commodity. Students supported that connection to one’s environment through practices that require
direct interaction with nature resituate our understanding of the natural world as a living identity. Ongoing legislation and the use of linguistics have fixated our view of nature as a commodity, something to be bought, sold, and profited from. Large conversations today that dominate the political landscape focus on whether or not to increase energy sources known to add greater environmental pollution such as tar sands extraction and hydraulic fracturing. I believe that when we see the majority of discourses framing conversations of environmental concern from a standpoint of energy dependency and profit, the need to revisit the tangible resources responsible for our survival need to be re-evaluated and championed.

Students also shared that the aesthetics of a non-edible landscape could be rivaled by edible ones, while also providing utility that outweighs their non-edible counterpart. Having native flora that support native fauna is incredibly important for supporting the environmental diversity of our region and for maintaining species that reside here. Potential exists in discovering a balance between these two entities that support the wellness of our community and our environment, as discussed in earlier themes. Showcasing the beauty of our campus during visits, local events, and general tourism support a beneficial view of our campus. While providing these aesthetics edible landscapes could also provide harvests that feed communities, hands on education to individuals unaware of food systems, and social gathering locations that are rooted in environmental consciousness.
Implications for Decolonization:

As discussed earlier in this project, Indigenous ways of knowing have developed holistic approaches to working in conjunction with the natural systems of the environment and the needs of the Indigenous populations. Contemporary usage of this design is feasible and not unrealistic. Farhan-Ferrari (2012) argues that Indigenous resource management systems that utilize traditional techniques and philosophies can merge with some technological innovations to reduce deforestation and provide sustainability for humans and the surrounding environment. The author goes on to cite that Indigenous people do not only focus on one aspect of an eco-system, but rather they use all the materials and knowledge of the landscape to create sustainable approaches. This holistic model does not jeopardize the balance of the eco-system. Understanding that one’s ability to survive successfully depends on a thriving environment creates paradigms that develop values of respect and care for the earth.
PROJECT LIMITATIONS

This project was initially supposed to identify themes of the broader campus community. Students, faculty, and various staff were expected to attend the CalFresh Enrollment event either to discover whether or not they qualified for benefits or out of general curiosity. By only having the input of students the findings do not reflect perceptions that may have a better understanding of concerns or recommendations from the administration, or other entities that do not have direct student participation. This does not diminish the input of students, in fact this serves to strengthen the findings relevancy among student populations. However, like some themes suggested, without broad collaborative participation, edible landscaping could not be attained in the manner discussed.

Some basic errors occurred when noting academic departments. A few research assistants, when asking what department the students worked for, which was a question meant for faculty or staff, noted their work department (e.g. Housing and Dining) therefore skewing the actual findings of academic departments that participated.

Future studies may consider events that are not targeted at food security in order to achieve more valid data. One may argue that students at a CalFresh enrollment event were already considering methods to increase their ability to attain food, such as CalFresh, there by increasing the likelihood that they would agree with edible landscaping, or another method that would increase food security.
SUMMARY AND RECOMMENDATIONS

Overall, the findings support that students are interested in increasing the variety of edible landscape on campus, acknowledging the numerous benefits while also providing for the wellbeing of the campus community. Challenges that have been noted in the past continue to be supported, such as funding issues, disagreement, and mismanagement. These obstacles are relevant in many fields and require perseverance and collaboration in order to be hurdled. Universities, which are centers of higher education, discuss activism, transformation, reform, shifting of paradigms, and the like as a means to motivate students to continue their passions outside the institution of the university. We take pride in recognizing the achievements of alum, and should take pride in the care we demonstrated them during attendance.

The discussions of implications for decolonization serve to remind us that our thoughts and perspectives are not separate or novel in many regards. The knowledge we claim and rename has been active and thriving in Indigenous communities prior to colonization. Recognition of these perspectives and empowering of them would not only benefit the systems we hope to cure (e.g. the environment) but would also repair some of the harm instigated by the greed and ignorance of colonial America. Repercussions that Western European culture might face by owning up to historical tragedies for some creates fear and for others disgust. In either view, damage can begin to be healed by citing the event and taking responsibility for the loss of culture, pain, and knowledge. This does not mean create guilt, this means to create renewal.
I recommend that the information provided in this project be used to further increase HSU’s continued obligation to increasing the education of students while also maintaining their well-being. Students discussed achievable methods that if utilized by the administration may be feasible of supporting edible landscapes. Although, the information provided does not represent a large sample of the student body, the themes presented can be used as a foundation for further investigation of student perceptions related to edible landscaping. With this in mind, future research that gains the perspective of the administration, faculty, and individual academic departments at HSU to achieve a well-rounded understanding would be ideal.

An identifiable HSU department that is capable of providing organization and resources to begin the process of collaboration and outreach would be helpful. The HSU Social Work Department, which already supports research and action for addressing multiple local community needs, such as hunger and homelessness, may be an excellent choice for procuring and organizing future actions to address hunger on campus. Interest by the Social Work Department to support edible landscapes and other campus hunger solutions, such as campus food pantries, was voiced during the completion of this project. My hope is that these interests will be utilized while this burgeoning subject continues to manifest.
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APPENDIX A: Questionnaire

Demographic Information
1. Are you an HSU Student?

If yes: What year or standing are you?

If no: Do you work for HSU?

If yes: What is your position?

2. What department do you affiliate yourself with?

Interview Questions
1. Do you think the Humboldt State University should change traditional non-edible landscape into edible landscapes?

Edible landscape:

If yes:

   a. What benefit do you think this change would provide for the university, the campus community and the surrounding community?
   b. In what ways could students assist with this change?
   c. In what ways could faculty support such a change?
   d. How might different academic departments at Humboldt State be engaging with this change?
   e. What potential challenges may arise during this change?

If no:

   a. What are your initial concerns with this change?
   b. What potential challenges exist?
   c. What benefits, if any, do you think might be provided by this change?

2. Do you think changing campus landscape to edible landscape may draw attention or awareness to any present world issues, issues in your life or the lives of other’s around you? And if so could you please explain any that come to mind?
APPENDIX B: Consent Form

HSU Edible Landscape Study

Please initial one of the following:

_____ I am an HSU student.

_____ I am an HSU staff member.

I understand by signing this portion of the consent that, I volunteer to participate in a research study conducted by Masters of Social Work student Ian MacKelvie from the Humboldt State University (HSU) Department of Social Work. I understand that I will be participating in a study evaluating my perceptions and beliefs on edible landscapes and issues associated with edible landscapes. The interview will take approximately 15-25 minutes and will take place on the HSU campus at a CalFresh Recruitment event. Notes will be written during the interview. Quotations from my interview may be used in reports and/or publications, but will not be associated with my name. Interview data will be stored until the end of this study and then shredded. The only document linking my name to the study will be this consent form, which will be kept confidential and stored in a locked drawer in a locked office. After 3 years all consent forms will be shredded.

While my participation in the study may increase awareness about campus edible landscape and may lead to important recommendations I understand that no benefits or risks are anticipated as a result of participating in this study. Confidentiality will be maintained throughout the study by ensuring that no identifiable information of mine will be provided in any final findings. Furthermore, to protect University Departments a minimum of 5 participants will be necessary to publish any findings specific to a Department. I recognize that my participation is voluntary and I may stop at any time.

The Primary Investigator, Ian MacKelvie, at idm6@humboldt.edu or (818) 631-6237, will answer any questions I have. Faculty Supervisor, Dr. Michael Yellow Bird, at mjy9@humboldt.edu or (707) 826-5346 may also be contacted regarding this study.

If I have any concerns with this study, I can contact the Chair of the Institutional Review Board for the Protection of Human Subjects, Dr. Ethan Gahtan, at eg51@humboldt.edu or (707) 826-4545.

If I have questions about my rights as a participant, I can report them to the Humboldt State University Dean of Research, Dr. Rhea Williamson, at Rhea.Williamson@humboldt.edu or (707) 826-5169.

__________________________________________ _               ________________________
Participant Signature      Date