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Insights from Alumni: A Grounded Theory Study of a Graduate Program in Sustainability Leadership

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Abstract: This grounded theory action research study examines the impact of a graduate sustainability leadership program through the lens of its alumni. The study reveals elements of the leadership program that had the most impact on the lives and careers of its alumni, as well as suggestions for how the program could better prepare students in the future. This study finds that impactful sustainability leadership programs might incorporate opportunities for: paradigm and perspective shifts; a culture of support and care; holistic personal growth and development; experiential community-based learning opportunities; and leadership tools and skills that students can practice and use. This study also indicates that future students of sustainability leadership in higher education could benefit from more career preparation and job transition support, and from more emphasis on critical theory, social justice, and diversity/inclusion in all coursework. Implications for program design and implementation are discussed, including suggestions for future practice.

1. Introduction

As institutions of higher education seek to educate leaders who can affect social and ecological change, new programs in sustainability have grown significantly. In particular, the number of sustainability leadership programs in higher education has continued to grow steadily in recent years [1]. The development of sustainability leaders can and should take place within higher education with the purpose of cultivating concern with "the effects of our leadership on the health and integrity of other people and nature" [2]. In this time of sharp ecological decline and deepening social inequity and unrest, it is especially important that higher education prepare leaders who can address these challenges. However, this preparation must challenge the dominant understanding of leadership, moving away from preparing leaders who are part of the hegemonic global capitalist system, which subjugates and undermines healthy and sustainable systems in the name of profit and advancement. Instead, higher education needs to prepare effective sustainability leaders. These are leaders who challenge oppressive systems, understand interconnectedness, and can work creatively and collaboratively to make systemic change in our ecological and social systems. Here, we articulate in more depth what sustainability leadership has come to mean and review literature on sustainability leadership development, particularly in higher education. This literature informs the results of a grounded theory study that examines the impact of a graduate sustainability education and leadership program through the lens of its alumni. The study reveals the elements of the leadership program that had the most impact on the lives and careers of alumni, as well as suggestions for how the program could better prepare students in the future. The results of this study provide new insights and nuances into the preparation of sustainability leaders in higher education.

1.1. Sustainability Leadership

Sustainability leadership serves the specific purpose of supporting healthy and resilient socioecological systems and thus leadership competencies or skills employed in pursuit of this purpose [2,3]. First, sustainability leadership is an ethical way of being and doing that involves "acting from one's values to address complex sustainability challenges and to affect sustainable change" [4]. Sustainability leadership also reflects the emerging consciousness of the world as complex, interconnected, networked, and relational; a complexity science understanding that reality is constantly changing, nonlinear, emergent, self-organizing, and adaptive [5–7]. As such, sustainability leadership involves a shift away from both a modernist and mechanistic worldview, and from a hierarchical, person-centered, control-based leadership practice. While traditional styles of leadership mirror western colonial society and often serve the continuation of exploitation, collective violence, and positional power, sustainability leadership seeks to foster the health, integrity, and resiliency of socioecological systems [2]. Because sustainability leadership specifically addresses complex challenges that reflect our complex reality, it must be systemic, process-oriented, and relational [4]. This relational and process-oriented focus requires collaborative models of leadership that are inclusive and empowering [6,8]. Sustainability leadership is thus a shared process of participation in which anyone can become competent [3]. Rooted in an understanding of holistic interconnectedness among and between people and the earth's natural systems, sustainability leaders create and facilitate opportunities for people to work together, interrupt oppression, solve problems, and generate answers [6]. This understanding of leadership is such a significant shift away from traditional models of positional leadership that it can sometimes be challenging for developing sustainability leaders to embrace a new conceptualization of what leadership can be and to recognize themselves and their collaborators as leaders. However, sustainability education programs must be able to emphasize leadership development that is empowering, collaborative, and critical of dominant systems in these times of severe ecological and social crises. Thus, designing and developing successful sustainability leadership programs within higher education requires careful crafting and an understanding of best practices.

1.2. Sustainability Leadership Development

The field of sustainability leadership has grown very quickly in the last 10–15 years as ecological and social issues such as climate change, loss of biodiversity, destruction of ecosystems, widening income gap, food insecurity, and social injustices have intensified. These issues have become strong motivators within higher education for the development of sustainability leaders who can work to address these challenges within both the public and private sectors. Previous studies have provided insight into the key elements of effective sustainability leadership programs and suggest best pedagogical practices for developing sustainability leadership. In their analysis of common characteristics of emerging sustainability leadership programs within higher education, Shriberg and MacDonald found that despite a wide variation in the type of programs offered, several common features emerged: a focus on network building, systems thinking, and project-based and experiential learning. In addition to these programmatic features, many program directors cited effective communication, systems thinking, self-assessment, and self-analysis as key skills that their programs seek to instill in students [9]. Shriberg and MacDonald also found that "peer-to-peer learning" and "diversity of participant perspectives" were some of the most effective components of sustainability leadership programs [9]. This was particularly strong in programs that employ a cohort format, and in which sustainability leadership is viewed as a group process.

In a follow up to their 2013 study, MacDonald and Shriberg sought to understand how alumni of 61 sustainability leadership programs perceived the outcomes of their learning experiences. Their results indicated that while alumni are generally satisfied with what they learned in their programs and report being well placed professionally, there is a gap in the knowledge and skills gained and those needed in the workplace. Their findings reveal that while sustainability leadership programs tend to emphasize systems thinking, dealing with complexity and self-reflection, program design and

implementation might benefit students more with a stronger focus on practice-oriented skills that can be used in the workplace such as facilitation, public speaking, and coalition building [1].

Another study examined student perceptions of learning in an undergraduate sustainability leadership certificate program and revealed the importance of application-oriented instructional methods and the development of a supportive community to students' learning [10]. Students expressed that the importance of community was connected to feelings of belonging, sense of place, and feeling safe and supported. The learning community also provided an opportunity for students to engage with the tensions of working with a group of people with differing backgrounds and opinions, and to practice interpersonal skills. Students also highlighted the significance of personal well-being in their sustainability leadership learning, citing activities like self-care as contributing to self-awareness and growth in feeling empowered [10].

In another study of sustainability leadership development within a graduate program, several aspects of pedagogical design that were found to be influential to student learning were: creating a sense of community, learning from peers, and case-in-point experiential learning. [11]. The findings from both the Savage et al. [10] and Burns [11] studies highlight the positive impacts of learning communities and student-centered experiential learning on sustainability leadership development. These findings also align with characteristics that Eich found of high quality postsecondary leadership programs, which included students being engaged in building and sustaining a learning community, and student-centered experiential learning experiences [12]. According to de Guerre and Taylor, designing educational programs to support sustainability leadership development requires reflexivity or a way of knowing in which the knower places themselves in the world they seek to know, rather than detached from it [13]. Thus, opportunities to learn in the community and to enhance self-awareness and reflection are key aspects of sustainability leadership development [4].

Because of its specific orientation and purpose, sustainability leadership implies the development of certain characteristics that would not necessarily be present in all leadership education programs such as: recognizing the interdependence of people with each other and the more than human world; embodying a way of being and acting rooted in sustainability values; utilizing a systems thinking perspective; commitment to facilitating collaborative processes that include diverse perspectives; and being able to envision a long-term sustainable future, among others. In order to prepare people to engage in this form of collaborative and relational sustainability leadership, research thus far shows that sustainability leadership development in higher education can be supported through pedagogies and practices that emphasize communities of learners and peer-to-peer learning, experiential learning, a focus on reflection, process, self-care, systems thinking, and skills in communication, facilitation, and collaboration.

1.3. The Leadership for Sustainability Education Graduate Program

The Leadership for Sustainability Education (LSE) master's program at Portland State University was one of the first U.S. graduate programs of its kind. Created in 2003 and nurtured by a growing campus-wide sustainability movement, LSE combines the study of sustainability leadership and pedagogy to prepare sustainability leaders and educators who can work collaboratively to make systemic change. The LSE program seeks to facilitate transformative learning that emphasizes personal growth and empowerment, interconnectedness with all life, social and ecological justice, relationship-building, and learning skills to engage in regenerative change and healing in the world. LSE graduates find careers as educators and leaders with both youth and adults in a variety of areas: garden or farm-based education; outdoor education; higher education; a variety of nonprofit organizations and businesses; and the public sector. Housed in the College of Education within the Educational Leadership and Policy department, this 45-credit master's program is home to three faculty and approximately 50 students. Students take a set of core courses in Educational Leadership and Policy, as well as core and elective courses in LSE that focus on sustainability leadership, spiritual leadership, sustainability pedagogy, whole systems design, global political ecology, garden-based

education, nonviolence, deep ecology, and more. All courses nurture a sense of place, earth connection, ecological identity, and interconnectedness with all life. Additionally, a key aspect of the LSE program is community-based learning (CBL), which is a required part of every course. For each graduate course, students complete a 30 h CBL with a community organization of their choice, in connection with the course themes. Another unique aspect of the LSE program is its Learning Gardens Lab, a four acre garden-based sustainability education site where students often engage in community projects and CBL. In 2010, the LSE program underwent a systemic revision that included the implementation of a cohort model, new core classes, and new program learning outcomes and assessment tools. At that time, we created four key programmatic learning areas, adapted from Parkin's (2010) work on sustainability leadership, which include: (1) Self-understanding and commitment; (2) a systemic view of the world (3) biocultural relationships; and (4) tools for sustainable change [14]. These four learning outcomes are woven into all LSE coursework and activities. While there are no consistent key competencies in the field of sustainability leadership, the LSE key learning areas align well with common core competencies in the field including: systems thinking, critical thinking, collaboration, communication, self-reflection, creative problem solving, and interpersonal skills [1].

Over the years, the LSE program has continued to grow and transform as faculty have sought to align LSE learning with best practices in the field of sustainability leadership and education, and as we have listened to and implemented feedback from our students. We were curious to know more about the specific impacts of our program on our alumni and to better understand how to further shape the LSE program to better prepare our graduates for their professional work. In 2018, we conducted a study of the alumni who have graduated since our 2010 programmatic changes (2010–2017). The research included a survey with both quantitative and qualitative elements, as well as focus group interviews and individual interviews with LSE alumni. The results of this study build on the current literature in sustainability leadership development and point to the aspects of this sustainability education and leadership program that are having the most impact on the lives and careers of our alumni, as well as places where this program can place more attention and continue to grow. These results may help to inform the design or implementation of other sustainability leadership programs. In this study we use both the terms alumni and alum. The term alum is used intentionally as a non-gender specific inclusive term.

2. Methods

2.1. Research Design and Research Questions

This study was designed as an action research study. Action research in educational settings typically seeks to understand complex issues in a specific context and to and improve practice based on the research [15,16]. We sought to better understand the experiences of LSE alumni since 2010 and to use that knowledge and deeper understanding to continue to develop and improve the graduate program. The research questions included: What impact has the LSE program had on alumni both personally and professionally? What aspects of the program had the most impact on their lives? What aspects of the program best prepared alumni for their professional work in leadership and education? How could LSE better prepare graduates in the future?

A grounded theory approach was used in this study in order to better understand the phenomenon and generate theory through the experience and perceptions of the participants themselves. The results thus arose from, and were grounded in, the data that were collected [17,18]. The data collected for this study were both qualitative and quantitative. Quantitative data were collected in a 38-question survey administered using the software Qualtrics. The survey included five open-ended qualitative questions. The survey was sent to 108 alum; 47 responded. All of the 108 alum were also invited via e-mail to participate in focus group interviews and/or an individual interview. Interviewees were those who either wanted to and could participate in one of the two focus group interview times or who responded that they would like to do an individual interview. Qualitative data were collected in the form of

two focus group interviews with a total of six participants each and five individual interviews. All qualitative data were coded on an ongoing basis, using the constant comparative method of analysis in order to continually review existing data and compare and categorize new data based on the coding of that data [18]. The data were first coded on an ongoing basis with open and descriptive coding. A second round of coding allowed for broader themes to begin to emerge and to be identified. In the third round of coding data were organized, connected, and the final connective theory about the phenomenon emerged [19]. Throughout the data analysis process, researcher memos provided a way to reflect on the data analysis process and the results. This research was approved by our university's Institutional Review Board and all participants consented to participate in this study.

2.2. Participants

Not all 47 survey participants chose to include their identities, but of those who did, 33 students identified as female and 7 identified as male. None identified as gender non-binary or trans. The age of the participants ranged from 24–63, although the majority of responders were in their 30s. Of these participants, 31 identified as white, six identified as Latinx, three identified as Jewish, and one as Native American/biracial. Further, 16 of the survey respondents lived outside of the Portland area, while the others lived in Portland, Oregon. The first focus group consisted of six white women, while the second a group was made up of mixed ethnicities with three women and three men. Individual interviews were with four women and one man, two of who identify as either Latinx or African American. Two of the individual interviews took place in person, while three were conducted on the phone or via skype with alum who live outside of the local area.

3. Results

The first section of these results examines the impact of the LSE program on its alum and focuses on the first two research questions: What impact has the LSE program had on alumni both personally and professionally? What aspects of the program had the most impact on their lives?

The data from the survey and interviews revealed that the impact the LSE program had on alum was largely transformative and life changing. The transformative nature of the program and its impact on alum arose in four key areas: (1) A perspective/paradigm shift and new ways of understanding the world; (2) intentional program culture of support and care; (3) learning that was personal and focused on self-growth and development; and (4) community-based learning.

3.1. Perspective/Paradigm Shift

Many alum noted that the way they understood the world and their place in it shifted dramatically while in the LSE program. This shift was one away from a modernist mechanistic view of the world to an interrelated, systemic, and relational perspective. This included a critical perspective of the dominant paradigm and an understanding of their own privilege within systems of oppression. Much of this shift in perspective was supported by course readings and discussion. In the survey, readings were rated as the most impactful pedagogical tool in the LSE program, indicating the tremendous impact of the new and varied perspectives represented in course readings. One alum noted, "I distinctly remember reading about critical theory and starting to question my whole frame of reference. It was very powerful." For another alum, this shift in perspective also impacted their sense of agency. This alum explained, "Coming into LSE I was unsure of the work I could do or what my role was . . . and learning about the western perspective, which to me is congruent with a settler colonial perspective or a white American perspective, was really helpful to develop my analysis of what's going on and what I can do." For these alum, learning about critical theory and the systems of oppression inherent in our dominant systems was part of the transformative impact of the LSE program on their lives. For others, the impact of the program also included a shift in perspectives related to how they engage in all kinds of systems, how they perceive themselves, and their leadership practice. Another alum explained, "LSE transformed the way that I live my life in regards to recognizing my power and

practicing the ongoing interruption of oppression. I value self-care much more now than I used to and I strongly believe in lateral leadership and establishing strong relationships in the work place and at home ... Because of LSE, I have transformed the way I look at the systems I am a part of: food, work, community, and how my role does have an impact on the greater whole." Throughout the data, a strong theme of impact was the transformative paradigm shift that alum experienced in the LSE program. This shift in perspective and paradigm was consistent with the pedagogical intentions of the program faculty, which center on transformative learning theory that is relational, spiritual, and contextual, and critical [20,21].

3.2. Intentional Program Culture of Support and Care

Another aspect of the LSE program that had a strong impact on alum was the intentional culture of support and care within the program. Alum spoke about LSE as an anchor, as a program with depth that had a certain "feel to it." This feel or culture was described as one that was grounding, refreshing, softening, opening, welcoming, healing, and restorative. Most alum felt a sense of belonging and acceptance in this LSE culture for which they felt gratitude and a sense of looking back fondly on and cherishing the experience. This culture of belonging and depth was rooted in what alum recognized as an intentional program design that was supportive and caring. This intentional focus included the fostering of supportive and caring relationships, and pedagogical patterns that included aspects of personal development such as self-care, mindfulness, slowing down, and emergence.

The cohort (or co-heart as we say) learning community created each year was important to their sense of belonging and to learning how to communicate, listen, deal with conflict, and hone honesty and patience. Alum spoke of learning how to challenge each other and push back, but also of supporting one another and learning how to create community. Alum spoke of this happening with the support and affirmation of faculty and also through intentional learning opportunities such as required weekly reading groups outside of class, small group projects and teaching sessions, as well as the program's yearly orientation and other events, including gatherings at the program's Learning Gardens Laboratory where students engage in community projects such as growing food for a farm stand, community events, and teaching middle school students. These nurturing relationships in the program were for many very close and were described as loving and caring. One alum noted, "The co-heart model and LSE pedagogical practices did much to create spaces of inclusion, welcome vulnerability, and authentic relationship." Another commented, "Experiencing the power that exists in the level of commitment of the LSE community was transformative. My professors and fellow students inspire me to this day and I will be forever grateful for the experiences we shared together. My life changed because of this program and I feel great love for the people that I met in the program and that is not something that often happens in an academic system." Another alum spoke of the impacts of the relational program design and culture as important to their emergent sense of self. They said, "The whole LSE program was not always comfortable, but the impact or the effect was this sort of like softening and simultaneous anchoring ... the relational aspects of learning, inside and outside of the classroom were really beneficial in establishing a sense of place and self."

Faculty mentoring and modeling was also impactful, as was the creation of a supportive and safe learning community. One alum noted that faculty "went to great lengths to ensure all voices that wanted to be heard, were." Another explained, "LSE professors demonstrated amazingly how to engage students at all levels (emotionally, spiritually, culturally, and intellectually), which is the basis for inclusion ... classroom management practices seemed to always intentionally be creating space for quieter voices and giving a voice to diverse perspectives." Another said, "Faculty are really doing everything to be responsive to students needs and concerns and to show up in ways that are authentic, to bring their whole selves to their work within the program." Alum spoke frequently about how the support and trust of the faculty and the LSE community enhanced their learning. This is indeed an intentional aspect of the LSE program, as we seek to create open, caring, and holistic learning spaces [22–24].

Learning from one another, collaborating, creating group norms, starting classes with an opening circle, and embodied mindful learning were all discussed as impactful aspects of the LSE program. In the survey, opening circle in which students checked in with each other and practiced mindfulness was rated as the second most impactful pedagogical strategy used in the LSE program. One alum expanded on the impact of the intentional supportive community saying, "I think the learning environment that was created and all of our classes, from the time we spent setting up group norms and just having a container that was really safe for everybody, or I mean I don't know if safe is the right word but it was so intentional, that while we were there we could be vulnerable, we could push back, we could be critical of each other and even the program and the readings. And so I think that through the relationships we built that really impacted and affected how I work in groups or how I am as a leader in sustainability education."

While the intentional program design and culture of support and care was impactful for most alum, it is also important to note that not all alum felt the same sense of belonging and inclusion. In the survey, some alum noted that LSE is primarily a culture of whiteness with certain norms that sometimes led to feelings of exclusion. The lack of diversity left some feeling on the outside. One person said, "I think this program depends on mostly white, mostly women-identified students of privilege to carry on and students struggling with other identities and circumstances feel excluded and unsupported by LSE culture." This points to the need for the LSE program to expand and extend the intentional culture of inclusion and care, and to de-center whiteness.

3.3. Learning That Was Personal and Focused on Self-Growth and Development

Most alum reported that the personal nature of learning in the LSE program was highly impactful. This learning included a focus on identifying and clarifying their values and their identities as educators and leaders. A focus on self-reflection and awareness resulted in empowerment, increased confidence, and courage as they experienced learning that encouraged their authenticity, vulnerability, and enoughness. Alum talked about learning self-care, self-compassion, and about trusting, loving, and learning to be themselves. Learning to embrace a spiritual sense of self, to live with more ease and presence, and to trust the process of emergence were also important aspects of impactful learning that was personal. A connection to place and experiencing a sense of place was also a theme of impact. One alum explained, "Who I am in the world and how I show up for myself and others was positively impacted by the LSE program. I left a more compassionate and caring human and more at ease with the uncertainty of life. I believe that this opportunity allowed me to be truly awake in this beautiful and complex world and have more courage to do the work I am called to do." Another alum said, "LSE gave me an avenue into spiritual practice, which I had not found. It gave me a mirror to understand myself in ways I had never ventured into, including learning to see the places I need to work on." Another said, "I look at stress and what place that has in my life and how, through the tools of self-care, I can navigate that a lot more successfully." These personal applications of learning impacted alum in both their personal and professional lives. One alum explained, "LSE is not technically based; it is very much based around pulling out a lot of things that you didn't know you had within you emotionally and mentally. But doing that in a gentle way. Something that I take with me professionally is being gentle with others and trying to be understanding . . . I needed to learn and grow. LSE helped me to find a smoother relationship with the world and with myself instead of really just dragging myself through life." Another alum commented, "A deeper comprehension and appreciation for interbeing, interconnection, and whole self-engagement shifted the way I am and interact in both personal and professional settings." Yet another said, "I left feeling more confident in my myself, that I could take on bigger roles, that I can help change the world . . . " The focus on learning that was personal and focused on self-growth clearly had a strong impact on alum both personally and professionally and was an important part of their sustainability leadership development. In the LSE program, this focus on self-development was nurtured through regular contemplative pedagogies

and the intentional inclusion of assignments and activities that focused on interbeing, self-care, and self-compassion [25–27].

3.4. Community-Based Learning (CBL)

Most alum felt that community-based learning was also highly impactful to their learning. This included multiple ways of exploring and learning in the community including internships, field trips, on-campus leadership opportunities, and other ongoing community volunteer opportunities. These experiences allowed for practical experience and connections that impacted their careers. A 30-h community-based learning (CBL) requirement was part of all LSE courses and showed up in the data repeatedly as an impactful part of the learning experience. In the survey, CBL was ranked as the third most impactful pedagogical strategy in the LSE program. One alum said, "The community-based learning was huge . . . it is almost impossible for me to talk about my formal education, the master's degree, without the community based work that I was part of . . . to me it is inseparable in a lot of ways." Alum tied these CBL experiences closely to their personal and professional development. One alum explained, "The organizations that I ended up working for were really big for me professionally, but also kind of fundamental to my thinking about what I want and what I want to do in the world".

For many, the CBL impacted their networking and community relationships, which resulted in new opportunities or getting a job. One alum commented, "I got my job through CBL. There was an organization that I really admired and I was never able to volunteer at. I think to have the kind of clout to say, I am a graduate student and I would like to work with you, I am doing a project and here are my skills that I have to offer . . . that legitimacy was really an asset." Another alum commented on the applicability of practical learning to the development of sustainability leadership saying, "I loved the theory and the practical hands-on learning equally—I believe the program has continued to improve and provides an amazing assortment of pathways to discover sustainability leadership." Being required to participate in Community-Based Learning as part of every course clearly had an impact on alum, both in the application of their learning and leadership skills, and in finding work in the field. Engaging in CBL allowed them to explore and work with a variety of community organizations during their graduate studies and provided ongoing experiential and contextual learning [28] which often supports transformative sustainability learning [29].

3.5. Results: Part 2

The second section of these results examines the impact of the LSE program on its alum and focuses on the last two research questions: What aspects of the program best prepared alumni for their professional work in leadership and education? How could LSE better prepare graduates in the future?

The data revealed that the aspects of the program that best prepared alum for their professional work were (1) learning pedagogical tools and (2) shifting their understanding and practice of leadership. The program could better prepare graduates by providing (1) More career preparation and guidance; (2) more skills in translating the LSE learning to the workplace; and (3) more integration of diversity, equity, and inclusion, including more integration of people of color, and more focus on systems of oppression and critical theory.

3.6. Pedagogical Tools

LSE alum reported that learning pedagogical tools was one of the key aspects of the program that prepared them for their professional work in sustainability education and leadership. This included learning to facilitate learning that was transformative, collaborative, and experiential. Hands-on and place-based pedagogical strategies were important to their learning, as were facilitating mindfulness and critical reflection. Alum also noted the importance of learning to facilitate "popular education" or education that draws on the collective wisdom of the group and in which people work together to learn from one another [30]. Social justice pedagogy was important as well [31–34]. Learned pedagogical tools were also closely connected to personal development, including learning to observe, slow down,

and connect to place/earth [27,35,36]. One alum explained that she has reduced the traditional use of power point and technology in her work, in order to "create more face to face engagement and interaction . . . because it is all about relationships, as well as actual communication and collaboration with people." Another alum spoke of replacing lecture-based practices in her work with hands-on experiences and of speaking to a national audience about the importance of incorporating critical theory and reflection into their work. Yet another spoke of the importance of being an educator who empowers others, of being able to "recognize that members of our communities know what they need and they have the expertise and the experience that is required to impact the positive changes and address the solutions that are possible." Yet another alum spoke of sustainability pedagogy as a craft and themselves as an apprentice of the craft. It was clear from alum that facilitating transformative sustainability learning required an array of pedagogical practices that they learned in the LSE program. These pedagogical practices were important for their professional roles.

3.7. A Shift in Their Understanding and Practice of Leadership

Much like the shift in perspectives previously discussed, alum specifically talked about the shift in their understanding and practice of leadership as something that was important in their professional preparation. This shift included coming to understand leadership as letting go of control, empowering others, and creating shared and horizontal leadership opportunities. Leadership also became understood as process-oriented and personal, consisting of skills such as listening, storytelling, holding silence, and practicing vulnerability through personal narratives and failures. Part of this new understanding of leadership for alum also included recognizing dominant hierarchical systems of leadership as oppressive. Understanding systems of power and privilege, the importance of multiple perspectives and how these relate to leadership was also important. One alum said, "I had a very one-dimensional view of leadership that was rooted in whiteness and power, and I learned a lot from indigenous perspectives and from group projects with a variety of perspectives." A number of alum discussed how they apply sustainability leadership in their professional roles. One alum explained, "I encourage failure and I also try to function with compassion . . . I ask a lot of questions and try as much as possible not to give as many direct answers and if I do offer suggestions, it is more of a storytelling." Another alum explained their leadership as "stepping back . . . I am really more of a listener and trying to lead from that place of letting the collective wisdom be a really big part of the solution and answer." Other alum also talked about the importance of humility and leading by listening. Another said, "I am thinking a lot about equity, non-hierarchy, and collective decision-making and bringing the thoughts of the children, their families, and my colleagues into the work that we do." On the whole, alum noted the importance of developing a new understanding and practice of sustainability leadership to their careers. This new understanding and practice of sustainability leadership was much more open, inclusive, collaborative, and non-hierarchical [4,6,7].

3.8. Better Preparation

The data revealed three areas in which LSE could better prepare alum. These included: (1) More career preparation and guidance; (2) more skills in translating LSE learning to the workplace; and (3) more integration of diversity including people of color and focus on systems of oppression and critical theory.

First, LSE alum talked about needing more career preparation and guidance. The breadth and openness of the Leadership for Sustainability Education program means that graduates have many options in terms of careers, but some needed and wanted more support in finding the right work after graduation. Alum wanted to have more connections with community organizations and to know more about the job opportunities within the field. They suggested more guidance for future students in making their community-based learning more intentional for job exploration. Alum also suggested more connections for current students with LSE alum and learning more skills for job searching (e.g., resume, interviewing) as well as on the job skills (e.g., group facilitation and conflict resolution). Other

technical skills that alum suggested for job preparation included more research and technical writing experience (e.g., grants, volunteer descriptions, MOUs, etc.)

Second, LSE alum noted that the transition from LSE to a post-graduation job was difficult. Much of this difficulty arose from leaving the LSE community, the intentional culture of care and support, and the shared understanding and language. Alum spoke of struggling to "translate" their new understanding of the world and their new skills in pedagogy and leadership into the workplace, especially when the workplace was functioning within a dominant hierarchical paradigm. They wanted more support in making this transition and being able to talk about their skills and experience, and about what they could offer to an organization. They also wanted more skills and tools for facilitating systemic organizational change within these organizations. In the survey, more preparation in how to affect organizational change was the top choice of topics alum would have liked more of during their time in LSE. One alum explained, "I have had a couple of experiences where like there's a disconnect between what they see as a strong leader and what I'm trying to build as a leader . . . it takes more time to navigate situations, trying to be humble and deal with big issues like racism and institutionalized systems of oppression." Another said, "It can be lonely, leaving the program and going into an organization, other organizations and institutions that are profoundly different from LSE and really take more dominant approaches." Another alum pondered whether this transition should be to "find ways to work for ourselves rather than to just keep sustaining oppressive systems." Similarly, other alum noted the need for more entrepreneurial and business skills to prepare them for the transition from LSE.

Third, alum noted that the LSE program can benefit from a stronger focus on diversity, equity, and inclusion. Alum noted that they would like to see more students of color in the program and more faculty of color. Reading materials were also discussed as a place to bring in more diverse voices. While many alum noted that the LSE program has increasingly focused on learning that highlights power, privilege and systems of oppression, many noted that a stronger focus on critical theory and social justice throughout the program's curriculum would strengthen the program. As one alum explained, "There was a lot of good work that happened on social justice and confronting systems of oppression. A lot did happen, but I think it has to go deeper in all sustainability education . . . it has to be more challenging and more in your face . . . I think partnering with the right organizations we would be able to have those real experiences on the ground with different populations, whether it be communities of color or low income or states of houselessness or whatever." Another alum suggested new readings focused on social justice and organizational change through democratic organizing principles and other strategies driven primarily by people of color. Yet another alum suggested, "Find ways to shape the program from perspectives that might not be showing up. I see and appreciate the openness of LSE to incorporate feedback from students and alum, but it is leaving out ideas and feedback from folks who do not even get in the door." On the whole, many alum commented on wanting to see more of a focus on social justice, interrupting oppression, and the inclusion of more diverse perspectives into the LSE program.

4. Discussion of Results

In looking at the aspects of the LSE program that had the biggest impact on alum, most of these results connect closely to previous literature on sustainability leadership development. The importance of experiential learning (in this case through community-based learning) and of learning within intentional learning communities have been well documented as important to sustainability leadership development [9–11]. Some aspects of personal learning that were found to be impactful in this study, such as self-reflection and self-care, have also been documented in the literature as important to sustainability leadership development [10,11]. However, this study points even more strongly to the importance of personal and relational learning that is holistic, emphasizing spiritual, emotional, physical, and relational aspects of learning leadership in community. The specific emphasis on care and support was found to be highly impactful to learning, most likely because within

an environment of safety and belonging students felt they could bring their whole selves to their learning, and practice authentic leadership by being vulnerable. This highlights the need for academic programs to move beyond the traditional boundaries of academia and to specifically foster caring relationships and the development of whole people within programs [37]. This holistic emphasis requires opportunities for students to get to know and develop themselves as spiritual, emotional, and relational beings [24,25]. This study indicates that having the opportunity for deep perspective change and personal development, especially in areas not usually emphasized in academia, had a transformative impact on alum in terms of their confidence, relationships, and leadership abilities. Program design should be intentional, weaving support and care and opportunities for personal development into course activities and assignments as well as other program activities. For example, including the pattern of opening circle into all LSE courses has had a tremendous impact on relationship building, fostering relationships that go beyond collegial and become personal, caring, and supportive. This study also points to the important role faculty play in designing and modeling these experiences of relationship building, and in facilitating contemplative practices that foster mindfulness and slowing down enough to connect [38].

This study also highlights the importance of designing learning opportunities for perspective shift through the introduction of new and challenging perspectives. Within the LSE program, this includes examining and challenging dominant paradigms and becoming versed in theories of new science, complexity theory, and systems theory, and practicing leadership that is rooted in those theories [7,39,40]. It also includes understanding and personalizing systems of power and oppression and exploring global and institutional systems of oppression and how to interrupt oppression. We weave indigenous and spiritual perspectives of deep ecology and interbeing into all of our courses. Opportunities to connect with the earth, the more than human world, and our places are also woven into all our work in LSE. [26,41–46]. Introducing all of these perspectives, which are new to many of our students, provides intense opportunities for self-reflection and for opening to new ways of being and new ways to engage as leaders.

These results also indicate that opportunities for hands-on learning and practice, both in classes and through CBL is important for learning the pedagogical skills and leadership skills needed for professional work. This study finds, much like MacDonald and Shriberg's study of alumni, that even more opportunities for learning and practicing skills such as facilitation, writing, communication, and conflict resolution are important for career preparation in sustainability education and leadership [31]. One way that LSE has already started to take action from this action research project and to adapt to this need is through the redesign of a one-credit course that students take at the end of their first year called Leadership Seminar. This course was originally created to provide opportunities for students to start doing preliminary writing and research for their end of program comprehensive papers. Now, this seminar focuses more on helping students articulate their perspective shifts and values and beginning to explore a life and career design that might align with their values, gifts, and interests. In this seminar, we connect students to a wide variety of alumni who share their career paths and stories, asking students to create plans for how they might experientially explore various career options through "wayfinding" conversations with alum, and through CBL and internship opportunities during the final year of their program.

Beyond these suggestions for learning new skills and being more prepared for their careers, this study also points to other important considerations for sustainability leadership programs. In the LSE program, we will be exploring new ways to support students in learning how to use their sustainability leadership skills to be actively involved in organizational change. We also want to support students in learning to "translate" their transformative experience and paradigm shifts to organizations that may not yet share these new perspectives or values. This is challenging, as sustainability leaders learn to exist in the "space between stories," between what has been and new ways that are emerging [26]. However, one step we are making in LSE is talking more explicitly with students about this challenge and how it relates to transitioning out of LSE and into professional work. Providing more opportunities

for students to be able to share their learning, in writing or through speaking with groups, may also help them to better articulate their perspective shifts and what it means to the work they are doing.

This study also points to the importance of diverse and critical perspectives to sustainability leadership development. Emphasizing social justice as well as understanding and interrupting systems of oppression are important aspects of sustainability work and they must be attended to, so as not to continue to perpetuate systems of domination and control [47]. Sustainability as a discourse and field, even as an epistemology, arose in the West from within the context of colonialism and global capitalism. Sustainability leadership development must critically examine these roots and attend to the inclusion of a variety of non-dominant perspectives. In the LSE program we already do provide a variety of non-dominant perspectives and are working to de-center whiteness in our curriculum. We are also looking for ways to more effectively facilitate the important work of understanding power and privilege within mixed groups of students that include people of color and other marginalized identities, as well as white students who may have never before encountered critical theory. In the future, our work includes partnering with more organizations led by and for people of color, providing our students with opportunities for learning within these organizations, but also providing our program with crucial listening and learning opportunities. We could include more people of color as guest teachers and speakers, and could reach out to more diverse organizations in our program recruitment.

On the whole, sustainability leadership development must include a deep discussion of social justice and equity, as well as the systemic and historical nature of oppression, power, and privilege in order to be effective. Sustainability leaders must be prepared to work collaboratively with diverse others, be able to understand oppressive systems, and know how to leverage change within these systems.

5. Conclusions

This grounded theory action research study of alumni adds to the literature on sustainability leadership development in higher education and expands upon what is known about how to develop sustainability leaders. In particular, this study indicates that programs that wish to design impactful sustainability leadership programs might incorporate opportunities for: paradigm and perspective shifts; a culture of support and care; holistic personal growth and development; experiential community-based learning opportunities; and leadership tools and skills that students can practice and use. Further, this study indicates that future students of sustainability leadership in higher education could benefit from more career preparation and transition support, and from more inclusion of critical theory, social justice, and diversity and inclusion into all coursework. As professionals in higher education seek to foster sustainability leaders who can meet the profound socioecological issues we are facing, we are challenged to create opportunities for transformative and empowering learning within systems and institutions which are themselves unsustainable. Nonetheless, these opportunities for learning can be created through intentional spaces and cultures in which sustainability leadership is practiced and modeled as caring relationships, dynamic processes, critical inquiry, and holistic engagement. By connecting deeply to the earth and each other in this transitionary time, we can create powerful spaces of healing and transformation in which to participate in what Eisenstein calls, "the space between, and birth into the new" [26].

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