Understanding Environmental Justice Instruction in Higher Education: Activist Epistemic Orientations and a Continuum of Community Engaged Curricular and Pedagogical Practice

Christopher James Rabe

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UNDERSTANDING ENVIRONMENTAL JUSTICE INSTRUCTION IN HIGHER EDUCATION: ACTIVIST EPISTEMIC ORIENTATIONS AND A CONTINUUM OF COMMUNITY ENGAGED CURRICULAR AND PEDAGOGICAL PRACTICE

A Dissertation Presented

by

CHRISTOPHER JAMES RABE

Submitted to the Office of Graduate Studies, University of Massachusetts Boston, in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2022

Higher Education Program
UNDERSTANDING ENVIRONMENTAL JUSTICE INSTRUCTION IN HIGHER EDUCATION: ACTIVIST EPISTEMIC ORIENTATIONS AND A CONTINUUM OF COMMUNITY ENGAGED CURRICULAR AND PEDAGOGICAL PRACTICE

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ABSTRACT

UNDERSTANDING ENVIRONMENTAL JUSTICE INSTRUCTION IN HIGHER EDUCATION: ACTIVIST EPISTEMIC ORIENTATIONS AND A CONTINUUM OF COMMUNITY ENGAGED CURRICULAR AND PEDAGOGICAL PRACTICE

May 2022

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Directed by Professor John Saltmarsh

Starting in the early 1980’s, the environmental justice (EJ) movement was critical in drawing much needed attention to how communities of color, low-income groups, Indigenous peoples, and other marginalized groups have experienced a disproportionate burden of environmental and ecological harms. The EJ movement sparked the birth of the EJ field of study. While originally focused on quantitative and distributional understandings of toxic waste in communities of color, the EJ field of study has since expanded to comprise community-based methodologies and new ways to understand justice, including participatory, recognition, and transformational approaches. The EJ field now represents multiple areas such as climate, food, worker, global, and transnational justice.
However, despite the continued growth of the EJ movement and field of study, and recognition by organizations within higher education, theory and empirical research has demonstrated that EJ content knowledge and those who embody this content knowledge continue to be excluded within interdisciplinary environmental and sustainability (IES) degree programs. As such, this dissertation seeks to explore how EJ faculty develop, organize, and implement their EJ courses within different institutional and disciplinary contexts.

This study employs an interpretive multiple case study along with a theoretical and conceptual framework organized around the process and practices of faculty instruction. The core findings demonstrate that although all faculty members expressed activist epistemic orientations and community engaged goals for their instruction, each faculty member implemented these goals differently due to competing epistemologies, and different programmatic and institutional supports and impediments. Various levels of community engaged curricular and pedagogical practices are examined through a continuum of community engaged EJ instruction.

Community engaged EJ instructional practices included the encouragement of activism, invitation of guest speakers, courses designed around site visits and community partnerships, and the practice of decolonial field methods. Key implications discuss how and why EJ content knowledge and community engaged pedagogical practices should be intentionally integrated into IES program contexts. Additionally, the implications explore how the use of collaborative, student-centered, and community engaged methodologies are connected to culturally relevant and justice-centered instructional practices, and how these may apply to various disciplinary contexts across higher education.
ACKNOWLEDGEMENTS

While working on this project for more than three years, I received an astonishing amount of feedback, encouragement, and support from countless different groups and individuals. It was during this process that I realized that it is unfortunate that dissertations are still only understood as individual accomplishments because it really takes help from many members of one’s community to complete a project at this scale. One thing that made the support from the community much more salient was that most of this dissertation was completed during the COVID-19 Pandemic while many people were confined to their homes. Because of this, I was even more reliant on family, my cohort, my dissertation committee, other faculty within my doctoral program, my larger community of friends, and my study participants. It was only with the support from these groups that I was able to get through each stage of the dissertation process.

First, I would like to thank my family and close friends. The year of 2021 was a very challenging year for my immediate family. There were a lot of health challenges and other obstacles that occurred. However, my family always understood that I was working on my dissertation, and not only encouraged me to keep going, but also provided me with time and space to do so. For this, I will be forever grateful to my partner, Lorena (who was simultaneously working on her own dissertation) for her patience with me. I say this because I tend to be an overthinker, so living with me while I am working on a long-term project can be very difficult! However, despite my constant need to discuss some aspect of my dissertation, Lorena would always be extremely patient with me, listen to my concerns, and provide me with feedback. Thank you, Lore!
I would also like to thank my mother-in-law and parents for taking amazing care of my son, Tiago while I was working on this project. Thank you, Doris, for your absolute and unconditional love for Tiago and your willingness to take care of him at any moment, regardless of the day and time. Without your help, I doubt I would have been able to get through this process. I am also so grateful to my Mom and Dad for taking Tiago back and forth to school on so many days. It was during these small pockets of time that I was able to make consistent progress on my writing. Finally, there were various members of my friends who inquired about my project and provided bits of advice and wisdom as I tried to make progress. Thank you to Jason and Kristen for always checking in with me and providing words of encouragement, support, and wisdom.

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I would also like to acknowledge all the faculty in the UMass Boston Higher Education Doctoral Program and my Dissertation Committee for their support and encouragement during my entire experience as a PhD student in the program. It is important for me to acknowledge all the faculty because each faculty member at one point gave me
both critical feedback and encouragement about my desire to pursue an aspect of an environmental education as part of my dissertation work. This experience helped confirm to me that one of the most important things any teacher, instructor or faculty member can provide to students is encouragement. I believe it was this feeling of encouragement that fueled my project. I would like to extend a special thank you to John Saltmarsh, Cheryl Ching, and José Martínez-Reyes for the extra feedback and support before during and after the dissertation proposal hearing and defense.

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CHAPTER 1

INTRODUCTION

Most of the available research and scholarly discussion of environmental issues in the U.S. privilege a dominant perspective constructed by middle class White thinkers and activists (Taylor, 1996, 2002). This dominant perspective defined the environmental movement in the early 20th century and centered on wildlife and habitat preservation, protection, and recreational issues. As activist concern continued with these problems, a mainstream movement began to form marked by the publication of Carson’s *Silent Spring* (1962), which documented damages caused by the use of pesticides, the creation of Earth Day (1970), the passing of the National Environmental Policy Act (1970), and the founding of the North American Association of Environmental Education (1971) (NAAEE) (Kahn, 2008; Taylor, 2002).

In a historical analysis of American environmentalism through the lens of race, gender and class, Taylor (2002) demonstrates that other movements were happening simultaneously beyond the mainstream. For example, among the other “pathways” (p. 1) for activism was an urban movement that focused on open spaces, sanitation, and public health, as well as a working-class agenda dedicated to workers’ rights, occupational health, and safety (Taylor, 2002). The mainstream narrative, however, excluded accounts of environmentalism experienced by People of Color (POC), indigenous people, and low-
income groups, which reflects how dominant group social identity causes distinct narratives to gain recognition, while others are neglected. Different from the mainstream movement, the experiences of POC concerned issues of social justice, such as loss of land, tribal sovereignty, less access to resources, and the unjust impact of environmental hazards on their communities (Taylor, 2002). Issues such as these are prominent in recent events such as Hurricane Katrina, indigenous protests regarding the construction of the Keystone XL Pipeline, and the water crisis of Flint Michigan.

The exclusion of the interests of POC from the mainstream environmentalist narrative is concerning, as there is ample evidence to show that historically oppressed groups confront environmental burdens at uneven rates (Mohai et al., 2009), thus showing a mismatch between the severity of experiences, and the ability to gain recognition and support. This evidence began to materialize in the 1980s with two large-scale reports. The U.S. General Accounting Office (USGAO) documented that African American communities held the burden of a disproportionate amount of waste facilities within their neighborhoods (USGAO, 1983). In addition, The United Church of Christ (UCC) Commission for Racial Justice report, Toxic Wastes and Race in the United States, documented the inequitable and discriminatory locations of toxic waste facilities across the U.S. (UCC, 1987). Since these two seminal reports, hundreds of other reports and research studies have shown how POC, indigenous peoples, and low-income groups experience environmental issues in disproportionate ways (Mohai et al., 2009).

These reports formed the early work of what is now known as the field of Environmental Justice (EJ), a multidisciplinary area of study that attempts to identify environmental injustices and provide theory and practice for their possible resolution (Mohai...
et al., 2009; Pellow, 2000). The field began with mainly quantitative methods to identify and document the inequitable distribution of environmental harms faced by communities of color and has since evolved to include other qualitative and participatory methodologies (Mohai et al., 2009; Pellow, 2016; Schlosberg, 2013). The field has grown to the point where the NAAEE has recognized EJ as a key aspect of environmental education (NAAEE, 2007).

As Garibay et al. (2016) pointedly argue, despite the growth of the EJ field and recognition from the NAAEE (NAAEE, 2007) and other environmental organizations, EJ topics remain marginal to or excluded from the curricular offerings of most environmental studies programs. For example, curricular and institutional change initiatives promoted by The American Association of Sustainability in Higher Education (AASHE, 2010) and environmental studies scholars (Cortese, 2003; Vincent & Focht, 2009) have largely focused on environmental sustainability and not environmental justice (Agyeman & Crouch, 2005; Garibay et al., 2016; Haluza-Delay, 2013). For example, Cortese (2003), in a critique of higher education’s role in creating a sustainable future, outlines which curricular assumptions should be revaluated, but only vaguely mentions issues of social or environmental justice. Similarly, in AASHE’s (2010) Call to Action, the association calls for the infusion of sustainability principles and concepts across the higher education curriculum, but never once directly addresses the need to include EJ education. Instead, one of the main results of these initiatives has been the increased establishment of more Interdisciplinary Environmental and Sustainability (IES) degree programs, which primarily include a focus on sustainability, science management, and science policy (Garibay et al., 2016; Vincent et al., 2012).

Perhaps the most compelling evidence that EJ remains marginal within environmental studies programs comes from a study looking at 297 IES degree programs (Garibay et al.,
which found that although some program administrators personally value EJ content as an important component of the curriculum, EJ principles and concepts have still not been “fully integrated” (p. 931) into the IES curriculum. Moreover, when the IES curriculum has an explicit Science, Technology, and Engineering (STE) focus, there is a direct negative effect on the level of importance placed on EJ content, pointing towards a bias for hard science competencies. The bias towards hard science content knowledge has previously been theorized and tested by other scholars (Cole, 2007; Haluza-Delay, 2013; Umbach, 2006) and connects with Agyeman and Crouch’s (2005) assertion that EJ topics are usually dealt with outside environmental science programs (Garibay et al., 2016). For example, EJ topics have been found in advanced gender courses (Cheng-Levine, 2002), and special course offerings on environmental ethics (Evans-Agnew et al., 2015; Kaza, 2002). The positioning of EJ course offerings in other programs is problematic, because it further demonstrates the exclusion of EJ courses from IES programs and constitutes another obstacle for EJ content knowledge to gain validation within the larger field of environmental and sustainability education.

The claim that EJ related instruction usually happens outside of IES programs (Agyeman & Crouch, 2005) may relate to limited representation regarding race and gender within the faculty of IES programs (Garibay et al., 2016). Some evidence suggests that female faculty and Faculty of Color (FOC) may be more likely to include EJ content in their courses (Haluza-Delay, 2013; Taylor, 2010); however, FOC and female faculty are underrepresented in Science and Engineering (S&E) fields and environmental programs. Taylor (2010) found that in a sample of 2,407 faculty from a variety of environmental disciplines, Latinx, African American, Native American, and female faculty together
accounted for only 11%. In addition, these faculty members often occupy lower professional ranks (Taylor, 2010), which further demonstrates a lack of representation and programmatic power.

The lack of EJ content in IES programs may have a significant effect on the climate of these programs, as experienced by underrepresented faculty and students (Garibay & Vincent, 2018). Faculty and Students of Color, for example, may not feel welcomed in IES programs because the epistemology (i.e., the nature, construction, and validation of knowledge) (Jones et al., 2013) does not include their personal experiences and ways of knowing. This is consistent with other work in higher education that documents how Faculty and Students of Color experience invalidation of their epistemology (Bernal & Villalpando, 2002; Museus et al., 2015). Epistemology plays a crucial role in informing other vital educational practices, such as the development and implementation of curricula and pedagogy, as well as scholarship (Saltmarsh, 2009; Schön, 1995). As Garibay and Vincent (2018) state, “What is included or excluded in the curriculum communicates to students what or who is and is not valued” (p. 212). Thus, it is highly important to rethink the core epistemology that guides curricula and pedagogy in these programs for Students and Faculty of Color (and other IES program participants who advocate EJ knowledge and beliefs) to have more inclusive and equitable educational experiences.

**Problem Statement**

The problem this study explores is how the exclusion and invalidation of EJ content knowledge (Garibay et al., 2016; Garibay & Vincent, 2018) in IES programs perpetuates an environmentalist narrative that privileges the experiences and concerns of mainly White activists and thinkers (Taylor, 1996, 2002). This unjust exclusion is part of a system of
epistemic marginalization, where not only EJ knowledge is excluded, but also those who embody that knowledge are discounted (i.e., Students of Color and Faculty of Color) (Garibay & Vincent, 2018; Taylor, 2008, 2010), as well as others who may have experienced environmental injustices based on their social identity (Taylor, 2002, 2010).

Although EJ content knowledge has been excluded from many IES programs (Garibay et al., 2016), the inclusion of EJ content knowledge in some IES programs has a positive relationship with increased enrollment of Students of Color (Garibay & Vincent, 2018). To understand solutions to the problem of EJ content knowledge exclusion, the way EJ knowledge is implemented in the curriculum and delivered via pedagogy merits further examination (Garibay et al., 2016; Haluza-Delay, 2013).

**Environmental Justice Instruction in the Context of COVID-19**

Since the worldwide outbreak of the Corona Virus in early 2020, the highly contagious virus has spread rapidly affecting communities everywhere. One salient theme that has emerged in many news articles and online think pieces (especially in the U.S.) is the way that COVID 19 has inequitably affected various groups with health risks such as the elderly, and the immunocompromised, but also historically oppressed and vulnerable social groups such as African Americans, People of Color, indigenous peoples, immigrants, low income groups, as well as affecting poorer countries such as in the global south more so than in the more affluent global north. Authors and pundits have pointed out how historic racism, classism, and other forms of oppression (especially in the U.S.) have led to the extremely vulnerable position of these groups, thus exacerbating various socio-environmental public health risks that have caused more deadly outcomes of COVID 19.
Considering all the media attention and increased public awareness (coupled with the racial justice movement) that these issues have garnered during the pandemic, it is very likely that faculty teaching EJ courses in higher education will recontextualize content and pedagogical strategies within the new era of COVID 19. Even if they do not place a high importance on adapting their course or specific class sessions, it is highly possible that student comments and or current events may force it into the limelight. Thus, it is pertinent to briefly mention that this study will take place during an era of heightened awareness of public health and public health inequities (especially racism as a public health issue), and how these public health problems relate to the larger socio-environmental injustices of environmental degradation and the climate crisis.

**Purpose of Study**

Due to the above problem regarding the marginalization of EJ knowledge in IES programs, the purpose of this study is to explore the process of how environmental justice faculty develop, organize their course content, and then communicate it via pedagogical practices. In relation to examining the process and practices of EJ faculty curriculum and pedagogy, an overarching goal of this study is to develop a theoretical framework for EJ instruction that would aid curriculum decision makers (Conrad & Pratt, 1983) in environmental education and possibly other programs across disciplines in higher education. To begin the investigative process, this study seeks to explore the following research questions:

**Research Questions**

Primary Research Question: How do EJ faculty develop, organize, and implement their courses?
Sub Research Questions:

1. How does EJ faculty epistemic orientation influence instruction?
2. How do EJ faculty organize course content knowledge?
3. What pedagogical processes and practices do EJ faculty employ to meet their learning goals?
4. What institutional or programmatic factors support or impede EJ faculty?

With the purpose of the study and research questions in mind, the next section will explain the main contributions of this study to different fields in higher education.

**Significance**

This study has at least three notable contributions to various fields within higher education. First, this study brings together three distinct areas of research and literature within higher education including the field of environmental justice, diversity, equity and inclusion, and curriculum and instruction. Understanding the connections between these areas of research is extremely important for EJ practitioners, as although research on EJ instruction may be growing, there is still an extreme dearth of knowledge in this area. In addition, because EJ scholars have historically argued that EJ knowledge has been marginalized within environmental education overall (Agyeman, 2003; Cole, 2007; Haluza-Delay, 2013; Taylor, 1996), reviewing the *how* and *why* of EJ content knowledge exclusion, and *how* curricular and pedagogical practices can address this exclusion is of paramount importance.

Second, this study was able to provide an in-depth review of four EJ faculty member’s primary curricular and pedagogical practices, generating critical knowledge regarding EJ instruction in higher education. The most innovative practices seek to integrate
course material and student learning with community members and activists from the local community. To give just a few examples, some of the faculty employed the invitation of guest speakers and site visits to allow for community partnerships to participate in the instructional process. These practices help reinforce previous studies that show that there is a critical connection between EJ content knowledge and community engaged instructional practices (Garibay & Vincent, 2018). This insight and the frameworks I construct for both community engaged EJ instruction and EJ knowledge inclusion could be an extremely important contribution for faculty, programs, or institutions looking to integrate EJ instructional practices.

A final contribution of this study is the insight it provides for the instructional process for faculty in higher education in general. This study’s conceptual and theoretical framework and primary research questions at their core seek to understand the instructional process and practices that faculty experience while teaching their courses. For example, the research question of: How do EJ faculty develop, organize, and implement their courses, could be revised to focus on anti-racist faculty, or faculty who focus on culturally relevant pedagogy. No matter the discipline, faculty must progress through several processes when implementing their courses, that include the processing of their initial beliefs and experiences, the organization of content knowledge into their syllabi and the way they communicate this knowledge to students. From this lens, the conceptual and theoretical framework developed for this study which focuses on faculty epistemology, curriculum and pedagogy could serve as an important professional development tool for faculty across departments and disciplinary contexts within higher education.
Organization of Dissertation

This section provides a brief description of the overall layout of the dissertation. To begin, in Chapter 2, I review the three main areas of literature related to the above research problem which include 1. The field of environmental justice, 2. EJ epistemic exclusion in environmental programs and 3. EJ curriculum and pedagogy. The end of Chapter 2 includes a conceptual and theoretical framework for the study which relies on four main concepts including epistemologies, curriculum, pedagogy, and programmatic and institutional factors that impact faculty practices. This framework serves as an important organizational tool for my findings and discussion of the data collected. Chapter 3 reviews the study’s research design and methodology of a multiple case study. In this chapter I described the main procedures for data collection, data analysis, as well as trustworthiness and ethical considerations.

In Chapters 4, 5, and 6 I describe the study’s findings, and present two chapters of discussion related to both curriculum and pedagogy, and the organizational factors that impact faculty instructional practices. More specifically, in Chapter 4, I organize the main themes from the findings around the key areas of the conceptual and theoretical framework. In doing so, I hope to clearly document the findings that explore the study’s primary research questions. In Chapter 5, I construct a continuum for community engaged instruction that displays concrete curricular and pedagogical practices that most aided faculty in advancing their activist epistemologies and primary learning goals for their course. In Chapter 6, I more deeply explore how each faculty member’s organizational context either supported or impeded their instructional practices, including their goals for community engagement, activism, and social change. In Chapter 7, I conclude with a section on implications and
recommendations that proposes solutions for EJ epistemic inclusion and finally, reviews limitations and areas for future research. The next section will review the relevant literature in relation to the research problem discussed in the introduction.
CHAPTER 2
LITERATURE REVIEW

This literature review is organized to illuminate different aspects of EJ knowledge. The first area attempts to give a broad summary of the EJ field, including its origins, core theoretical perspectives, and emerging research directions. The second area concerns the relationship of EJ content knowledge to issues of diversity, inclusion, and equity in IES programs. Finally, the last area examines EJ knowledge from a faculty standpoint, focusing on theory that informs the practice of EJ curricula and pedagogy development and implementation. This literature review seeks to explore the following questions:

- What are the historical foundations and main research areas of the EJ field?
- How are EJ knowledge and those who embody it excluded from environmental studies programs?
- How does theory inform practice in the development and implementation of EJ curricula and pedagogy?

The Field of Environmental Justice

As documented above, the stories and experiences related to environmental justice have been neglected to favor more dominant narratives of the environment (Taylor, 2002). For this reason, it is important to gain more detailed insight on the development of the modern environmental justice movement and the birth of the field of environmental justice.
In addition, a broad view of the EJ field will allow actors within higher education, such as members of environmental programs to better understand why EJ curricular knowledge has not been fully integrated into IES programs. Finally, many of the areas of the EJ field such as debating the notions of both “the environment” and “justice” are highly applicable to the development and implementation of a course with EJ topics, practices, or student outcomes. Accordingly, in this section I will explore the main areas of the EJ field, including the historical foundations, initial debates, theoretical bases, and new directions in theory, research, and practice.

**Historical Foundations**

The fight for environmental justice has been an issue in the Americas since colonization began in the 1400s, as indigenous peoples fought for tribal sovereignty and the protection of their lands (Agyeman, 2005; Taylor, 2002). However, the environmental justice movement (EJM) that catalyzed the field of environmental justice (EJ) studies is widely thought to have originated in 1982 in Warren County, North Carolina when several activist groups backed by civil rights organizations, protested the unequal distribution of toxic waste in neighborhoods that were predominantly populated by People of Color (POC) (Agyeman, 2005; Mohai et al., 2009). These protests helped garner attention, and two important research studies materialized. One from the U.S. General Accounting Office (GAO) documented that African American communities held the burden of a disproportionate amount of waste facilities within their neighborhoods (USGAO, 1983). The other, from the United Church of Christ (UCC) Commission for Racial Justice, *Toxic Wastes and Race in the United States* report documented the inequitable and discriminatory locations of toxic wastes facilities across the U.S. (UCC, 1987).
Soon after these findings gained traction, EJ studies surfaced as an interdisciplinary field of study where early work used primarily quantitative methodology to help document the disparate effects of environmental harms on groups of POC (Mohai et al., 2009; Schlosberg, 2013). Since these foundational reports, “hundreds of studies conclude that, in general, ethnic minorities, indigenous persons, people of color, and low-income communities confront a higher burden of environmental exposure to water and soil pollution from industrialization, militarization, and consumer practices” (Mohai et al., 2009 p. 406). From a theoretical perspective, EJ scholars began to examine the complex intersections of social inequities with environmental harms (Agyeman et al., 2002).

Originally published in 1990, Robert Bullard’s seminal book *Dumping in Dixie: Race, Class and Environmental Quality* linked hazard waste locations with geographical racial segregation, arguing that historical and structural racism were one of the main causes of overburdened toxic waste exposure on POC, and was also the first work to explore the psychological effects of such harms. Later, sociologists Bunyan Bryant and Paul Mohai organized *The Conference on Race and the Incidence of Environmental Hazards* at the University of Michigan, which brought together researchers from all over the U.S. studying environmental injustices. The findings at this conference were crucial as they led to the Environmental Protection Agency recognizing EJ issues as a key part to environmental protection (Mohai et al., 2009). However, the flurry of evidence demonstrating that race was at the center of unequal distribution of environmental dangers caused other researchers to replicate similar studies and begin to contest this notion.
**Initial Environmental Justice Debates**

As the field of EJ studies continued in its early stages, the initial findings from the UCC and GAO studies were contested by other scholars (Anderton et al., 1994), as researchers began to question the newly formed claim that race was the principal cause in the uneven distribution of hazardous waste, treatment, and storage facilities (TSDF). Among others, one core question posed was if the primary cause was race or class? Anderton et al. (1994) in an attempt to scrutinize the findings from the UCC study, found few racial differences in the reporting of TSDFs in similar areas. Instead of race being a key factor to describe the location of TSDFs, the main variable found was the percentage of people employed in manufacturing jobs (Anderton et al., 1994). These researchers argued that the main reason different results emerged was due to different units of analysis. Whereas the UCC study used zip codes, Anderton et al. (1994) relied on census tracts, and argued that this unit of analysis was smaller, more accurate and less susceptible to environmental error. In other words, relationships found at larger scales may not exist in the same way in smaller scales (Mohai et al., 2009).

Later, Mohai (1995) and Been (1995) both entered the conversation with their own analysis of these findings and argued that there were other key variations in the studies besides the simple difference in geographical unit of analysis. For example, the population groups were constructed differently. More specifically, Anderton et al. (1994) did not use rural groups in their analysis (the UCC study did) and excluded metropolitan areas not already containing TSDFs, claiming that metropolitan areas not containing them were not suited for them in the first place. This claim was contested by Mohai (1995) and Been (1995), and a later analysis from Mohai (2008) showed that the principal factor in the
Anderton et al. (1994) study, (the percentage of people employed in manufacturing) did not precisely indicate which metropolitan areas contained TSDFs and those that did not. As the debate continued, more evidence (like the UCC study) continued to show that the best predictor for which urban areas contained TSDFs was the percentage of People of Color in a given area (Mohai et al., 2009). Mohai (1995, 2008) and Been (1995) found that the Anderton et al. (1994) study did not refute the UCC study. Although the “race vs. class” debate still existed; systematic reviews of the quantitative research have shown that race, not economic status, has been proven to more strongly correlate to the inequitable placement of TSDFs in communities of color (Mohai, 2008).

Another key debate that has surfaced is whether hazardous waste existed in these communities before POC began populating them, or vice versa (Mohai et al., 2009). To fully understand this relationship, large scale longitudinal research is needed to better understand the relationship of when TSDFs are placed in certain geographical locations and which groups populate those areas over time (Mohai & Saha, 2015a). In the first study of its kind Mohai & Saha (2015b) used a national database of commercial hazardous waste facilities from 1966-1995 and examined the demographic conditions around those facilities and how they changed over time. Overall, Mohai and Saha (2015b) found a much stronger relationship with the demographic composition of neighborhoods attracting hazardous waste, as opposed to waste facilities attracting specific groups of POC or low-income groups. In addition, long term, longitudinal empirical evidence shows that economic, socio-political, or racial factors (Mohai et al., 2009) cause hazardous waste to be disparately placed around the homes of POC.
Theoretical Bases of Environmental Justice Studies

Explanations of Injustices

As the beginning landmark studies and books emerged that showed how people of different racial backgrounds were inequitably burdened with varying environmental hazards, scholars began to theorize the underlying causes for these results. Mohai et al. (2009) grouped explanations into three categories: economic, socio-political, and racial. The core argument of the economic explanation is that these unfavorable environmental results are not happening at a conscious level but are results of the often uneven and unequal marketplace as differing industry interests attempt to maximize profits. In addition, once hazardous waste facilities are placed within neighborhoods, economic factors such as changing real estate prices perpetuate inequities. As Whites (with higher incomes) can move out of the area, the neighborhood becomes more concentrated with residents of color (Mohai et al., 2009). In this case, how economic and racial factors are intertwined could be unpacked in more detail.

The socio-political theoretical explanation assumes that government and industry interests seek “the path of least resistance” when lobbying where and how to place hazardous waste facilities (Mohai et al., 2009, p. 414). Industries attempting to site hazardous waste within municipalities that do not want unnecessary time wasted, or media controversies, so they seek areas with residents with less social capital who are unable to organize and block the process (Bullard & Wright, 1987). In contrast, communities with the most social capital tend to be White and of higher economic status and possess more resources to advocate against the placement of such facilities. Saha and Mohai (2005) argue that as the Not in My Back Yard (NIMBY) movement grew, more communities were aware of environmental issues and were concerned about the placement of commercial waste. However, the NIMBY
movement was more prominent in more White and affluent communities, exacerbating the already inequitable distribution of waste in communities of POC.

In some instances, economic forces and sociopolitical forces are hard to disentangle. Schnailburg et al. (1996, as cited in Mohai et al., 2009) argue that the model of ever-increasing production and growth depend on ecological harm for continued profit. At the root of these processes is the struggle for economic resources such as land and materials, which transpires with disproportionate impacts for the wealthy, workers, and people of those communities.

The *racial* theoretical explanation contends that race and racism are at the heart of environmental injustices. Although widely debated whether racist beliefs or agendas are at the root of discriminatory environmental issues, there is widespread evidence that regardless of the intentions of certain policies or initiatives, the results are still racially discriminatory in nature (Mohai et al., 2009). For example, although certain decisions today to place hazardous waste facilities in what are now considered to be industrial zones seem to be race neutral, these decisions still tend to unequally affect communities of color due to racist housing segregation that dates to 1900 (Cole & Foster, as cited in Mohai et al., 2009). From this lens, historic racism can continue to impact what seems like race-neutral politics.

In addition, other scholars argue that historic racism is then compounded with more present-day overt White supremacy or unconscious issues of White privilege, and for these reasons environmental racism continues (Pulido, 2000). Pulido (2000) critiques the notion that racism is the result of individual heinous acts, and builds on other scholars (Bullard, 1990) and points to geographical/spatial understandings of race and racism in American society. More specifically, Pulido (2000) references the construct of White privilege and the
theory that “because race lives in various realms. Racial meanings are embedded in our language, psyche, and social structures” (p. 534). From this perspective, issues such as housing discrimination are not simply the result of irresponsible landlords, but stem from a “diversity of racisms” (p. 534).

Mohai et al. (2009) continue a review of race-based explanations citing theorists from critical race theory, a theory that uses race as a prism to understand sociopolitical phenomenon (Delgado & Stefancic, 2017) and discussions of intersectionality, a theory that attempts to understand how intersecting identities exacerbate privilege and oppression (Crenshaw, 1989). Taylor (2002) provides an extensive understanding of how differing environmental movements have been recognized with different amounts of political or public recognition and support depending on the race, gender, and class of the group. In most cases, modern environmentalism has privileged the stories, voices and knowledge of White men and women, and this has led to a problematic lack of diversity in environmental organizations (Taylor, 2014) and continues to perpetuate issues of procedural justice within decision making and creation and implementation of public policy.

Most importantly, the theoretical construct of intersectionality shows that no one theoretical explanation (economic, socio-political, or race) can be the sole cause of environmental injustices (Mohai et al., 2009). Intersectionality can be used as a key concept in understanding the way differing identities such as race, gender, and class (among others) play a role in the uneven consequences of environmental degradation (Pellow, 2016). Much more research is needed on the role of intersectionality and the meaning making of environmental problems and subsequent resolutions.
Redefining the Environment

One of the main distinguishing elements of EJ studies and scholarship is the redefining of “the environment.” For years, mainstream environmental science has relied on a more positivist paradigm that has focused on the natural sciences and the observation of the environment as an objective form of natural space (Agyeman, 2003; Cole, 2007; Haluza-Delay, 2013; Taylor, 1996). Schlosberg (2013) conveys that redefining “the environment” constitutes a large theme in the early work of EJ studies and continues to this day. Many early scholars critiqued the conceptualization of the environment as the “big outside,” (Schlosberg, 2013, p. 38) and broader definitions began to appear. For example, in one interview Bullard (1999, as cited in Mohai et al., 2009) spoke of how the EJM began to transform the traditional definition of the environment:

The environmental justice movement has basically redefined what environmentalism is all about. It basically says that the environment is everything: where we live, work, play, go to school, as well as the physical and natural world. And so, we can’t separate the physical environment from the cultural environment. We have to talk about making sure that justice is integrated throughout all of the stuff that we do. (p. 407)

“Where We Live, Work and Play” (Novotny, 2000) in many ways has redefined the traditional notion of environment and become a prominent definition within EJ spheres. Schlosberg (2013) contends that this redefinition of environment cannot be understated. Although there has been a long history of interest in urban environmental issues, these problems were extremely undervalued by large, mainstream environmental organizations
(Taylor, 1996, 2002). This new definition provided much needed attention on EJ issues that touch people’s everyday lives (Schlosberg, 2013).

In addition to the above definitional change, Taylor (2000) has relied on theories from environmental sociology (Hannigan, 2014) to explain how the environment may be defined or understood uniquely depending on a person’s or group’s social location. That is, different groups (depending on race, gender, or class) will construct environmental issues and their possible remedies in divergent ways. In this way, Taylor (2000) argues that: “‘environmental problems’ are social problems; they are socially constructed claims defined through collective processes. By social construction, I mean that environmental problems are not static. They are not always the product of readily identifiable, visible, or objective conditions” (p. 509). Redefining the environment is an important aspect for making environmental education more inclusive as it validates student narratives that see issues like homelessness, or gentrification as urban environmental issues (Gould et al., 2018; Taylor, 1996).

**Conceptualizations of Justice**

In addition to the causes of environmental injustices, scholars have also attempted to move beyond by looking at the distribution/location of environmental injustices and have explored new ways to conceptualize “justice.” For example, Walker (2009) refers to three conceptualizations of justice: distributive, procedural, and recognition based. Distributive justice refers to the notion of justice described at the birth of the EJ field as the unequal distribution of environmental hazards. Since then, Walker (2009) describes that a more nuanced and multi-spatial or plural (Schlosberg, 2013) understanding of justice is needed. Stemming from a more pluralistic form of justice, a lack of respect in the process of
understanding or validating environmental issues of oppressed communities in comparison to ones of more privilege forms the notion of recognition-based justice. With a lack of recognition, support and power, oppressed groups may struggle to gain access to deliberation and democratic systems, in what is described as participatory and procedural justice (Schlosberg, 2013; Walker, 2009).

Similarly, Schlosberg (2013) has called for EJ methodology and theory to include “pluralistic justice,” which refers to equity, recognition, participation and the basic “functioning of individuals and communities” or a “capabilities” approach to justice (p. 40). Differing from Walker (2009), Schlosberg refers to a capabilities approach, which in some ways combines aspects of distributive, recognition, and procedural justice to encompass various issues with communities being denied their basic rights, receiving social recognition, and economic political rights. Schlosberg has also noted how the “pluralistic” understanding of justice means that the different notions of justice are not competing or mutually exclusive, but instead work as an interconnected system with distribution, recognition and participation working to produce various injustices.

**New Directions in EJ Studies**

The original focus of EJ studies on the unjust distribution of toxic waste in communities of color has expanded in depth and breath, as well as globally (Schlosberg, 2013). One new and ever-expanding area is global and transnational EJ studies (Agyeman et al., 2016), which more broadly looks at issues such as human rights, slavery, genocide, deforestation and natural resources extraction, climate change and many others. As EJ studies has globalized, it has focused more on the impacts of climate change and food security, which have now been coined as climate and food justice (Agyeman et al., 2016).
Also, key theories such as Agyeman’s (2005) conceptualization of Just Sustainability, or Pellow’s (2016) framework for Critical EJ Studies have created new theoretical and empirical areas of study as well.

Agyeman’s (2003, 2005, 2013) notion of Just Sustainability, later described as Just Sustainabilities (Agyeman, 2012) to refer to plural forms of sustainability, is an important new direction of EJ studies, as it may help describe the continued invalidation of EJ education. Agyeman (2005) seeks to find middle ground between what he describes as a stagnant and complex socio-political debate between sustainability and EJ organizations. Whereas the movement for ecological sustainability and sustainable development was more top-down, stemming from the large non-government organizations like the UN, and corporations (Kahn, 2008), the EJ movement was grassroots, rising from community organizations, activism, and protest from mainly POC (Agyeman, 2005; Taylor, 2002).

Agyeman (2005) believed that an important nexus (Agyeman, 2003) between the two camps was needed, which he has coined “just sustainabilities” (Agyeman, 2012). Within this nexus, Agyeman (2005) believed that both the human socio-political (racism and other forms of discrimination), or anthropocentric aspects of environmental justice should be highly valued; however, issues of ecological sustainability must not be overshadowed. This framework could provide a useful tool to blend more traditional aspects of environmental education with recent aspects of the EJ field and movement, as Agyeman hopes more collaboration between differing environmental socio-political camps can learn to work together.

In addition to just sustainabilities, critical environmental justice (CEJ) helps mark the difference in a broad shift within the EJ field. As Walker (2009) and Schlosberg (2013)
noted, the early foundations of EJ studies mainly focused on unequal environmental burdens, largely focusing on racial inequities. Scholars have begun to refer to this era of EJ studies as “first generation EJ research.” However, the “second generation” has extended beyond mere unequal distributive impacts to include more theory on how other identities such as gender and sexuality for example, also shape EJ issues. Using CRT, intersectionality, ecofeminism (among others), Pellow (2016) attempts to fill earlier gaps in research and better understand how multiple identities affect socio-political events and communities and examines their relationship to ecological and socio-environmental threats and problems. From this lens, Pellow’s (2016) construct of CEJ highlights the continued multidisciplinary and expanding nature of EJ studies. The use of new theories such as intersectionality and CRT may provide foundations for EJ related curricula and pedagogies.

**The EJ Field: Relevant Themes and Key Gaps**

One important aspect of the different trends and themes of the EJ field is to see that the initial quantitative studies that launched the field were highly contested (Anderton, 1994). That is, the entire field still may face scrutiny and acceptance, as racism in society continues to persist (Delgado & Stefancic, 2017; Pulido, 2000). This may help explain why EJ scholars and curricula have still not been fully accepted within IES programs, and often find themselves in other departments and disciplines (Agyeman & Crouch, 2005).

In addition, relevant themes, and research areas of the EJ field that carry through into the process of curricula and pedagogy development and implementation. For example, an EJ course may examine the history and foundations of environmental justice or explore injustices and why they may occur in a context (local community or global/transnational), as well as discuss the varied kinds of environmental problems (wildlife extinction or urban
pollution) and explore who is causing these injustices and who is most affected along the lines of race, gender and class (as well as other identities) (Taylor, 1996, 2000, 2002).

In terms of gaps, although the EJ field has had scholars that analyze environmentalism and environmental issues through the lens of race, gender, and class (Taylor, 2000, 2002), much more research could be done in this area, especially using more recent and relevant theoretical frameworks regarding identity such as CRT (Delgado & Stefancic, 2017) or Intersectionality (Crenshaw, 1989). Although Pellow (2016) uses these theories of identity in his framework of critical environmental justice, more research could still be done in this area. Finally, a large gap exists on how the EJ field is applied within the context of higher education (Garibay et al., 2016; Haluza-Delay, 2013). For this reason, in the next two sections I seek to blend theories and research from the EJ field with research related to EJ topics in IES programs and recent research looking at EJ topics and trends in the classroom.

**Epistemic EJ Exclusion in Environmental Programs**

With a better understanding of the field of environmental justice, it is now pertinent to see how this field is represented within environmental programs of higher education. Because communities of color, low-income groups, and indigenous peoples have been involved with environmental justice activism, their participation in the development and instruction of EJ curricula with environmental programs is crucial. However, research has shown that SOC and FOC (Hodgdon, 1982; Taylor, 2007, 2010; Valdez, 1995) and EJ related curricula (Garibay et al., 2016) have been systemically excluded from environmental programs. In this section I seek to first review research that shows how SOC and FOC are both excluded in various categories of environmental programs. The second part will explore
two large scale quantitative studies that discuss the lack of inclusion of EJ curricular content in many IES programs. Explanations for why these results occurred will also be reviewed.

**Student and Faculty of Color Exclusion in Environmental Programs**

**Student of Color Representation in Environmental Programs**

Despite the relatively small amount of research on student diversity in environmental programs, some research has been conducted to better understand the pipeline leading to environmental organization employment (Hodgdon, 1982; Taylor, 2007; Valdez, 1995). Research began in the 1970s examining the enrollment of women and ethnic minorities (a term used at the time) in wildlife programs. Hodgdon (1982), using surveys that were mailed to 95 North American universities that offer wildlife training, found that 32% of master’s degree and 34.6% undergraduate students were women, far below the 49% reported for all students at four-year colleges in 1979. Ethnic minority students only represented 3.1% of the total wildlife program enrollment, a number far lower than the national average at the time for minorities at 16.9%. Even at the time of this study, Hodgdon (1982) noted how the low percentage of women and minority students within these programs would continue to perpetuate the low percentages of minority participation within the wildlife profession, which shows that a concern for diversity in the environmental organization pipeline began in the late 1970s and continues today (Taylor, 2014, 2018).

In a later study, Valdez (1995) was also concerned with the limited number of minority professionals beginning careers in agricultural and natural resources fields. At the time of this study, the National Center for Education Statistics (1994) showed that out of 11,863 students who had received degrees in agricultural and natural resource programs (1990-1991) only 341 (2.8%) were African Americans, 238 (2%) were Asian or Pacific
Islanders, and 233 (1.9%) were Hispanic. Because of these low amounts and a growing Hispanic population, Valdez (1995) conducted a study by sending questionnaires to 10 universities in various western states of which 7 responded, to better understand how many Hispanic students had majored and graduated within these wildlife programs. Overall, this study found that less than 1% of wildlife undergraduates graduating in 5 California and Texas universities were Hispanic, pointing to a dangerously low amount of Hispanic participation in these programs.

Valdez (1995) unlike Hodgdon (1982) discusses possible causes and remedies for the problem of low participation among Hispanic students in wildlife programs. One reason argued for low participation was the lack of exposure to environmental issues. Although Valdez (1995) argues that Hispanic students should be encouraged by educators to visit nature organizations and wildlife refuge areas, theory from other researchers (Taylor, 1989; Mohai & Bryant, 1998) helps understand that historical injustices made nature/environmental activities less visible and accessible for POC. These theories provide a better understanding of why Hispanic student participation in wildlife programs was so low.

In addition, Valdez (1995) cites a need for curricula aimed at Hispanic students in these areas to introduce environmental issues in high school and earlier. However, Valdez (1995) may have been unaware of the way environmental curricula was designed and presented to these students, as researchers later demonstrated that environmental education may have been (and still is) presented to SOC in a way that is not relevant to their cultural experiences (Agyeman, 2003; Cole, 2007; Taylor, 1996). Accordingly, Valdez’s (1995) recommendations were on the right track but need to be contextualized with theories that were later developed.
In a much more recent study attempting to understand environmental degree student perceptions of diversity, Taylor (2007) was able to report that among a sample of 1,239 students in 9 environmental disciplines from 185 colleges and universities, 28% were minorities (disaggregated as Asian 10%, Latinos 9.1%, Blacks, 7.9%, Native Americans 1.6%) and 57.1% were female. Although the main research question of this study did not specifically pertain to student compositional diversity in environmental programs, the randomized sample with a representation of 185 colleges and universities, and students from undergraduate programs (17%), masters programs (41.9%), and doctoral programs (40.8 percent), provides a comprehensive collection of data showing a continued (although slightly improved) lack of enrollment for SOC in various environmental degree program contexts across higher education. Inevitably, the historic pattern of low SOC enrollment in these programs has led to low representation of Faculty of Color (FOC) as well (Taylor, 2010).

**Faculty of Color and Female Faculty in Environmental and S&E Programs**

Although there is literature on the lack of FOC (and female faculty) in the broad umbrella of STEM programs (Johnson, 2011; Towns, 2010), and in a slightly more specific context of science and engineering programs (Burreli, 2011) (S&E), there may be only one empirical study that specifically examines the composition of FOC and female faculty within environmentally oriented science degree programs (Taylor, 2010). In a comprehensive review of a national survey (collected in 2004-2005) of 2,407 faculty members in various environmental disciplines, Taylor (2010) found that Latinx, African American, Native American, and female faculty were all underrepresented with 264 FOC constituting only 11% of the sample.
In addition, Taylor’s (2010) study sought to better understand the representation of female faculty in these programs, as well as explore how race and gender informed the professional rank of different faculty. In relation to gender representation, the sample had an overwhelmingly male composition at 61% where female only represented 34.6%, and another 3.5% of faculty did not reveal their gender. Regarding faculty rank, White male faculty were more likely to hold positions of higher faculty rank (e.g., full-professor and tenure track), whereas White women were more likely to be in tenure-track or non-tenured track than in higher ranked positions. Similarly, FOC were also more likely to be situated in less powerful professional ranks.

In a more recent study related to Taylor’s (2010) work, Burrelli (2011) in an Info-Brief from the National Center for Science and Engineering Statistics (NCSES), found that although within the Science and Health (SEH) field, doctorate degrees awarded to minorities have been increasing, minority doctorates awarded, and minority faculty continue to be at low numbers. In data collected in 2008, doctorate degrees earned by African American, Latinx, and Native Americans represented only 3,255 (9%) of the total of 34,921.

In addition, in Burrelli’s data collected in 2008, out of the 291,000 doctorates working in higher education contexts, 221,000 were working as faculty. Within this group, 13% were Asian, 4% were Black, 4% were Latinx, and less than 1% were all other races (which included Native American, Hawaiian or Pacific Islander). Interestingly, of this group, many of the FOC came from other countries with 33% of African Americans, 37% of Latinx and 91% of Asian and 11% of White faculty being non-US born. This finding points to another issue related to an inability for many programs to recruit Students and Faculty of Color domestically.
Finally, Burrelli’s (2011) study noted the professional ranks of FOC and the type of institutions where they earned their degree and gained employment. Like Taylor (2010), Burrelli (2011) noted that African American, Latinx, and Asian were less likely to hold full professor positions and be in tenured positions. In terms of institutions where the doctoral degrees were earned, African Americans earned their doctoral degrees at less prestigious research universities than their Latinx, Asian and White counterparts as ranked by the Carnegie classification system. In terms of employment, African American faculty held a higher representation of jobs at lower-tier research universities as well.

These studies demonstrate that FOC and female faculty are not only underrepresented in environmental disciplines and the larger field of Science and Engineering and Health, but they also are subjected to lower and more vulnerable faculty ranks and are subject to gaining degrees and employment in less prestigious and less active research universities. Lower faculty ranks and representation may impact FOC (and female faculty’s) ability to make program-level decisions such as creating and implementing environmental justice content, and attempting to adjust program culture for SOC. However, it is also important to attempt to understand how and why SOC and FOC have experienced this systemic exclusion from both environmental degree programs and prestigious research universities.

Theory and Explanation for SOC and FOC Exclusion in Environmental Programs

Racist Stereotypes Regarding Environment: From Society to Academia

To understand the lack of representation and exclusion of SOC and FOC in environmental disciplines, it is important to first contextualize theory and research related to popular myths of People of Color and their purported lack of concern for environment in larger society (Mohai, 2003; Mohai & Bryant, 1998; Taylor, 1989). These myths have then
pervaded the lines of academic institutions and possibly caused researchers (Quimby et al., 2007) and environmental program practitioners to believe them as well, which has led to the exclusion of SOC/FOC in these programs.

A common stereotype of African Americans has been that they are less concerned about environmental issues than Whites (Taylor, 1989, 2018; Mohai, 2003; Mohai & Bryant; 1998). Taylor (1989) and Mohai and Bryant (1998) in an attempt to understand these stereotypes, theorized various reasons why divergent concern for the environment may exist between these racial groups. Taylor (1989) theorized that concern may be similar between racial groups; however, African Americans may be less able to act on these concerns due to lack of political recognition, less access to voluntary environmental advocacy groups, and less resource mobilization among others. Related to this, Taylor (2007) cites Snow and Bedford (1988) to refer to the theory of “framing” or “the process by which individuals and groups identify, interpret, and express social and political grievances (p.92). It may be that depending on differing social identity and power, groups identify divergent issues and seek alternative forms to resolve them (Taylor, 2000, 2002, 2007).

Mohai and Bryant (1998) on the other hand discuss three theories regarding African American concern for the environment including hierarchy of needs, cultural differences, and environmental deprivation. In relation to the above theories, Mohai and Bryant (1998) surveyed residents in the city of Detroit and found little evidence to support any of the theoretical arguments that would predict that African Americans are less concerned about environmental issues than Whites. Mohai and Bryant (1998) and later Mohai (2003) were able to debunk the myth that African Americans are less concerned about environmental issues than Whites. Although this myth was debunked in other instances (Taylor, 2018), it
continued to be pervasive enough to also affect perceptions of SOC and their interest in studying environmental science, and moving into careers within environmental organizations (Taylor, 2007, 2008, 2018).

*Students of Color and Stereotypes Regarding the Environment*

These problematic stereotypes may help explain the continued lack of SOC enrollment in environmental programs, as well as the exclusion of environmental justice curricula content in IES programs (Garibay et al., 2016), which both relate to the lack of Faculty of Color representation in these programs (Taylor, 2010). Taylor (2007) argues that the negative stereotypes regarding POC, and the environment have continued to influence researchers. In a study conducted relatively recently before Taylor (2007)’s study, Quimby et al. (2007) looked at the environmental concern of 124 White and 37 minority students and concluded that the minority students showed less concern than the White students.

Taylor (2007) refutes these findings, as the researchers did not include any of the previous research that disproved negative stereotypes on POC and the environment described earlier (Mohai, 2003; Mohai & Bryant; 1998; Taylor, 1989) and did not mention issues or arguments related to environmental justice. In addition, Taylor (1989, 2007) has argued that researchers using traditional environmental criteria (not environmentally justice based) on surveys with small samples are more likely to mislabel and misunderstand how SOC perceive, interact and relate to nature and the environment, thus perpetuating racist stereotypes.

Because of these continued racist stereotypes, Taylor (1989, 2007, 2018) has theorized and conducted empirical studies spanning four decades in an attempt to debunk these myths, and better explain why students, faculty and environmental professionals have
been excluded from environmental science programs and organizational/professional contexts. The assumption that People/Students of Color are either disconnected to or fear the natural world continues up until today, as a wide body of popular psychological literature continues to perpetuate this idea (Taylor, 2018). However, in a recent study of STEM student perceptions of nature, Taylor (2018) attempts to argue that there is no significant difference between student's connectedness to nature and landscapes among racial/ethnic groups.

In this study, Taylor (2018) uses a sample of 157 STEM students from 3 institutions (a large public mid-western university, a mid-sized private university from the mid-Atlantic and a small historically black university (HBCU) from the south). In terms of racial/ethnic breakdown, the sample consisted of 46 White, 43 black and 68 other SOC. Overall, when giving survey responses and rating landscape photos, not only did black students express no differences in their perceptions to nature than other racial/ethnic groups, but they also reported preferences to naturalistic landscapes instead of urban ones, once again discrediting popular myths that blacks and other students of color fear or do not prefer nature.

More specifically, regarding perceptions of nature, although participants referenced different things when asked to ponder nature (e.g., trees, plants, forest etc.), there was no significant difference between groups. In terms of connectedness with nature, none of the respondents said they were disconnected or somewhat disconnected, and even less than 8% of participants said they felt neutral towards nature. In terms of curiosity towards nature, SOC (not including black students) were slightly more likely to say they were curious with 82.4% saying they were very curious, compared to 73.9% of White students and 51.2% of blacks. And finally, in terms of landscape preferences although there are some minor
differences in racial groups, for the most part, Blacks and other SOC continue to show a varied degree of preference for natural landscapes as opposed to urban ones, debunking earlier research that argued the opposite.

Taylor’s (2007, 2018) critiques and findings are critical for environmental studies faculty and practitioners as well as professionals working in environmental organizations attempting to increase the recruitment of professionals of color. Practitioners in both the above contexts should be highly attuned to the way their program, department or organization frame issues of diversity and equity and nature, and how those issues are carried out via practice in curricula and pedagogy and other organizational projects and actions. From a more programmatic lens, the next subsection of literature that deals with epistemic exclusion in environmental programs seeks to better understand how EJ content is included within IES programs within higher education, and how that connects to enrollment and program climate regarding SOC.

IES Programs, EJ Content and Student Diversity, Inclusion and Equity

Program Characteristics and EJ Content

Scholars have described the way environmental justice theory, practice and knowledge have not been included within the dominant discourse of environmental education (Agyeman, 2003; Cole, 2007; Haluza-Delay, 2013). In addition, these same scholars theorized that the lack of EJ content is in some way connected to the low amounts of SOC and FOC in many environmental programs and fields (Taylor, 2007, 2010). However, there was very little empirical evidence to support these claims (Haluza-Delay, 2013).

To better understand this issue, researchers set out to investigate the relationship between EJ curricula content and IES program student diversity, and overall racial climate
Garibay et al. (2016; Garibay & Vincent, 2018) wanted to understand what caused programs to value and practice EJ content within IES program curricula. More specifically, using 2012-2013 data from the National Council for Science and the Environment (NCSE), they attempted to identify program and institutional characteristics, values and racial/ethnic student demographics that may influence the inclusion of EJ content in IES curricula. This study looked at 297 IES degree programs within 197 higher education institutions. Overall, 54% of these IES programs were considered primarily science, technology, or engineering (STE), and 29% were graduate degree programs. Thirty percent had shown a three-year trend of increasing student diversity.

Their statistical analysis looked at how important EJ curricula was valued within an “ideal” IES program curricula and compared it to how much it was emphasized in the “actual” IES curricula of the programs in the sample. Generally, the findings showed that when EJ curricula was not valued as part of an ideal curriculum, it was also not emphasized within that program, as the results demonstrated 97% of programs matching the value of ideal program vs. emphasis in actual program. The programs that do value EJ curricula in an ideal program were slightly less likely (63.6%) to emphasize it in their actual program. These findings suggest that for many programs even if they place a high value of EJ content in an ideal program, it does not mean that they will always emphasize it within their actual curricula.

In addition, this study showed that IES programs that were located primarily in STE fields were less likely to value and emphasize EJ content. This could mean that in programs where hard science is greater emphasized, EJ content is less likely to be valued or emphasized. Most importantly, findings showed a positive relationship with three prior years
of increasing student diversity (in terms of percent of Students of Color) in the programs and the inclusion of EJ content. Although researchers were still not completely sure of the exact cause of this relationship, these finding point to an important link between EJ content and student diversity, which provides empirical evidence for the earlier theories described by EJ scholars (Agyeman, 2003; Cole, 2007; Garibay et al., 2016; Haluza-Delay, 2013). However, more research was needed to fully explore the relationship between EJ curricula and increased IES degree program student diversity.

**EJ Content and IES Enrollment of SOC**

In a follow up study, Garibay and Vincent (2018) wanted to examine the relationship more closely between increasing numbers of SOC and the inclusion of EJ content in IES degree programs. Using data from the NSCE the researchers examined a sample of 343 IES from 199 institutions. The researchers hypothesized that either a. greater inclusion of EJ content (including community engagement, advocacy, and outreach as part of EJ curricula/pedagogy) would predict an increased enrollment of students of color; and b. greater numbers of SOC enrolled in the IES program would be positively associated with increased enrollment of SOC (Garibay & Vincent, 2018).

First, Garibay and Vincent (2018) found that 29.7% of programs showed three years of prior increased enrollment of SOC. Second, they found that IES degree programs that had a greater emphasis on EJ content in the actual curriculum were significantly more likely to have reported an increasing enrollment of SOC. Third, having a greater emphasis on community engagement in the actual curriculum positively contributed to a greater enrollment of SOC in the program.
Finally, increased enrollment of SOC also was statistically significant ($p < .001$) to have reported increasing enrollment of SOC. Garibay and Vincent (2018) were able to demonstrate an almost chain reaction (Perez & McDonough, 2008) where curricula focus on EJ content led to increased enrollment of SOC, which also had a positive relationship with increased SOC enrollment. These researchers show that two key programmatic characteristics (EJ curricula content and community-based pedagogy) have an important positive relationship with increased diversity and inclusivity of IES programs. The finding that SOC may be more attuned to EJ curricula could be attributed to the possibility that EJ curricula contains issues of equity and diversity within the practice of solving EJ related environmental dilemmas. To understand the nuanced relationship more fully between EJ curricula and enrollment of SOC, the following subsection reviews theoretical frameworks used in the above empirical studies.

**Theoretical Explanations for EJ Curricula and Student of Color Enrollment in IES Programs**

*Curricular Decision Making*

Garibay et al. (2016) utilize Conrad and Pratt’s (1983) theory of curricular decision-making (CDM) to better understand program and institutional factors that may lead to the development and implementation of EJ curricula. Firstly, Conrad and Pratt’s model discussed the importance of environment inputs that go into the construction of curricula including societal variables, institutional attributes, and student composition within programs. In the case of EJ curricula, societal factors may include a relatively low public awareness regarding EJ issues, or the negative stereotypes perpetuated regarding POC’s concern and connection to nature and environmental issues, which may limit the importance for EJ content.
Institutions may have other STEM related agendas within their environmental programs that include more technological based content and research, which may limit the importance of EJ content and research, as well as community engaged practices that may be more closely linked with non-government and non-for-profit organizations. As for student demographics, if SOC continue to be very poorly represented in these programs (Taylor, 2007), it points to a possible low demand for EJ related content and courses.

The CDM framework also speaks to the importance of control that curriculum designers hold in the process. In this case, if FOC are also highly underrepresented in these programs, the likelihood that someone with EJ practice and experience is in control of curriculum development and implementation is very low. Interestingly, the CDM theory mixed with research findings on the low representation of SOC and FOC in these programs points to a low likelihood of importance and implementation of EJ curricula. This theoretical explanation may have been what led to Garibay and Vincent’s (2018) research to better understand the correlation between EJ curricula and SOC enrollment.

**Expectancy Value Model of Achievement Related Choice**

To gain insight into why SOC may or may not choose to enroll in a specific IES program, Garibay and Vincent (2018) employ a theoretical framework known as the expectancy value model of achievement related choice, first developed by Eccles et al. (1983). This theory attempts to explain that students' educational and professional choices are made based on their expectations of success related to other factors and obstacles associated with that activity. In part, this theory uses “task values” to help explain the student decision making process. Examples of task values include enjoyment of the activity (interest value), how well the activity relates to sense of self/identity (attainment value), ability of this activity...
to help students reach a particular goal (utility value), and the amount of sacrifice or negative experiences a student has to endure to complete this activity (cost value) (Eccles, 2005; Eccles et al., 1983).

Garibay and Vincent (2018) discuss the strengths of this theory in the context of their study in that other scholars have linked racial/ethnic identity as key variables influencing the educational and professional decision-making process of students. However, Garibay and Vincent point out that most of this research has been done in the K-12 space, and given the recent increased focus in higher education on how racial climate impacts student achievement and persistence (Harper & Hurtado, 2007; Museus et al., 2008; Museus & Jayakumar, 2011), there is a great need to link the expectancy value model of achievement related choice with research on racial/ethnic climate in higher education to better understand how racial climate impacts the decision-making process of SOC.

For example, as SOC make decisions to possibly enroll in an IES program two key factors that influence their perception of program racial climate may be the inclusion of POC in the curriculum (in this case the addition of EJ related curricular content) and the overall student compositional diversity (the percentage of SOC in relation to White students) (Garibay & Vincent, 2018). With the expectancy value model of achievement related choice and research related to campus/program racial climate, the findings that the inclusion of EJ content may lead to greater enrollment of SOC, which leads to a further increase in SOC enrollment become clearer.

EJ curricular content, community engaged program practices, and student compositional diversity are three key factors that lead to a higher proportion of SOC to enroll in IES programs (Garibay & Vincent, 2018). These factors may lead to a greater sense of
self (or attainment value), a higher possibility to learn about opportunities with community organizations (utility value), and less negative experiences related to issues with race in terms of the curricula and compositional diversity (cost value).

From the opposite perspective, these theories may also help understand the research on the low representation of SOC and FOC in environmental programs. With a lack of student compositional diversity, and EJ curricular content, (as well as FOC to help build and implement EJ curricula and aid in the creation of more inclusive program racial climate), students may not see that their educational/professional choice is worth the cost (cost value), and it may not match their sense of self (attainment value). Theories related to curricular decision makers, and student selection of educational goals posited by Garibay and Vincent (2018) are highly useful to better understand various findings within the realm of EJ epistemic exclusion in environmental programs in higher education.

**EJ Epistemic Exclusion: Relevant Trends and Key Gaps**

To summarize the second literature review area, one relevant trend related to epistemic exclusion within environmental programs is the continued lack of SOC and FOC representation (Burrelli, 2011; Hodgdon, 1982; Taylor, 2007, 2010; Valdez, 1995) with no significant improvements. The trend of SOC and FOC exclusion from environmental programs is also further explained with theory and additional research that shows how negative stereotypes about POC and SOC perceptions of the environment and nature in society and academia have continued to exist (Taylor, 2007, 2018), even with an extensive amount of theory and research that explains otherwise (Mohai, 2003; Mohai & Brant, 1995; Taylor 1989, 2007, 2018).
Although research on the low representation of SOC and FOC in environmental programs exists, it is difficult to find, and often utilizes data that refers to larger program categories such as STEM or E&S programs. Even more important, is the dearth of research on FOC or faculty who identify as EJ faculty and their experiences. In this case, much more research could be done on the representation or experiences of FOC in environmental programs, as Taylor’s (2010) study seems to be the only study that exists that looks at FOC representation and professional status specifically in relation to environmental programs.

The findings related to EJ curricula and SOC enrollment could have a profound impact on the IES program curricula development and implementation, as well as the practice of community-based pedagogies and their relationship to student diversity and inclusivity (Garibay et al., 2016; Garibay & Vincent, 2018). Garibay et al. (2016) suggest that future research could explore more detailed aspects of the curricula such as which courses contain EJ curricula, how they are developed, and the types of pedagogical methods used. All these areas could shed light on how EJ content and practice are incorporated into the curriculum. For a deeper understanding of the program environment, qualitative research may be of use to better understand the nuanced experiences of faculty and students within EJ courses (Garibay et al., 2016).

Finally, this study could have more generalizable results to STE environmental programs that are seeking to improve student diversity. The inclusion of more EJ related content with the hard sciences has the potential to increase student diversity and create more inclusive programs and has recently been studied in the K-12 space (Dimick, 2012; Morales-Doyle, 2017). In this case, the curriculum and content of these programs, or how these programs’ structure and value EJ epistemology could allow for SOC to feel that their own
voices and experiences are valued not only within higher education, but also in the larger scope of historical environmentalism (Taylor, 2002). If IES degree programs could improve their overall inclusion and retention of SOC, this could have profound effects for environmental organizations outside of higher education (Taylor, 2014, 2018).

**Environmental Justice Pedagogy and Curricula: From Theory to Practice**

Up to this point, this paper has focused on the EJ field, and how EJ knowledge (and those who embody it) are represented within environmental programs of higher education. This section will review the theory and empirical data on EJ curricula and pedagogy. More specifically, I will outline earlier arguments by scholars arguing for environmental education to become more inclusive for students of diverse racial/ethnic/linguistic backgrounds. The connection between multicultural environmental education (Taylor, 1996) and culturally relevant pedagogy (CRP) will be reviewed. This connection is relevant, as recent empirical research with EJ related topics has relied on aspects of CRP, including the discussion of critical consciousness development, an important tenet of CRP (Dimick, 2012; Kaza, 2002; Morales-Doyle, 2017). In addition, the theme of community and community engaged practices in relation to EJ topics and student outcomes is explored in an attempt to better understand the results from Garibay and Vincent (2018), which show the importance of community engaged practices for the increased enrollment of SOC. A final area will review relevant trends and key gaps.

**Foundations of EJ Pedagogy**

Although empirical data are lacking around EJ teaching practices (Garibay et al., 2016; Haluza-Delay, 2013), there are many theoretical articles that discuss issues regarding environmental justice instruction, especially earlier literature that begins to question the
inclusivity of mainstream environmental education (EE) (Agyeman, 2003, Cole, 2007; Taylor, 1996, 2002). The dominant discourse of EE has perpetuated a limited definition of the environment (Cole, 2007; Taylor, 1996), and left out nuanced perspectives and experiences from SOC, and students of other marginalized backgrounds (Agyeman, 2003; Cole, 2007).

In an early article advocating for multicultural environmental education (MEE), Taylor (1996) critiques various exclusive characteristics of mainstream EE. Taylor (1996) explains in detail how EE has maintained a primarily ecological focus while omitting socio-political issues. In addition, EE materialized from discourse centered on White male perspectives of classic environmentalists like Henry David Thoreau, Ralph Waldo Emerson, and John Muir, causing other perspectives from POC, indigenous peoples and the working class to be overlooked (Taylor, 2002). To combat these issues, Taylor (1996) calls for a redefinition of the environment that includes the stories and experiences of POC. The focus on redefining the environment has been echoed by other EJ scholars (Schlosberg, 2013) and educators within the field of conservation as a crucial aspect that makes EJ education more inclusive, and possibly allowing for increased enrollment of SOC (Gould et al., 2017).

Like Taylor (1996), Agyeman (2003) argues that because experiences with the environment are different based on cultural variations, educator teaching and research practices should reflect these socio-cultural factors. The argument for culturally sensitive instruction stemmed from a growing body of literature on MEE and other forms of more culturally sensitive or critical environmental education (Agyeman, 2003; Bowers, 2000; Marouli, 2002). Later, Cole (2007) explored infusing environmental education with aspects of critical pedagogy, EJ issues, and place-based education, contending that key
environmental concepts and literacies were not universal, but culturally specific and contextualized by place, and would benefit from more diverse and inclusive pedagogies.

Coincidentally, Taylor’s (1996) article on MEE surfaced at the same time of Ladson-Billings’ (1995) first work on Culturally Relevant Pedagogy (CRP), which was subsequently expanded upon in many articles by Ladson-Billings and others, with each work adding new layers and nuances (Ladson Billings, 1995, 2014; McCarty & Lee, 2014; Paris, 2012). CRP has origins in Critical Race Theory (CRT) and intersectionality (Crenshaw, 1996), both multidisciplinary theories that seek to understand socio-political phenomena through the prism of race, and other marginalized identities such as gender, sexuality, class etc. (Delgado & Stefancic, 2017).

More specifically, CRP is defined as having three main tenets: “(a) students must experience academic success; (b) students must develop and or maintain cultural competence; (c) students must develop a critical consciousness through which they challenge the status quo of the current social order (Ladson-Billings, 1995, p.160). The first two tenets remind instructors that traditional academic standards (although sometimes problematic and biased) remain important, if “students’ culture remains a vehicle for learning” (p. 161). From this lens, CRP seeks to transform the deficit model status quo to an asset model (Gorski, 2011; Harper, 2010; Saltmarsh, 2009). Instead of seeing students’ oppressed identities as an obstacle and forcing them to assimilate into the dominant (White, male) discourse of traditional education (Rendon, 2009), an asset model allows marginalized students identities, stories, and experiences to flourish and be valued within the classroom. From this lens, CRP offers a clear connection to the valuing of SOC experiences and unique

The last tenet of CRP stems from the work of Paulo Freire (1970) on critical pedagogy and his term *Conscientização*, which refers to deep and critical reflection with oneself and others. This term has origins in Freire’s work with rural farm workers in Brazil and their attempt to develop not only academic literacy, but also a more critical socio-political literacy to understand power relations with others in society. The interconnections between MEE, CRP and critical pedagogy seem to show that instructors working to integrate EJ concepts and themes into a course need to understand how to create, adapt and present the material in a relevant way for their student population.

In addition, practitioners also need to find methods to highlight ways in which the current social order and societal status quo can be questioned, which can provoke a practice of critical consciousness or *Conscientização* (Freire, 1970). The next section seeks to look at four empirical examples of how instructors in the K-12 (and higher education) context have interwoven both CRP, environmental science content and differing forms of critical consciousness development, as well as experiential learning (Dimick, 2012; Kaza, 2002; Morales-Doyle, 2017). In addition, the importance of community and community engaged pedagogical practices are discussed (Blanchette-Cohen & Reilly, 2013; Djonko-Moore, 2018; Morales-Doyle, 2017).

**From Theory to Practice: Environmental Justice Pedagogy in Action**

*Experience and Critical Consciousness Development*

As the above section focused on theory, this section hopes to give a brief overview of some empirical examples of EJ related pedagogy. Two unifying themes of several recent
empirical studies are the connections to CRP and or critical consciousness, and the use of an experiential-based activity or project (Dimick, 2012; Kaza, 2002; Morales-Doyle, 2017). These studies use some variation of CRP and or consciousness development in their theoretical frameworks, while also finding that students demonstrate some form of consciousness change related to a new understanding of the relationship between self, others, and the environment. In addition, each study utilizes real-world hands-on experience such as an environmental justice community tour (Kaza, 2002), a long-term chemistry project analyzing contaminants in soil (Morales-Doyle, 2017), and a student-led river pollution analysis project (Dimick, 2012).

One key difference is the use of terminology. While Kaza (2002) uses the term “critical conscientization,” and “liberation” (p. 102) while co-teaching a student-led course on environmental ethics at the university of Vermont, Dimick (2012) applies a framework of “student empowerment” (p.990) in their observation of a high school environmental science class. Finally, Morales-Doyle (2017) in an experiential learning venture entitled “The Soil Project,” discusses how his high school AP chemistry Students of Color became “transformative intellectuals” while learning about the discriminatory placement and soil pollution caused by a coal factory.

Most of these studies show how student engagement with both the academic content of the course and the field experience caused students to develop new perspectives and challenge the status quo in relation to environmental issues. For example, in an environmental ethics course co-created by students and faculty, Kaza (2002) applied the Catholic priest and physicist Fourez’s (1982) principles of liberation theology which focus on social patterns of oppression and domination. One step of this process is known as
“conscientization” or “waking up the conditioned conscience to see the influence of socially-framed values” (p. 102). The first two stages of this process were employed in two units focusing on racism and whiteness, and theories of injustice, such as eco-feminism and environmental justice.

However, the final and experience-based stage included a toxic tour of five community areas experiencing some form of environmental justice, including power plants and nearby affected communities and housing facilities affected by lead poisoning, among others. Overall, Kaza (2002) found that the tour caused students to recognize their own denial of environmental injustice in Vermont, to engage in a direct experience with inequity, and to have a greater sense of awareness of their complicity with these issues. In this case, in class linguistic and theoretical discussion helped create a foundation for greater conscientization of environmental inequities on the toxic tour (Kaza, 2002).

Like Kaza (2002), Morales-Doyle (2017) utilizes an experiential project as part of his pedagogy. More specifically, Morales-Doyle (2017) works with high school students of marginalized backgrounds in an urban-low-income community of Chicago and uses an AP chemistry course for students to work on a long-term project coined the “The Soil Project” where students had to test the number of contaminants contained in the soil near the closed coal power plant. Although Morales-Doyle uses CRP and critical consciousness in his theoretical framework, he also applies the term “transformative intellectuals” (p.1038) in his findings, stemming from Gramsci’s “organic intellectuals” which was used to signify a thinker whose agenda remains focused on the working class.

Morales-Doyle (2017) chooses to use this term to describe how his students from African American and Latinx backgrounds were able to “transcend tensions” between above
average academic success and gaining awareness about environmental injustice and racism in the community. In an analysis of student work and interviews, it was found that students were able to do this on three levels: 1) learning about the complexities of a social justice science issue (e.g. inequitable placement of the coal factor in low-income/minority community), 2) committing to their community by presenting and educating members about soil contamination, which allowed them to 3) gain academic and professional credibility amongst their peers. In creating a framework for justice-centered science education, Morales-Doyle shows how instructors can not only aid students in above average academic achievement, but also foster a critical awareness and action related to environmental racism/inequity within the community.

While Morales-Doyle (2017) and Kaza (2002) employ the terms conscientization and transformation, Dimick (2012) employs a framework of student empowerment while observing a high school environmental science class co-create a project related to how science can help understand pollution in a local river. Empowerment was examined in the classroom as it related to three areas: social, political, and academic. Like the above studies, Dimick’s (2012) framework for student empowerment explains that social/political empowerment relates to gaining awareness of privilege, oppression, and unequal power structures within society, but more traditional academic success/empowerment is not overshadowed.

Dimick (2012) like Morales-Doyle (2017) found that the different areas of student empowerment interacted reciprocally. As students co-created the river analysis project, their political empowerment was activated where participation and deliberation were needed to decide on the process and goals. Within this process, the co-creation of the river project
served as an activation of the students’ funds of knowledge (Gonzales et al., 2005), a process like Ladson-Billings' (1995) framework for CRP where student cultural and community knowledge is honored and utilized within the classroom. However, in an analysis of interviews with the instructor, Dimick (2012) noted that during the deliberation and execution of the river project, an unsatisfactory amount of science content was covered. In a slight difference from Morales-Doyle (2017), academic achievement was slightly impeded by the socio-political process of engaging in a real-world environmental science project. Dimick (2012) points to the need for continued discussion of how social justice process's function and relate to student success in the classroom.

**Importance of Community**

Another theme that emerged in different empirical examples of EJ related classrooms was the importance of community. The above examples of experiential-pedagogy engaged their students in community-based projects or activities (Dimick, 2012; Kaza, 2002; Morales-Doyle, 2017), while other studies also reference the importance of community in environmental classrooms. For example, community is referenced as an important part of engaging multicultural, and linguistically diverse students (Blanchette-Cohen & Reilly, 2013; Djonko-Moore, 2018; Morales-Doyle, 2017) and ensuring the success of a new interdisciplinary food justice program (Neiman & Schroedel, 2019).

A sense of community, and meaningful community engagement can play a key role in supporting culturally and linguistically diverse students in the environmental classroom. For example, Blanchette-Cohen and Reilly (2013) in a study of Canadian high school environmental education instructors working with culturally and linguistically diverse populations, describe the importance of community empowerment, and the inclusion of
community organizations as part of the process of culturally responsive environmental education (CrEE). One relevant finding was that while teaching, instructors observed the importance of “transcending the classroom walls” (p. 19) and involving both the students’ family/parents, as well as community environmental organizations. Although difficult to cross cultural barriers, instructors described the need for persistence and cultural awareness and understanding to show the importance of environmental issues to parents. In addition, all three schools worked hard to solidify relationships with community organizations which engaged in instructional school visits, but also helped students learn about vital environmental resources in the local area.

In another example of working with linguistically and culturally diverse students, Djonko-Moore et al. (2019), working with Latinx ELL’s and African American 3rd-6th grade students from urban areas of Colorado, use CRP in their pedagogical framework to engage students in culturally relevant science activities related to the environment and climate change. These researchers utilized community spaces for activities such as the Denver Science Museum, botanical gardens, and Rocky Mountain National Park and found that this pedagogical method had an overall positive impact on children's learning, engagement, and interest in science.

The narratives found in interviews demonstrated that the hands-on activities aided African American and ELL students “to build content knowledge, use scientific vocabulary, and create unique understandings about science and climate change” (p. 150). This study's findings relate well with the results of Morales-Doyle (2017), as his study also engaged linguistically diverse students in social justice science issues within the community. Both studies point to community engagement, and direct experience as helpful practices to help
contextualize academic and socio-political knowledge and awareness within STEM/environmental contexts for diverse student populations.

A final example of the importance of community in relation to environmental justice pedagogy is found in a study that assessed a high school interdisciplinary food justice education program (Neimen & Schroedel, 2019). In analyzing interviews and journals of college student interns, Neimen and Schroedel found that creating a democratic classroom space, building trusting relationships, and building a sense of community in the classroom and the school were key aspects that made the program successful in understanding socio-political inequities with the food system of the local community. More specifically, the researchers found that the program had positive effects in “increasing the self-confidence of students and building a stronger sense of community at the school and the local community” (p. 1937). Although this study has a strong analysis of community-based themes, the enactment of a food justice program with a focus on socio-political awareness of inequity strongly reinforce findings from earlier discussed studies related to EJ-oriented pedagogy (Dimick, 2012; Kaza, 2002; Morales-Doyle, 2017).

**EJ Pedagogy: Relevant Trends and Key Gaps**

In the review of these empirical studies that mixed theory from CRP and critical pedagogy with EJ related topics and action projects, it was found that three relevant and interconnected themes emerged: 1) The use and discovery of CRP and critical consciousness development in the theoretical frameworks and findings, 2) Experiential learning projects, and 3) The importance of community and community engagement. Although these studies highlight a small justice-based trend in science and environmental education instruction,
there are very few of these studies. Much more work is needed to better understand how EJ pedagogy functions, especially in the context of higher education.

The use of CRP and critical consciousness as theoretical foundations to these pedagogies shows the importance of understanding systemic injustices related to the environment, and the need to provide students with a context to begin transforming them through action projects (Dimick, 2012; Kaza, 2002; Morales-Doyle, 2017). However, considering the emergence of Critical Environmental Justice (CEJ) studies (Pellow, 2016), future studies regarding EJ related pedagogy could consider using CEJ which utilizes intersectionality and CRT as key frameworks, as they may provide an even better lens to analyze the role that identity and race play in the causes and remedies specific to environmental injustices.

Many of the above studies included community as important factors, or had students do EJ related work with community members, which may allude to how community-engaged pedagogical practices serve as meaningful context for EJ instruction (Blanchette-Cohen & Reilly, 2013; Dimick, 2012; Kaza, 2002; Morales-Doyle, 2017; Neiman & Schroedel, 2019).

It seems that inequitable environmental harms and their possible solutions are better understood or processed by students when there is a real-world community-based project. These community action projects may serve as important critical and culturally relevant vehicles for students to not only digest important academic content, but also engage in an analysis of real-life action about systemic socio-environmental injustices.

These results and discussions are extremely relevant because they relate to earlier findings regarding the diversity, inclusion, and equity of IES programs, and how community engaged program practices aid in the increased enrollment of SOC. These pedagogical
studies serve as partial explanations as to why IES programs that utilize more community-based practices may have higher enrollment of SOC. However, more work could be done in this area to better understand the precise relationship between community engaged practices and the increase in SOC enrollment in environmental programs. The next section will review and explain the study’s conceptual framework, which seeks to help aid the organization and analysis of the findings.

**Conceptual and Theoretical Framework**

This study seeks to examine how EJ faculty develop, organize, and implement their courses. After reviewing my primary research questions and drawing on the literature to understand the main processes and practices that faculty experience when instructing a course, I chose to organize a conceptual and theoretical framework around epistemic orientation, curriculum, pedagogy, and programmatic and institutional factors.

The use of these core concepts and the placement of epistemic orientation at the center of the framework was in part inspired by Schon (1995), who in an essay in response to Boyer’s book *Scholarship Reconsidered* (1990) argues that new forms of scholarship call for a new epistemology, or a new “institutional epistemology” (p.34). As part of his argument, Schon calls for a shift towards action research and scholarship but describes how this shift would first require a political challenge to the dominant epistemology of research universities, or what Schon refers to as an epistemology of “technical rationality.” What Schon is arguing is that practices associated with research, scholarship, or teaching depend upon, and are intricately related to the dominant institutional epistemology of the organization. For example, for action-research to be included more often in a particular college or university, it must be seen as a legitimate form of knowledge creation in
comparison to the prevailing dominant epistemology of “technical rationality.” Thus, to change a particular practice, such as the integration of EJ content knowledge, it may mean “becoming involved in an epistemological battle” (p. 32).

However, although Schon’s (1995) discussion of epistemology is relevant for this study’s conceptual framework, he also omits how issues of race, gender and class may influence the myriad “epistemological battles” (p. 32) taking place across higher education, as many of them are connected to activist women and people of color resisting the dominant Eurocentric epistemologies that remain prevalent in higher education today (Rendón, 2009; Taylor, 2002; Wilcox, 2009). Thus, it is of critical importance that this conceptual framework is also rooted in the resistance of EJ scholars and practitioners who discuss and demonstrate how EJ epistemologies continue to be excluded from the dominant and often STEM based (Garibay et al., 2016) epistemologies of E&S and IES programs across higher education (Agyeman, 2003; Garibay et al., 2016; Garibay & Vincent, 2018; Taylor, 1996).

More specifically, Garibay et al. (2016) reference the way a curriculum of an IES program can signify the legitimacy and valuation of epistemology and send critical messages to students about what kind of knowledge and whose experiences are included. Based on the above arguments of Schon and EJ scholars, I have chosen to develop a conceptual framework that represents how an EJ faculty member’s curricular and pedagogical processes will be informed by their epistemic orientation, which can also be impacted by the dominant epistemologies of both the program and institution. (For a visual representation of this framework, please see Figure 1 below).
Epistemic Orientation

After having drafted the main research question for this study: “How do EJ faculty develop, organize, and implement their courses?”, I began to visualize what faculty instruction would look like on paper as a set of processes and practices. I asked myself the question: “How does any instructor or faculty member go about creating and implementing their course?” I realized that the development of any course most likely begins with conscious or unconscious beliefs, theories, or experiences that faculty may have about teaching and learning. These beliefs and theories might also be influenced by previous experiences teaching as faculty, learning as students, or the dominant epistemologies of the program, or institution as referenced above.
In other words, these beliefs or theories may refer to how knowledge is created, valued, organized, communicated and or acquired. The theory of knowledge is referred to by philosophers and educators (Jones et al., 2013; Rendón, 2009) as epistemology, and therefore the core area of the conceptual/theoretical framework begins with a circle entitled \textit{epistemic orientation} at its center. It is referred to as \textit{epistemic orientation}, because faculty may be oriented by different or even contrasting personal epistemologies, or epistemologies that stem from other groups, such as community partners, students, or the institution.

To examine the research question: \textit{How does EJ faculty epistemic orientation influence instruction?} A main area of focus was how EJ faculty may seek to include issues and voices from marginalized EJ communities into their courses. This focus stemmed from research from the EJ field (Taylor, 2000; Schlosberg, 2013), but also from research related to community engaged EJ instruction (Dimmick, 2012; Kaza, 2002; Morales-Doyle, 2017). For example, beliefs about how environmental injustices are identified, understood, communicated, and addressed may serve as a critical way faculty value or prioritize EJ knowledge in their course(s) (Taylor, 2000). Taylor (2000) calls this the EJ paradigm, referencing the shift from studying the environment as an objective form of nature, to conceptualizing environmental problems as socially constructed, where differing social locations of groups cause distinct environmental issues to garner recognition and attention.

Building off the EJ epistemic paradigm, whether faculty utilize and value their own expert knowledge or knowledge from EJ community members might also play a role in their course design and instructional practices (Rendón, 2009; Temper & Bernal, 2016; Wilcox, 2009). For example, Rendón (2009) refers to faculty who mainly rely on their own expert knowledge as “sole experts” (p. 33). In contrast, Temper and Bernal (2016) point to the
importance of allowing for the “co-creation” or “co-design” (p. 41) of EJ related research with EJ activists. However, in this context, I am adapting the concept of co-design in research to faculty instructional practices that seek to include EJ community voices in their course’s knowledge production and sharing process. In addition, Yosso (2005), in their discussion of the CRT tenet entitled: The centrality of experiential knowledge also calls for the knowledge of people of color who have experienced racism and other forms of marginalization to be seen as “legitimate, appropriate and central to understanding” (p.74).

Another important aspect of epistemology would be related to whether faculty members value traditional intellectual/rational ways of knowing (Rendón, 2009) or also attempt to have students learn and practice socio-emotional intelligences (Rendón, 2009) or what Wilcox (2009) refers to as “embodied ways of knowing” (p. 105). Embodied ways of knowing also include lived experiences, a unique definition of performance (which includes creativity and critique) and, other “bodily intelligences” (Gardner p. 206 as cited in Wilcox, 2009) such as hands on, and experiential activities.

Thus, the different epistemic lenses described above from both EJ, CRT and scholars of higher education, serve to aid in the understanding of the way EJ faculty assumptions, experiences and beliefs influence their instructional practices. The first way faculty beliefs may impact their instructional process is through their overall course design, and the development and organization of knowledge, often referred to as curriculum.

**Curriculum**

Because epistemologies represent EJ faculty member’s core assumptions about knowledge, they serve as a foundation for all other practices of course implementation, including the organization of knowledge into a syllabus. Therefore, the next and slightly
larger circle of framework is entitled *curriculum*, as it refers to the way course content knowledge is organized. Faculty epistemologies undergird the organization of course content knowledge as faculty may include more of one kind of knowledge in their course content as opposed to another. For example, some faculty may rely heavily on academic theory while others may use knowledge from EJ community activist experiences. The results of these decisions could be courses that are organized primarily via academic articles, while other courses may use more informal writing, personal narratives, or news articles. In addition, guest speakers, or activities and experiences with community partners (Dimick, 2012; Kaza, 2002; Morales-Doyle, 2017) could also serve as a platform for curricular organization.

In this way, curriculum does not only refer to *how* content knowledge is organized, but it also refers to *what* kind of knowledge and *whose* knowledge is chosen to be included in the course, pointing to important aspects of justice described by EJ scholars such as recognition and participation-based justice (Schlosberg, 2013) and even epistemic justice (Temper & Bernal, 2016), which is related to whose knowledge is included, valued and viewed as legitimate. Like the example above, EJ faculty may choose to include content knowledge from EJ activists of color, indigenous peoples, or other groups that have been historically excluded from the mainstream environmental movement (Taylor, 2002).

For this reason, the most important literature used to help answer the research question: *How do EJ faculty organize course content knowledge?* is the previously discussed empirical work of Garibay et al. (2016), which examined how EJ knowledge had still not been fully integrated into IES programs. Perhaps more importantly, a follow up study by Garibay and Vincent (2018) showed that when EJ content and community engaged practices were integrated into the IES curriculum, there was a positive correlation with the increased
enrollment of students of color into these programs. This second study also points to a unique interconnection between EJ course content and community engaged curricular practices, which may provide some evidence that EJ faculty in higher education often choose to engage their courses with local EJ community issues, organizations, and activists.

Even more specifically, community “resistance and struggle” could serve as a key curricular organizational tool, where faculty members base units or sections of their course on community activist voices, or experiences with community member resistance in the local area (Crother et al., 2005 p. 2), such as protests, or community organizing meetings. Curricular content knowledge organization and prioritization can also have an important influence on how faculty choose to communicate this knowledge with students, because if faculty members integrate community engagement into their curriculum, they may use experiences with community members and activists as key aspects to their pedagogy.

Pedagogy

Epistemic orientation and curricular content organization can both influence EJ faculty pedagogy, that is, the process and practices used to communicate course content knowledge to students. For this reason, the next concentric circle after curriculum is referred to as pedagogy. What is more, pedagogy also serves as a way faculty advance the learning objectives they have stated in the course. Learning goals are closely connected with faculty beliefs regarding knowledge, so this represents another way epistemology and pedagogy are closely intertwined. Activities and practices faculty often use to help advance their learning goals tend to relate to different ways knowledge is communicated such as with lecture, exams, papers, guest speakers, group discussion and final course projects.
To help understand and analyze the question: *What pedagogical processes and practices do EJ faculty employ to meet their learning goals?*, I relied heavily on the literature regarding EJ pedagogy (see section 3 of Chapter 2), where in various cases, faculty teaching EJ related courses used frameworks that included critical consciousness development (Freire, 1970), culturally relevant pedagogy (Ladson-Billings, 1995), and community engaged course designs (Blanchette-Cohen & Reilly, 2013; Dimmick, 2012; Kaza; 2002; Morales-Doyle, 2017). Within the above set of studies and theory, Morales-Doyle's (2017) examined how he comprehensively integrated issues regarding toxic pollution from an old coal factory in an urban Chicago neighborhood into his course design. This study shows how a community related EJ issue (or issues) can serve as the primary focus for a community engaged model of EJ instruction, where the pedagogical practices can stem from this context.

Due to the relevant literature regarding community engaged EJ curriculum, I began thinking that EJ faculty in higher education may also look to similarly integrate their courses with important EJ issues in the local community. In other words, as opposed to just having one or two pedagogical activities in the semester that involved issues in the local community, faculty may create a fully integrated curricular design that provides a unique context for community engaged pedagogical practices, again highlighting how epistemology, curriculum, and pedagogy can intertwine.

Additional examples of this might be Ollis’ (2020) recent work on adult learning in an EJ activist campaign to resist the expansion of fracking in Australia. Some of the findings showed that learning via community activism is often “relational” and “embedded in practice” (p. 219). These findings show that when learners participate in the process of activism, learning can occur as a natural outcome from forming relationships with other
community members and focusing on the context-dependent task at hand. Ollis’ (2020) study is also related to previous research on protests “during and as a result of indigenous environmental movements” by Lowan-Trudeau (2017) that also demonstrates the different ways in which protest experiences can create unique opportunities for learning within environmental contexts related to issues of EJ. However, due to possible organization constraints, not all faculty members may be able to effectively design community engaged EJ courses. Please see the organization of the literature regarding epistemic orientation, curriculum, and pedagogy in conjunction with the study’s primary research questions in Figure 2 below.

Figure 2
Organization of Literature: Epistemic Orientation, Curriculum and Pedagogy
Institutional and Programmatic Factors

Although epistemic, curricular, and pedagogical aspects of course development and implementation are crucial to how faculty approach the instruction of their EJ courses, institutional and programmatic factors can also play a critical role that serves to either support or impede them in this process. Examples of institutional and programmatic factors that influence EJ instruction could be faculty rank, faculty tenure rewards systems, class size, the student population, opportunities for professional training, program or institutional values, and funding or assistance for guest educators and community partnerships. From this lens, faculty dedication, experience, and competence with innovative EJ curricular and pedagogical practices can in some cases be dependent on organizational support or constraints.

To fully explore the last research question: What institutional or programmatic factors support or impede EJ faculty instruction? I draw upon several different theories and empirical studies that sought to examine the role of organizational context on faculty recognition, support and instructional competency and development. Research and theory used in this section included Garibay et al. (2016) and Garibay and Vincent’s studies that looked at EJ course content not being fully integrated into IES programs, and its relationship with the increased enrollment of students of color and community engaged curricular practices. This research was important to keep in mind to understand other factors that might impede faculty from integrating EJ content or community engagement into their courses.

Higher education faculty reward systems are often skewed towards research success and away from pedagogical innovation (Dennin et al., 2017; Schimanski & Alperin, 2018). Faculty may be motivated or inclined to dedicate most of their time to instructing their EJ
courses due to the much higher importance placed on research and publishing. In relation to this pressure to publish, I also looked to research connected to academic capitalism (Slaughter & Rhodes, 2004), neoliberalism and striving in higher education (Gonzales et al., 2014; O'Meara & Bloomgarden, 2011), as I thought another obstacle to faculty teaching is the pressure to add prestige to their university in the form of published research articles in the top journals.

In close relation to the above areas of research, I thought it would be pertinent to also include literature regarding faculty professional development in the area of instruction such as theory on why and how faculty make changes to their pedagogy (Grunspan et al., 2018), studies on student awareness of pedagogical competence (Kaynardağ, 2019), and how instructional training can help faculty adopt a more student-centered focus in their courses (Stes et al., 2009). The theory and research here would help to more fully understand why some faculty may be more inclined to engage in pedagogical innovation within their EJ courses, while others may not. For a visual representation of the literature organized in conjunction with the final research question, please see Figure 3 below.
Conclusion

The main goal of this chapter was to provide an extensive review of the three main areas of literature related to this study. After reviewing the available literature from the field of EJ, diversity, inclusion, and equity in environmental programs, and EJ related curriculum and pedagogy, I drew upon the most relevant theory and studies to construct the conceptual and theoretical framework for this study. This conceptual and theoretical framework is rooted in Schon’s (1995) argument that to understand and change practices in different realms of higher education, it is crucial to consider how these practices may compete with the dominant institutional epistemology.

Faculty instructional practices are interconnected and influenced by both the faculty member’s and the institutional, or programmatic epistemic orientation. Schon’s argument is
highly relevant to this study, as EJ researchers and scholars (Agyeman, 2003; Garibay et al., 2016; Haluza-Delay, 2013; Taylor, 1996) have pointed the need to understand why environmental programs have still not fully integrated EJ related content knowledge into environmental programs. The relevant literature from the theoretical and conceptual framework hopes to aid in this study’s data organization and analysis, especially regarding separating EJ faculty practices into different categories such as epistemic orientation, curriculum, pedagogy, and programmatic and institutional factors that influence faculty practices. The next chapter will discuss the research design and methodology chosen for this study.
CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

For this study, I selected a case study methodology to explore 4 EJ faculty members’ courses for one academic semester to understand their background, the reasoning behind their curricular and pedagogical orientations, and how they seek to practice and enact EJ principles through their classroom practices and interactions. With the above goals in mind, I explored the following research questions:

Primary Research Question: How do EJ faculty develop, organize, and implement their courses?

Sub Research Questions:

1. How does EJ faculty epistemic orientation influence instruction?
2. How do EJ faculty organize content knowledge in their courses?
3. What pedagogical processes and practices do EJ faculty employ to meet their learning goals?
4. What institutional or programmatic factors support or impede EJ faculty?

In this chapter, I will first discuss the rational for choosing a multi-case study methodology. Secondly, data collection procedures will be reviewed, highlighting a comprehensive plan for three main sources of data and the triangulation of that data. This
will be followed by a discussion of the data analysis procedures, validity, and trustworthiness.

**Research Design**

For this study, I used qualitative methodology in the form of case study to pursue the question of how environmental justice (EJ) faculty develop, organize, and implement their courses. More specifically, to better understand the development and implementation of EJ curricula and pedagogy, I employed an interpretive (Merriam, 1998) multiple case study (Yin, 2003) of 4 faculty who teach EJ courses. A key advantage of this form of case study is it allows for a deep understanding of one (or multiple) bounded phenomena known as “a case” (Merriam, 1998). In this instance, the selected cases were of 4 EJ faculty members. Organizing the cases around each individual faculty member allowed the study to investigate the instructional *process and practices* from course content organization to pedagogical implementation in the classroom within their academic program/department for one academic semester.

However, although the cases focused on how each participant instructs one EJ course during an academic semester and the faculty member’s instructional process, it is important to note that certain aspects of the above research questions refer to the how the faculty member arrived to their current position; thus, it was necessary to inquire about identity, experiences, practice in the field/community through an open, semi-structured interview protocol which will be more thoroughly discussed in the data collection procedures and seen in the interview protocol found in the appendix.
Interpretive Multiple-Case Study Application

There are various reasons why case study, and more specifically a multiple-case study is very applicable to the process and practices of EJ course development, organization, and implementation of various EJ faculty. The reasons are listed in the following section. They are briefly bullet pointed here to provide a quick overview for the reader, and then further described in the following section:

1. A multi-case design has a practical use to predict and analyze similarities and contrasts between multiple cases (Yin, 2003).

2. It has a long history in education (Merriam, 1998) and higher education (Jones et al., 2013) and is connected to understanding practices and their applicability.

3. Case study research is useful when large questions of how and why are guiding the study (Yin, 1994), such as how and why EJ faculty develop and implement their courses and allows for the inquiry to move beyond mere description and into interrogation (Smith-Maddox & Solórzano, 2002).

4. It is useful for the development of theory (Merriam, 1998).

5. Case study methodology is rooted in the constructivist paradigm (Baxter & Jack, 2008; Stake, 1995), which is connected to important theory within this study’s undergirding conceptual framework, as well as literature from the field of EJ studies and my researcher positionality.

Compare and Contrast Multiple Faculty Courses

This study utilized a multiple-case study methodology. Yin (2003) explains how multiple case studies are used to find either similar results or predict contrasting results for predictable reasons based on a theory. When relying on multiple cases, the evidence found
can be comprehensive due to the varying contexts and gathering this amount of data but can also be time consuming (Baxter & Jack, 2008). To predict and explore the varying degrees of similarities and contrast among the differing EJ faculty members process and practice, I employed various theories described in my conceptual framework such as the EJ Paradigm (Taylor, 2000), Embodied Ways of Knowing (Wilcox, 2009), and Culturally Relevant Pedagogy (Ladson-Billings, 1995), and through an inductive process the objective was to see how those theories help explain the differing aspects of how these faculty plan, organize and implement their classes with the goal of using the findings to create a more concretized theoretical framework for EJ instruction in higher education. Where the theory did not aid in the explanation of faculty process and practices, I attempted to introduce or build new theory.

**Historically Connected to Practices and Applicability**

In addition to the above reason to utilize a multi-case design, case study research is quite common in education (Merriam, 1998) and higher education (Jones et al., 2013). This is because case study research has had a long history in education where it serves as an effective way to understand and develop new knowledge regarding practices and their applicability (Merriam, 1998). This reason cannot be understated in this study, as in many ways, the development and implementation of any college course revolves around a series of practices stemming from theory, or “praxis,” the process of how theory leads to practice (Freire, 1970). In the multiple cases of these faculty teaching EJ courses, understanding their curricular development process and their pedagogical practices as they attempt to deliver this knowledge within the classroom served as vital data points to better understand how EJ courses function.
What is more, many educational environments can be delineated into cases (Jones et al., 2013) providing rich bounded areas to study comprehensively, as Merriam (1998) explains case study as an “intensive, holistic description and analysis of a single unit or bounded system” (p. 12). As described above, the single unit or bounded system was each individual faculty member. This included their background, social identity, and process of course development and teaching practices within courses residing in different academic departmental and institutional contexts. Within these bounded areas, a natural process of holistic inquiry can take place with triangulation.

In this study, triangulation (to be discussed in more depth in data collection procedures) was a natural outcome of understanding faculty teaching practices as faculty instruction is usually understood through three main areas: 1. Faculty members discussing their teaching process (interviews), 2. Review of faculty syllabi and other pertinent course documents (document analysis) and 3. Faculty practices in the classroom (participant observation). Baxter and Jack (2008) like Meriam (1998) describe this by presenting case study as an approach that “facilitates exploration of a phenomenon within its context using a variety of data sources. This ensures that issues are not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood” (p. 544). In this way, case study is uniquely orientated to understanding the phenomena associated with the practice of teaching within the context of education and higher education (Baxter, 2008; Jones et al., 2013; Meriam, 1998).

**How and Why Questions**

Case study research is also useful when large questions of “how” and “why” are guiding the study (Yin, 1994, as cited in Merriam, 1998). Case study moves beyond mere
description and into interrogation, adding a more critical lens for interpretation (Smith-Maddox & Solórzano, 2002). This is evident in this study’s questions regarding how faculty members develop, organize, and implement their EJ curricula and pedagogy, but also why they have chosen specific instructional methodologies and approaches. The question related to the kind of instructional methodology used when teaching EJ courses was extremely important, as certain faculty members employed a community engaged instructional methodology while others did not. These questions also may illuminate aspects related to the practical significance of this study and provide some applicability to other educational contexts concerning various disciplines within higher education such as why EJ epistemology has not gained more traction within the faculty members’ IES degree program.

In addition to the important question guiding this inquiry of “how do these faculty members develop, organize and implement their courses”, another “why” question is why do they attempt to teach this kind of content knowledge to college students? In other words, what are the key goals of faculty teaching EJ courses? This “why” question was central to this inquiry in identifying if faculty are particularly motivated by some kind of environmental injustice within larger society, and how that injustice may have driven them to engage in some kind of practice within the community or helped them to start researching EJ issues within one particular academic discipline such sociology or environmental sustainability, for example.

Related to the goals of faculty, there were also deeply rooted pedagogical goals regarding student activism, empowerment, and engagement with communities. Faculty hoped students would become more active or involved with local environmental justice issues through inviting guest speakers and organizing site visits and experiential activities
with local EJ community activists (Dimmick, 2012; Kaza, 2002; Morales-Doyle, 2017). This was guided by aspects related to community engaged EJ instruction (Dimick, 2012; Blanchett & Cohen, 2013; Morales-Doyle, 2017) and stems from aspects of popular education and critical pedagogy. Popular education and critical pedagogy were developed and advocated by Freire (1970) and aspires for the development of critical consciousness of students and learners, and their ability and motivation to transform the status quo of the current social order and seek the liberation of themselves and others from structural oppression related to power, class, and other social identities.

**Development of Theory**

Finally, a case study methodology can inform the necessary procedures and strategies for the development of theory. Meriam (1998) describes pluralistic, descriptive, and heuristic case studies. Whereas pluralistic and descriptive case studies are useful for deep description, which could play a role in this study, heuristic case studies are more about providing explanation and analysis of a phenomenon. As Meriam (1998) states, heuristic case studies are useful for situations where one needs to explain the effectiveness of something (i.e. effectiveness of EJ curricula and pedagogy) and the reasons for some kind of problem (i.e. lack of EJ curricula in IES programs or in higher education in general), but most importantly, it can evaluate, summarize and make conclusions about a particular phenomenon (i.e. the various practices associated with the development and delivery of an EJ course, and how that may vary from different academic perspectives).

Meriam (1998) further explains different forms of case study and notes that in an interpretive case study the researcher does not merely describe a particular phenomenon, but instead may gather extensive data to create “a typology, a continuum, or categories that
conceptualize different approaches to the task.” Thus, I used an interpretive case study to build theory regarding the development and implementation of EJ curriculum and pedagogy. In terms of the “different approaches to the task,” this connects very well with the way differing faculty from different social identities, experiences, and institutional contexts, approached the instruction of their EJ course. In addition, creating categories, concepts, and continuums to document this relates to a larger goal of my study, which was to develop a framework for EJ curriculum organization and pedagogical implementation that would aid any programs seeking to infuse environmental justice content knowledge into their course offerings. This framework took the form of a continuum for community engaged EJ instruction and will be discussed in detail within Chapter 5.

**Case Study and Constructivism**

Baxter and Jack (2008) note that the two most prominent approaches of case study methodology created and advocated by Yin (2003, 2006) and Stake (1995) are rooted in the constructivist paradigm. Constructivists believe that reality is a social construct, interpreted by one’s own identity and life experiences and is thus contested, meaning that a purely objective reality does not exist. One advantage of this paradigmatic orientation is that the researcher can have a closer relationship (and in some cases share experiences with) the participants, while still allowing participants to share their unique stories (Baxter, 2008). In this context, I see myself as a fellow faculty member and an apprentice of environmental justice instruction and activism with the goal of shedding an important light on the process, goals, and benefits of this kind of education. A second advantage is that allowing participants to tell their own unique stories enables the researcher to better understand their actions (Baxter, 2008).
These two advantages to a constructivist orientation were vital to this multiple case study. More specifically, there are three constructions that took place. First, as discussed in my conceptual framework, EJ faculty through the lens of the environmental justice paradigm (Taylor, 2000) (which also stems from the paradigm of social constructivism) have constructed their own reality regarding environmental issues within society. Faculty from differing disciplines and divergent social identities may interpret, advocate, and attempt to solve environmental problems from differing epistemic lenses. This initial construction leads to a second construction – the development and organization of their course content (see Figure 4).

**Figure 4**

*Differing Social Constructions Relevant to This Multi-Case Study*
Based on their own experiences, social identity, and scholarly work, faculty make decisions on content and its importance when organizing their syllabi, activities, assignments, and projects. In this context, a large part of inquiring about how faculty develop, organize, and implement their courses (the epistemic, curricular, and pedagogical *processes* and *practices*) relates back to their own viewpoints of the vast array of socioenvironmental issues, the priorities they assign to these, and how they as faculty attempt in different ways to transform these issues with their courses. For this reason, a transformative paradigmatic lens (Creswell & Creswell, 2018) was added here, and thus, it was my work as a researcher to accurately observe, interpret and finally depict these faculty constructions using as many data points as possible.

Accurately observing, interpreting, and depicting the instructional practices is the final construction of reality taking place. I also constructed a story of these faculty members based on reality from my own point of view and vantage points as a researcher, fellow faculty member, doctoral student and from the lens of my own social identity. After having explained the rationale for using an interpretive multi-case study, the following section explains the sampling procedures I used to select participants for this study.

**Sampling Procedures**

**Sampling Overview**

It is important to note that within qualitative methodology, sampling should be highly intentional with an “emphasis on information-rich cases that elicit an in-depth understanding of a particular phenomenon” (Jones et al., 2013, p. 65). This is called “purposeful sampling” (p. 65) because the sample is intimately connected to the study’s purpose (Patton, 2002, as cited in Jones et al., 2013). After the purpose of study and research questions are diligently
centered in the pre-sampling decision-making, then the researcher can begin to identify relevant spaces, settings, contexts, and groups where potential study participants may reside (Denzin & Lincoln, 2000a, as cited in Jones et al., 2013).

Another important issue is determining how many participants, but not just in simple number, but finding the correct amount of “coverage” (p. 66), or how to justify that one’s purpose and research questions are being fully interrogated with the specific selection of participants (Jones et al., 2013). Thus, a key aspect of sampling is developing a set of criteria for participant selection that fully aligns with the study’s purpose and research questions. This way, the researcher can be sure they will be able to carry out a manageable investigation that adequately covers the range of phenomena of study.

**Sampling Criteria**

Sampling criteria refer to the distinguishing variables that participants may have that signify why they are of central importance to both the statement of purpose and the research questions (Jones et al., 2013). These variables could also be referred to as demographics as they often refer to the social identities of participants such as age, gender, sexuality, race, class, occupation and much more. In this study, the purpose was to explore the process and practices of how EJ faculty develop, organize, and implement their courses. Thus, the three core sampling criteria are based on reputation, home program/department, and teaching in institutions of higher education and are described below.

The first sampling criterion is that these faculty are referred to by a knowledgeable colleague as doing EJ related scholarly work and teaching EJ courses. This criterion meant that the faculty member is at least well known by others in the institution or region as being an EJ faculty member. In this case, knowledgeable colleagues were considered deans of
schools and colleges who have worked with many faculty during a large period of time, or directors of institutes or research/practice laboratories that may work with faculty from multiple schools, departments and disciplines. This sampling criterion is closely related to the sampling strategy of snowballing (discussed in the next section), where prominent deans, directors, and faculty can refer to faculty in various disciplines/fields that do important or cutting-edge EJ work.

The second sampling criterion was that out of the four faculty members, *at least one should be from an IES program, and at least one should be from a non-IES program*. This sampling criterion is in place for two critical reasons. First, having faculty members from both an IES program and non IES program allows for an in-depth follow up inquiry to Garibay et al.’s (2016) study that shows that many IES programs have not “fully integrated” (p. 931) EJ content knowledge into their program curricula. For example, Garibay et al. (2016) took a bird's eye view as they examined the IES landscape by looking at 297 IES programs and surveying the program directors and deans on how much they both valued EJ knowledge in an “ideal” curriculum, but also how much they emphasized it in the “actual” course offerings.

Overall, they found that many programs did not authentically implement EJ content knowledge into their courses. From this viewpoint, this study, as Garibay et al. (2016) recommended, provided a much deeper dive within a small sample size investigating 4 faculty members' perception of programmatic and institutional support with their EJ course(s). The research question: “What institutional or programmatic factors support or impede EJ faculty instruction?” attempted to directly understand this issue. As it turned out,
three out of the four faculty members taught their course within an IES program whereas one taught within a sociology program.

The third sampling criterion is *these faculty should teach undergraduate, credit-bearing courses in institutions of higher education, and agree to all forms of data collection.* This final sampling criterion ensures that all faculty members will teach official credit bearing courses at institutions of higher education. In addition, this criterion opens the possibilities for faculty members who may hold positions that are different than tenure track, or faculty who teach at non-traditional institutions other than typical four-year colleges and universities.

**Key Sampling Strategy: Snowballing**

Snowball sampling is often referred to as a sampling strategy where researchers identify actors with knowledge about their research topic, and these discussions then lead to future communications or appointments to speak with others, causing a “snowball” effect, which helps the researcher gain access to even more possible community members, meetings, and other kinds of events from which to survey possible participants (Jones et al., 2013; Patton, 2002). At some point, researchers aspire to contact a *key informant* (Jones et al., 2013), what some scholars refer to as a knowledgeable/reputable person who will refer you to most or all of your future study participants, and provide you with access to other important spaces, or information vital to other contexts of your study.

For this study, I selected snowball sampling and carried out this process until four faculty members were found. To begin the snowballing process, I contacted *three* key informants, and from there, followed the list of names that they provided. In each case, I requested that the key informants contact or connect me with the individuals that they
identified, as this confirmed that I did not just cold call participants, but instead used one contact to help meet future ones. Below, is a list of these key informants and how they led to the confirmation of other participants:

1. A dean of a school for the environment at a four-year, public research institution. This key informant was identified during a student experience and curricular development project that I participated in. This dean founded the school for the environment (more than 20 years ago) and had extremely specific information regarding all the faculty in the institution who taught EJ related courses and had already helped in informally identifying some possible participants. The result of this conversation led to the finding of one participant, and this participant also referred me to key informant number two, who is explained next.

2. An experienced EJ scholar/practitioner who founded and directed an important EJ research/practice organization at a nearby four-year private institution. The first conversation I had with this key informant provided a wide-ranging list of other possible participants both in the region and nationally which I saved for future contacts. Later, this EJ faculty member also agreed to participate in the study, which resulted in my second confirmed participant.

3. Another well-known scholar (whom I have cited widely in my literature review) who has a long history in the field (since the origins) with many books, peer-reviewed articles, conference appearances, speeches etc. at another nearby four-year private institution. This EJ scholar was contacted through email and agreed to help with an informal search for participants and guidance regarding the direction of this study. This conversation was not as fruitful as the one with key
informant two, but still resulted in a small list of possible EJ faculty to contact.

For more information on participants please refer to Table 1 below.

After going through the list of contacts, I eventually found my third participant, who then referred me to the fourth participant. Interestingly, I had already attempted to contact the fourth participant, but it was this referral that caused them to agree to participate. I am extremely grateful for this referral, and the extra time and effort put forth by my participant to aid me in generating a strong list of EJ faculty members. The next section will provide a short profile of each participant. For demographic data of each participant, please refer to the table below.
Table 1

Faculty Demographics

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>Disciplinary Expertise</th>
<th>Salient Social Identities*</th>
<th>Institution</th>
<th>Faculty Rank</th>
<th>Years of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samuel</td>
<td>Environmental sustainability and Community Development</td>
<td>Brazilian, Activist, Multi-Racial, Person of Color Etc.</td>
<td>Urban Public University (UPU), a four-year, urban public university on the East Coast</td>
<td>Associate Professor</td>
<td>25+ years of teaching in general 3-4 years of teaching EJ</td>
</tr>
<tr>
<td>Darren</td>
<td>Sociology</td>
<td>White Man, Appalachian</td>
<td>East Coast Private (ECP), a four-year, prestigious private university on the East Coast</td>
<td>Full Professor</td>
<td>25+</td>
</tr>
<tr>
<td>Gabriela</td>
<td>Feminist and Women’s Studies</td>
<td>White, Women, Queer, Feminist</td>
<td>City Semester Program (CSP), an off-campus, semester intensive program that focuses on urban issues located in the Mid-West, Adjunct Professor at Local State University (LSU)</td>
<td>N/A (EJ Program Director)</td>
<td>10</td>
</tr>
<tr>
<td>Paul</td>
<td>Sociology</td>
<td>Human, cisgender, heterosexual, male, upper-middle class, African American, Multi-Racial etc.</td>
<td>West Coast Public (WCP), a four-year public university in the central West Coast</td>
<td>Full professor</td>
<td>25+</td>
</tr>
</tbody>
</table>

Note. *These social identities were self-identified during interviews
Faculty Profiles

Samuel

“I did graffiti at night. I was arrested. So, I had those experiences... ”

Samuel was born in Brazil where he earned a medical degree and worked for years as a physician. It was during this time working as a physician in the countryside when he first began to notice the detrimental health impacts of sugar cane plantations on local populations: “So, I had knowledge about some of these issues. But it was not really at that time, we did not talk about environmental justice.” He discussed a lot of different forms of activism and community organizing while growing up in a dictatorship, including passing out leaflets, organizing students, and doing graffiti as the quote above exemplifies.

Years later, Samuel began traveling to various countries around Latin America including Costa Rica, Mexico, Cuba, and Venezuela working as an environmental workplace health practitioner running trainings on emergency preparation and environmental epidemiology. Eventually, this area of work led him to the U.S. where he continued to travel and do trainings and got more involved in the growing EJ movement, and more specifically, a movement for worker justice and workplace health and safety, which Samuel is still passionate about today, as this topic appears as a salient theme in his course.

Samuel’s passion for EJ and workplace justice issues was palpable during our conversations, as when I asked him how he involves issues of “community” in his course he responded with: “This is at the level of the skin. They feel that when I say this stuff, this is not something that I learned in the book.” Samuel was referred to me by my first key informant, an ex-dean of the school for the environment at Samuel’s institution. Samuel has
been teaching at Urban Public University (UPU) for over 15 years within the School for Environment with class sizes that range from 15-30 students.

**Darren**

“There's really this need for a paradigm shift and the advent of what I call a more transformative environmental justice politics, one which doesn't just look to more equitably distribute environmental harm or risk, but rather go to the root causes of the ecological crisis.”

Darren grew up in Kentucky and discussed his upbringing in the historic environmentally degraded and oppressed region of Appalachia as an important formation for his career as an EJ scholar and faculty member: “So I'd go out there and you could see all of the devastation and damage done to Appalachia by mountaintop removal, strip mining.”

After receiving a doctorate in sociology, Darren helped form an EJ organization in Latin America which helped spawn a more specific EJ career in what is now referred to as Global EJ or Global Climate Justice: “we formed an organization called Environmental Justice in Central America (pseudonym for study), and we were looking at the connections between US foreign policy, human rights violations, poverty and ecological crises.”

This kind of global and transnational orientation of EJ studies was extremely evident while engaging in dialogue with Darren in interviews and observing his critical lectures in the classroom. I observed Darren give lectures on topics such as 1.) Globalization and the export of ecological hazards, 2.) The polluter-industrial complex and the colonization of the state, and 3.) The future of environmentalism. Darren employs a multidisciplinary area of theories and topics in each class session with content and theory related to globalization, power relations, political economy, capitalist technology, green washing, environmental
justice, climate justice and much more. A consistent theme Darren expressed in both interviews and during class lectures was the need to use the current global climate crisis as a tool for transformational societal change.

Darren, who was the second key informant I spoke with, and was recommended to me by Samuel, was an extremely important participant as he referred me to countless other EJ experts and faculty members and provided me with much needed mentorship as I began the study in the early stages. Darren has been teaching at East Coast Private (ECP) for more than 25 years where he teaches a popular lecture-based course with 115 students each semester.

**Gabriela**

"I believe that teaching environmental justice is really not the same thing as doing it."

The quote above defines both Gabriela’s personality and her teaching practices as she is an extremely committed EJ instructor and community organizer, as her entire course design and epistemic orientation revolves around contributing to the EJ movement with local EJ organizations and community activists. Gabriela got her start in community-based activism while participating in an AIDS walk with a local queer activist community.

This early activism and interest in queer studies, feminism (and later) environmentalism, led to a doctorate in Feminist studies with a famous scholar practitioner of Eco-feminism, an area of work that looks at the intersections of environmentalism and feminist studies. Later, Gabriela began teaching EJ courses at Local State University (and other local colleges) but felt impeded in her ability to implement a community engaged model of EJ instruction as she explained:
There's such a bureaucracy, I have to go through so many people to make decisions, I don't have a lot of freedom as an educator. I don't get to just pay people what I want them to pay, I don't have a budget.

This experience influenced Gabriela to take a position as a full-time instructor of environment and sustainability (to be named EJ Studies later) at City Semester Program (CSP), a non-profit organization affiliated with 20 other institutions of higher education where students can come and do a semester “off campus” from their home institution. CSP offers a semester-intensive program (with three courses and an internship) that seeks to focus on one urban issue (such as environmental justice). Gabriela now refers to CSP as her “dream” and “playground” where she feels unleashed to fully engage her course with the community. Gabriela teaches three courses (and helps connect students to internships) each semester, while organizing approximately fifteen site visits and interactions with over 50 guest educators from local community organizations. I found Gabriela through the participant lists I compiled with my key informants. Fortunately, Gabriela also passionately advocated for my study and introduced me to Paul, a very well-known EJ scholar, who is described next.

**Paul**

“And that's the other thing that I'm constantly trying to keep the focus on, that connection between theory and application, ideas and action, so that students will feel inspired, feel motivated, feel like they can actually make change in their lives and in their communities.”

During my interviews, observations, and analysis of course documents, Paul consistently advocated for students “to make change in their lives and in their communities”
as the above quote illuminates. Paul got his start making real-world change through influence from his parents: “He [Paul’s father] and my mom were both civil rights activists when they were in college, so there has always been that push in our family.” This push was one factor that led Paul to earn his doctorate in sociology, and with mentorship from the founder of EJ studies Robert Bullard, Paul began and continued a long career in EJ scholarship and practice, as Paul is one of the initial scholars that helped create the multidisciplinary field of environmental justice with countless articles and books.

One salient aspect of Paul’s instruction was his employment of guest speakers, where in two of the three class sessions I ended up observing, guest speakers played a large and active role. In both sessions, Paul invited some ex-students to model how they had been applying and practicing some of the theories and concepts they had learned in his course to real-life situations: “The idea was to show that students were applying some of the concepts and some of the ideas from the class to not just a class project, but a project that could have real policy implications.”

Paul has over 25 years of teaching experience and currently works at West Coast Public where he was hired as a full professor and has enjoyed a support system where he has been able to implement a laboratory for community, student and faculty collaboration that has become an important part of both his teaching, research, and different areas of EJ related activism his West Coast region.

Data Collection Sources and Procedures

As case study methodology calls for an “intensive, holistic description and analysis of a single/multiple (Yin, 2003) unit(s) or bounded system(s) (Merriam, 1998, p. 12), it is imperative to collect data from varied areas, sources, and data collection methods (Baxter &
This kind of multi-method data collection also lends itself for triangulation, “which involves using different methods as a check on one another, seeing if methods with different strengths and limitations all support [or not] a single conclusion” (Maxwell, 2013, p. 102). A final reason to use multiple methods is to “gain information about different aspects of phenomena that you are studying, or about different phenomena” such as the process by which faculty develop and organize their course content and the practices by which they communicate this content to students (Maxwell, 2013, p. 102).

To use multiple methods for data collection, I collected data using two interviews (one pre-observation and one post-observation) of the different faculty members, three observations of their classroom pedagogical practices, analysis of faculty syllabi (and other documents pertaining to the research questions such as instructor slides) and, for one of the participants, photographs of site visits and experiences with community partners. The following triangulation from these four data sources aided in a deep exploration of the core research questions. All of my data collection methods stem mainly from the social constructivist paradigm described earlier as an advantage of case study (Baxter & Jack, 2008) in the current context, and part of my researcher positionality (see researcher bias in section on trustworthiness). In essence, the goal of data collection is to co-construct an interpretation of the data with the participants. However, due to the emphasis on power dynamics within this study regarding the exclusion of EJ knowledge from areas of higher education (Garibay et al., 2016), and the differing recognition and support oppressed groups receive regarding environmental issues (Pellow, 2016; Taylor, 2000, 2002), a critical lens should also be applied.
**Critical Social Constructivist Interviews**

For the interviews, I created a semi-structured protocol and made sure to schedule them before and after classroom observations. Later, they were digitally transcribed, and the transcriptions were member checked for validity and trustworthiness. The interview protocol (see appendix) was carefully constructed from the purpose of the study, the core research questions, the conceptual framework and the propositions. Most importantly, each interview question and sub-questions attempted to allow space for dialogue and the co-construction of these faculty member’s stories (the underlying mechanisms/factors/experiences that help explain their curricular development processes and pedagogical practices).

The social constructivist philosophical paradigm can undergird a researcher’s investigative process, including their strategies for data collection, such as interviewing (Patton, 2015). For example, Koro-Ljungberg (2008) describes social constructivist interviews as “dialogical performances, social meaning-making acts, and co-facilitated knowledge exchanges.” (p. 430). In this way, a social constructivist interview could be described as an “interpretive practice” that “requires flexibility and dexterity that cannot be captured in mechanical scriptures or formulas (Holstein & Gubrium, 2011, as cited in Patton, 2015).

What is more, Koro-Ljungberg (2008) explains that for investigators to understand how participants make meaning during the process of an interview, it is imperative that they focus on the actions that have influenced that meaning, but even more importantly, on the larger socio-political actions/processes that have further impacted the context of study. Even more importantly, Koro-Ljungberg (2008) describes an imperative shift from the researcher
seeing participants as holders of knowledge, and instead they can engage in dialogue with participants to participate in the co-construction of knowledge.

One important tangible method or description of this process is that the first (pre-observation interview) will emphasize the background of faculty and the process of how the course is constructed and the second (post-observation) interview will emphasize the pedagogical practices taking place in the classroom. In both interviews, part of the approach is to have the syllabus (and other course artifacts such as instructor slides) for each faculty member and use it as a tool and reference to discuss some of the questions. In this way, the interview, observations, and document analysis will all be linked, and cross verified at multiple points.

For example, in some of the post-observation interviews while conversing with a faculty member, there were opportunities to reference and explore my interpretation of how they conducted a particular part of the class based on my observation of them, and what is described and explained on their syllabus. Thus, this allowed for a calibration of data interpretation between researcher and participant, allowing for some co-construction of how and why faculty organized their plan in the form of a syllabus (document analysis), and how they acted within class (participant analysis) and their thought process regarding these actions and processes (interviews).

In addition, careful attention should be paid on identity, power, oppression, and privilege and how that has connected with larger sociopolitical phenomena (Delgado & Stefancic, 2017; Koro-Ljungberg, 2008) to add a critical and transformational lens to this inquiry. To better understand how the interview protocol would unfold, pilot interviews were employed with a person of similar constitution (i.e., knowledgeable EJ faculty
member/practitioner) to my participants to rehearse and practice the process of dialogue generation and co-construction and interpretation of meaning, as well as make key adjustments to the order and kinds of questions. In fact, the COVID-19 pandemic seemed to facilitate the ability to speak with people from any geographical location, so I was able to conduct two informal piloted interviews with different EJ faculty members that were unable to participate in my study, but still wanted to contribute in some way. These informal interviews also helped me gain even more experience with how EJ faculty make sense of their courses and overall instructional practices.

**Participant Observation**

Whereas Patton (2015) and Koro-Ljungberg (2008) discuss how interviewing is designed at better understanding the underlying reasons or causes of participant actions, Luker (2008) discusses how one of the goals of social science researchers is to pay attention to practices (participant actions) in observations (and interviewing). In addition, as described above, Merriam (1998) also points to understanding important practices and their applicability as one of the key advantages to case study research. Thus, a key goal of observations in the investigation of EJ faculty is to better understand their pedagogical practices which stem from their epistemologies that can be derived from faculty interviews. From this viewpoint, a key overarching question guiding these classroom observations is: what are the key pedagogical practices of EJ faculty and how and why do they implement them? From there, and in conjunction with interviews and observations, I can then understand not only these practices, but their theoretical, experiential, and socio-political origins and foundations (Koro-Ljungberg, 2008).
For the three faculty classroom observations, I primarily relied on Patton’s (2015) “dimensions of fieldwork” (p. 571) to provide an overarching context. When conducting my observations, I observed and attempted to take notes on the following dimensions: context, physical setting, informal interactions, non-verbal cues, language, and formal activities. In addition, I paid attention to the documents (to be described in more detail in the document analysis section) during the process as well as what does not happen during the observation. In the current context, these dimensions will all relate to the faculty member’s actions. For more information related to the observation protocol, please see Appendix B.

It is important to note that the COVID-19 Pandemic did not allow for in-person observations. Although faculty members participating in this study were conducting their classes on Zoom, they continued to hold class synchronously although in some cases they would record the sessions and post them on their learning management software (LMS). Because of this, all of the class observations took place via Zoom, and this created some advantages and disadvantages. Firstly, one main advantage of doing course observations over Zoom was that I was no longer limited by geographical location. This allowed me to have participants who were teaching in the Midwest and West Coast.

In fact, I observed a class session that was happening on the West Coast on Tuesday, and a class session happening in the Midwest on Wednesday. This experience would have been close to impossible if the observations were happening in person. Another advantage of observing via Zoom was that I could observe other aspects of language such as the chat and emojis sent by students. Two faculty members taught rather large classes, so being able to see questions and other student engagement in the chat was something that would not have been available in a pre-COVID in-person class session. Finally, when faculty invited guest
speakers to visit their class, they easily Zoomed in, and I was able to fully observe and see how and what they discussed with students and how the faculty, students and guests interacted.

However, there were also various disadvantages to Zoom observations. One main disadvantage was being unable to “feel” the room and observe the physical setting of the classroom such as student desk arrangement (in a circle or rows) and how the faculty member positions themselves relative to the students (either standing or sitting). Another important disadvantage was not being able to observe informal interactions between students and or faculty during break times, or during group work as faculty members may walk around the room and chat with students, as Zoom sessions are generally limited to just the class session. Perhaps the largest disadvantage to observing class sessions on Zoom, was not being able to observe Gabriela’s site visits and experiential activities she planned with community organizations and activists. Although Gabriela invited me to these activities, I chose to decline because of the restrictions and dangers at the time associated with the COVID-19 Pandemic. However, in place of going to these activities, Gabriela sent me a folder with a large quantity of photographs from these activities and experiences, and I will describe this below in the photo analysis section.

In addition, within the “dimensions of fieldwork” Patton (2015) also lists “unobtrusive observations,” and discusses the important reminder that participants will often act differently when there is a presence of observation. Related to this, the goal was to be as unobtrusive as possible, to avoid making participants feel self-conscious or anxious and to address the concept of reactivity, or the influence of the researcher on the participants (Maxwell, 2013), which will be discussed more in the section on validation and
trustworthiness. Unobtrusive observation should be differentiated from covert observation, as I still sought formal permission from faculty members, and they knew of the date of observation as well as my intentions in observing them, which also relates to the ethical concerns of the study to be described in more depth below.

However, although it was my goal to be unobtrusive in my observations, two faculty member participants engaged me in activities during the class (one more than the other), while two did not. In situations where I was engaged in the classroom activities, I decided to engage and willingly participate, as I did not want to create an awkward situation and wanted to go with the flow of the faculty members' intentions and instructional activities. In all three observations, Gabriela involved me in warm-up and team-building activities, and in some ways, I thought this aided in a bond between researcher and participant, thus possibly decreasing any reactivity that may have been present. This kind of informal and friendly interaction between researcher and participant during observations not only serves as a critique to the idea of total unobtrusiveness, but also may speak to the importance of developing a rapport with participants during observations. In the case of classroom observations, faculty member interest and willingness to involve all visitors into the group culture also speaks to their epistemology and their beliefs about learning and the need to collaboratively include all participants.

**Documents as Data**

For the third area of data collection, I gathered and analyzed the most pertinent documents that faculty use in conjunction with their courses, especially the course syllabi, as well as course descriptions, and instructor lecture slides. Charmaz (2014) explains how documents can provide a very rich source of data but points out that “researchers often
review documents but undervalue their potential for theorizing” (p. 45). Related to Charmaz’s (2014) point regarding theorizing, one argument could be made that the course syllabus could be one of, if not the most important form of data, as they represent the faculty member’s formal documentation of the course.

In other words, the syllabus is a textual representation or concept map-like visual of the faculty member’s choices regarding the design and implementation of their EJ knowledge. The kinds of topics, the order of these topics, the materials used, the theories mentioned, the assignments, and sequence of the course were all stated on their syllabi. This information represented a vital fulcrum point of the investigation from which to gain reference and direction of the underlying mechanisms that drive the processes of course development and the pedagogical practices in the classroom. Thus, I saw faculty syllabi as a very important aspect for the development of theory, which was one of the key goals of the study.

Charmaz (2014) would classify faculty syllabi as extant documents, meaning that they are not produced with help from the researcher, and stem only from the participants or context of study. In most qualitative research, these kinds of documents are used in conjunction with interviews and observations as additional support (Charmaz, 2014), and in this case, the syllabi of faculty represent important supportive material to be used with other data collected. However, if for some reason there were stark differences between the syllabi and the actual practices that took place in the class, this would have needed to be noted and further investigated, and possibly discussed in interviews, representing a possibility for more critical interrogation of the participants curricular outline vs. their actual classroom actions (Maxwell...
& Solórzano, 2002). After observations and interviews, I did not notice any notable differences between what was happening in the classroom and what was stated in their syllabi.

In the instance of this study, there were no issues with gaining access to the course documents, as this was a part of the agreement made when beginning the study. Faculty were briefed from the onset of communication that part of my research project was to understand, collect and analyze their syllabus and any other course documents, such as instructor slides used during lecture and discussion or photographs of site visits. The main reason for collection of these was because classroom interactions and faculty lecture/discussion tend to happen very fast, so it was important to review these materials again when drafting memos and taking notes of my observations. In addition, it was also important to review the slides to find important quotes and or questions that faculty posed to students to better understand the discussion or lecture section of a class. These were most helpful when creating the findings for classroom discussions and is another example of how document analysis can be done in conjunction with observations, which points to another advantage of the use of multiple data collection methods. To aid in the document analysis, a protocol was developed using key theories and literature from the conceptual framework and is available in Appendix C.

**Photographs as Data**

The final area of data collection was the collection of photographs, which I did for one of the participants. Because I was unable to visit Gabriela’s site visits and outdoor educational experiences with community partners and activists, she voluntarily sent me a google drive folder filled with detailed photographs from most of the 16 site visits that she planned and organized during the semester. Interestingly, the analysis of visual material in
social science research has become much more common with the proliferation of digital media and access (Knoblauch et al., 2008) and has also been used to analyze outdoor educational experiences (Loeffler, 2005) such as the visits and experiential activities employed by Gabriela. More specifically, Loeffler used photographs taken by student participants to better understand how participants created meaning of their experiences.

The folders of photographs also corresponded with the site visits listed on the syllabus and a Google Calendar that was also shared with me. From the lens of case-study research, these photos provide another tool to verify the data via triangulation from interviews, observations, and the syllabus. In addition, the photographs not only provide important evidence that the site visits and activities took place, but they also provide very important additional visual information of what exactly happened during these visits and activities. Unfortunately, because I received access to these photographs very late in the data collection process, I missed the opportunity to discuss them with Gabriela as a tool to obtain more information about the visits during interviews. The way in which I go about this analysis and triangulation will be described below in the data analysis section.

**Data Analysis**

*Memos, Coding and Use of ATLAS.ti*

The preliminary strategy regarding this study’s data analysis was to create codes (short phrases that help describe themes from the data) from the interviews, observations, and documents. However, it is important to note that Maxwell (2013) points out that although coding is most often discussed in the literature regarding qualitative data analysis, simply reading through and thinking about your interview transcripts, observation, and document notes, writing memos, developing possible coding categories, and creating matrices are all
considered vital forms of data analysis. That is, coding may be inaccurately referred to in the literature as one finite strategy even though it is a part of many different tasks and other data analysis strategies.

For this reason, I tried to draft memos immediately after my interviews and observations (and maybe after looking over syllabi and instructor slides) to capture my first impression of the data. Then, I reread those later while looking over the interview transcripts or observation notes and reflecting upon the differences between both my notes/transcripts and my memos; this could result in changes or additions to earlier memos. From there, the goal was to develop informal/draft categorizations, concepts maps, matrices or other data visuals and organizational tools to develop a general understanding or landscape of the data.

After this initial informal interpretation of the data, I utilized ATLAS.ti, software designed to help researchers categorize and analyze data. First, I created the largest categories of codes using my conceptual/theoretical framework as a guide. These codes were titled in all capitals and were called: EPISTEMOLOGY, CURRICULUM, PEDAGOGY and FACULTY SUPPORT. After these large codes were created, I then began creating the most obvious sub-categories for these codes using advice I read on the ATLAS.ti help section which called for adding the main code with a colon to show the subcategory. Examples of these codes included: Epistemology: experiences, Curriculum: organization via theory and Pedagogy: use of guest speakers. Later, I further divided and specified some of these categories such as Epistemology: activist experiences, or Curriculum: organization via theoretical tools. I also color coordinated these codes with the colors I used for my initial conceptual/theoretical framework to aid in the organizational process. Codes that emerged
that were not part of my conceptual/theoretical framework were created when applicable. After I felt that I had rigorously coded all the available data, I ended up with 119 codes.

To code the interview transcripts, observation notes, syllabi, and instructor slides, I used ATLAS.ti’s coding feature which allows researchers to highlight a quote, or area of text and “tag” them with a code, which permanently connects that text with the code. After tagging all thirty-two documents I uploaded to ATLAS.ti, I was left with 689 quotations, each connected with one or various codes. To begin categorizing the data I then chose codes that were associated with many quotes, such as “Pedagogy: goals for students'’ which was associated with 48 quotes, for example. In many cases, I used the “query” tool on ATLAS.ti which allows the user to select multiple codes from a codebook, and then show all the associated quotes. The software can also generate an excel table that organizes the quotes and codes. With the help of the “Query” tool, I then began to copy and paste these quotes into a document under particular headings associated with larger codes and subcodes, such as “Pedagogy: application of theory, or Pedagogy: Mentoring goals, for example. I continued to do this until I had a large document filled with larger categories and subcategories of participant quotes (or text from syllabi) and this eventually became the themes of my findings, which was later revised several times based on the main areas of focus.

**Developing Theory with Networks**

Luker (2008) states that one of the main goals of a social science researcher is to develop theory and pay careful attention to practices within observations and interviews. In addition, as mentioned above, Merriam (1998) also discusses that an interpretive case study lends itself to understanding practice and its applicability, and categorizing, or creating a typology to understand different approaches to the particular task of study. In line with these
researchers, one of the fundamental goals of this study was to develop a theoretical framework for EJ curriculum and pedagogy.

To do this, findings can be connected to fundamental literature within my conceptual framework regarding epistemology in education (Rendón, 2009; Wilcox, 2009) and the field of EJ studies (Agyeman et al., 2016; Mohai et al., 2009; Schlosberg, 2013; Temper & Bernal, 2016) and EJ education and teaching and learning practices and (Agyeman, 2003; Cole, 2007; Dimick, 2012; Garibay et al., 2016; Haluza-Delay, 2013; Kaza, 2002; Morales-Doyle, 2014; Taylor, 1996) and more general literature regarding curriculum and pedagogy, such as culturally relevant (Ladson-Billings, 2014; Paris, 2012) and critical pedagogy (Freire, 1970).

In addition, there is a dearth of data regarding strategies for the creation and implementation of EJ related knowledge (Garibay et al., 2016; Haluza-Delay, 2013), thus some of the data analysis allowed for the generation of new knowledge currently unknown in the literature. To engage in the process of theory building, I reviewed my conceptual framework and transformed it based on the findings. To aid in this process, I developed networks (Miles et al., 2014). The goal of networks is to create a new visual, concept-map-like display in conjunction with the theoretical concept map discussed earlier containing points or areas showing novel streams or connections between participant actions, events, and processes. This is very useful and common in case study research (Miles et al., 2014). The result of this was a visual representation of faculty practices in the form of a continuum of community engaged EJ instruction, which will be discussed in depth in Chapter 5.

Validation and Trustworthiness

Validation is defined by Creswell and Miller (2000) as “how accurately the account represents participants’ realities of the social phenomena and is credible to them” (p. 124).
Although there is a large body of research and discussion on validation in qualitative research, many investigators differ on their approach to validating their findings (Creswell & Miller, 2000). For example, there are various factors that contribute to the way a researcher can approach their understanding of how accurate and valid the findings are depending on various lenses including the lens used by the researcher, their paradigmatic assumptions, the kind of research being conducted, member checking from participants and collaboration from colleagues, to name only a few (Creswell & Miller, 2000).

In this study, I relied on Creswell and Miller’s (2000) notion that it is best to tie the validation strategies to the methodological choices and the researcher/participant paradigmatic stances. I employed triangulation to confirm and disconfirm evidence in conjunction with member checking, both hallmarks of case-study research, stemming from the constructivist philosophical tradition. In addition, I also utilized researcher reflexivity and collaboration, which stem more from the critical or transformational tradition. Thus, my researcher identity and the methodology chosen help guide this study’s validation.

**Triangulation**

To verify data streams, and fortify the overall data analysis, I used concurrent triangulation. Maxwell (2013) describes triangulation as “collecting information from a diverse range of individuals and settings using a variety of methods” (p. 128). Creswell and Miller (2000) also point out that triangulation can be an excellent technique for classifying data into categories, an important step towards theory development (Merriam, 1998).

In addition, Creswell (2003, as cited in Jones et al., 2013) explains that in concurrent triangulation, data is collected at the same time with the goal of trying to substantiate findings in the same study. This can prove to be very important if one method is weaker than
another. Creswell (2003, as cited in Jones et al., 2013) explains that this form of triangulation is helpful to either show convergence or explain the lack of convergence. As mentioned briefly above, I triangulated the data from interviews, syllabi, instructor slides, classroom observations, and in the case of one faculty member: photographs of site visits. However, Creswell and Miller (2000) point out that triangulation is a data analysis method that only takes the researcher’s lens into account (which stems from a more positivist tradition), and for this reason, I seek to blend this form of triangulation with more of a social constructivist lens and transformational lens and try and use triangulation in conjunction with member checking, researcher reflexivity, and collaboration.

One area of triangulation that was very important in this study occurred when I was analyzing faculty epistemologies, their learning goals, and their pedagogical practices they employed. Different faculty epistemologies (their beliefs about knowledge and the experiences and identities that may inform these beliefs) were mainly understood during the interview process as faculty members were able to describe their experiences and identities that informed their epistemologies. However, an important aspect of verification occurred when I compared expressed beliefs and ideologies of faculty with tangible pedagogical practices and strategies I observed in the classroom. In some cases, faculty members’ pedagogical practices were deeply connected to their expressed epistemic foundations, but in others, the connections were not as present, or went in contrast to their beliefs.

Triangulation also took place with the collection and analysis of photographs from Gabriela’s site visits. In both interviews and classroom observations, Gabriela often referred to the many different community partners she worked with and the various experiential activities she had planned during the semester. In some classroom observations, Gabriela
would remind students of a particular site visit and how it related to that class-session's material, or she would refer to a future site visit, reminding students to apply what they learned during the class. However, as a researcher listening to these site visits, it was sometimes difficult to imagine or visualize what they looked like in real life. For this reason, examining the photographs with clear labels that pertained to each activity, provided much needed context, visual information, and verification of this pedagogical and curricular practice.

**Member Checking and Collaboration**

With member checking, the perspective of the investigation can move from the researcher to the participants (Creswell & Miller, 2000). This idea is of paramount importance, as social constructivist interviews call for a dialogue and co-construction of data with participants. A more intense form of member checking could be referred to as collaboration, where participants are either formally or informally involved in some of the data analysis (Creswell & Miller, 2000). Allowing participants to voice some of their perspectives on my interpretation of their instructional processes and practices increases the credibility of the final interpretations that are presented as formal findings (Creswell & Miller, 2000).

During the post-observation interviews with faculty members, I attempted to facilitate dialogue that opened a space for both triangulation, member checking and collaboration (Koro-Ljungberg, 2008). In all the post-observation interviews with faculty members, I did my best to refer to things I saw in the observations and ask them about them, and in many cases I would inject my own interpretation of these events. In most cases, I was pleasantly surprised that my interpretations were like the faculty member’s intentions or goals.
However, in some cases, my interpretations were incorrect, and it was important that the faculty member had the opportunity to clarify. This was very helpful to better understand my findings and subsequent analysis of the data. Here are two examples where I attempted to engage faculty members in a dialogue related to my interpretations. The first one is from a discussion about using guest speakers in the classroom with Paul:

Researcher: In both of those classes I visited, you definitely took more of an MC role or like a ... I don't know, kind of guiding as opposed to lecturing. Is that related to what you said before, just about giving them a break and stepping back a little bit?
Paul: Yes, exactly. And of course, I want to step back and give the guest speakers a pretty wide berth in terms of what they're going to present and how they're going to present it.

Here is an example when my interpretation was corrected by Gabriela:

Researcher: So, would you say that particular unit or class was about tribal land rights, or the land back movement? Or did it not really have a title or anything? I'm just trying to map that out.
Gabriela: It wasn't about land back. And I know that because we had a specific day on land back, and we had a different speaker. So, when we had Matt Daniels come talk, I believe that was the day when we were trying to move through... Let's see. I was going to say imperial lenses, but that wasn't it. Was it agnotology? Hold on. Yeah.

The process of member checking and the co-construction of findings allowed for a deeper understanding of findings but also signaled to faculty members how I was interpreting something, thus leading to an open dialogue to calibrate or cross-examine our interpretations. Because this was a complex process that did not always go perfectly, an alternative strategy
was to share my interview transcripts, notes, and interpretations with faculty members after
data collection, and ask them if they confirm my interpretations to be accurate. I did this at
times with short emails with my notes of observations. This also provided additional
opportunities for faculty to see my interpretations of their instructional practices and make
clarifications when necessary.

**Researcher Reflexivity**

Researcher bias is another important area of trustworthiness. Researcher bias is
defined by Maxwell (2013) as the way our qualitative conclusions fit the researchers’
eexisting theory, goals or preconceptions about the area being studied. This is also defined as
researcher reflexivity (Patton, 2015), the idea that researchers should be continually
observing themselves and their own actions and interpretation of the data, as well as the
participants. Luker (2008) refers to this as an embedded assumption. In this way, biases
within the present research design could inform everything from research questions, to
methodology, to strategies of data analysis. Thus, it is imperative that I acknowledge myself
as a non-neutral investigator and discuss the biases that I have and their influences on this
study.

**Researcher Positionality and Biases**

One very important issue with regards to my positionality is my race and gender as a
White man, and my lack of experience with EJ issues in the real world. This is very different
from the groups and communities of color, low-income groups and (often referred to as EJ
communities) who have experienced the myriad of terrible environmental injustices. In
addition to this, I have never taught or taken an EJ course in higher education or conducted
EJ related research. Although I continue to be passionate about all kinds of environmental
issues and the ways in which they intersect with social injustices, I often struggle with my role as a graduate student conducting research on the complex topic of EJ instruction. As I began this research, I tried to continually remember this lack of experience and knowledge and the need to orientate myself as a listener and stay open and vulnerable during conversations with the many EJ experts I spoke with.

One way in which I better understood my role is through my experience contacting and meeting with over a dozen or so different EJ faculty members and practitioners. During these conversations, I learned many different things about the significance and possible implications of my study. Most notably, many faculty agreed that there was a huge need for this research, as little has been understood about the specific practices of EJ instruction in higher education. In some cases, I could see faculty members being visibly excited about what I was doing, and this became a strong motivating force behind my dissertation. I began to realize that one of my roles was to add onto the small amount of research there is at the intersection of EJ and teaching and learning in higher education. In some of the interviews for this study, I could feel a growing sense of collegiality with the faculty members, and I can only hope that our conversations about EJ curriculum and pedagogy were in some ways beneficial to their instructional practice.

Another bias I brought to this research was a strong interest in better understanding community engaged EJ instruction. As mentioned above in the conceptual/theoretical framework, most of the existing empirical studies showed the EJ instructors and faculty members attempted to provide a community engaged or experiential model of teaching to their courses (Dimick, 2012; Garibay & Vincent, 2018; Kaza, 2002; Morales-Doyle, 2017). However, I believe my interest goes far beyond the body of empirical evidence there is on
differing models of EJ community engaged instruction. I have some experience organizing activities in my own courses (as an ESL instructor in higher education) with community partners. During these visits with community partners the real-life experience and interaction with other experts always felt far more exciting and engaging than traditional classroom instruction. Based on these empirical findings and my own experiences, I was particularly interested to explore what ways the faculty members in this study integrated EJ community issues and organizations into their curricular and pedagogical practices, and what kind of epistemology impacted these practices. More so than any other bias, I believe this personal interest based on earlier empirical research and personal experience impacted the findings and discussion of this study, as this served as the key lens from which to analyze the findings.

In addition, other biases as a faculty member within higher education may have caused me to have more embedded assumptions about how or why faculty design and deliver their courses. One example is that I am a faculty member who believes more in student consciousness transformation, which may lead to societal transformation, as opposed to only focusing on the delivery of academic content, which many formal academic assessments attempt to measure. Thus, in this case, I was likely overly focused on pedagogical theory that involved abstract student learning that is difficult to measure such as experiential and other forms of intelligence (Wilcox, 2009). This bias may have to be accounted for in future studies with students in EJ courses to measure what kind of academic and socio-emotional or experiential learning takes place.

Lastly, I am a strong advocate of environmental justice education, and believe that it is a necessary tool to combat climate change, environmental destruction, and the uneven
burden that historically oppressed people face due to all environmental/ecological issues. This bias may have caused me to view these instructors and their practices in an overly positive light. To account for this, I attempted to also engage in interrogation (Smith-Maddox & Solórzano, 2002) of possible areas of improvement. Faculty member’s practices should be understood as evolving, and areas to be strengthened were described, examined, and an open space for dialogue with faculty regarding these areas was cultivated when it was possible.

**Reactivity**

A final issue with trustworthiness is the problem of reactivity. Reactivity is the influence of the researcher on the individual (or group) of participants being studied (Maxwell, 2013). In this case, I observed faculty member’s class sessions three times. My presence in the space may have played a role in the thoughts, feelings, behavior, or outcomes of the participants. To diminish this potential problem, my objective was to be as inconspicuous as possible during classroom observations and to clearly communicate my role in the space at the onset of the course. However, as described above in the section on observation, some faculty members invited me to participate in some classroom activities and discussions. When I was asked to participate, I spontaneously agreed because I felt that saying no would have caused discomfort, and it did not seem to impact the classroom space in a negative way.

**Ethical Concerns**

One main area of ethical concern in this study can be described as “negotiating entry” or “granting access” (Maxwell, 2013). These terms are concerned with how the researcher enters the research site/space, and their relationships with their participants. However, it is
important to note that gaining access or negotiating entry is not a one-time procedure, instead it is a constant ongoing process that can evolve and shift during the research study. In addition, there may not be a need to gain total access, but instead just enough access to allow the investigator to sufficiently answer their research questions (Maxwell, 2013). In the context of this study, access was negotiated many times when scheduling classroom observations, as there were many back and forth emails.

After reflection, I realized that the relationship I first built with the faculty members was crucial as they allowed access to the classrooms, documents and any other pertinent information or spaces (such as photographs and instructor slides). Thus, I attempted to have clear, transparent discussions regarding my own researcher bias, and research goals as data collection was set to begin. It was highly important to acknowledge that no matter my own research goals, my research process was an intrusion into the lives of my participants. In this vein, it was crucial to try and understand how participants perceived this intrusion and adjust my actions accordingly and remain aware of this during the research process. This is known as reciprocity (Maxwell, 2013). It is imperative to always remember the negative and problematic history of colonization, the history of research as a form of cultural invasion, and the need to be aware of my own biases and the way they impact the participants (Beeman-Cadwallader et al., 2011)

Conclusion

The primary goal of this chapter was to outline and discuss the research design for this study. Along with the research methodology of a multiple case study, this chapter also reviewed the sampling procedures, the primary data collection and analysis procedures, as well as issues of validation, trustworthiness, and ethical concerns. Most importantly, key
aspects of this multiple case study include the use of four data collection methods (social constructivist interviews, classroom observation, analysis of course documents and for one participant – collection of photographs) and the use of the data collection methods of coding with ATLAS.ti and the development of networks to build theory. Stemming from case study research, I employed triangulation of these data collection methods to provide an extensive understanding of EJ faculty instructional processes and practices. The next chapter will document the most salient findings that emerged during data collection and analysis.
CHAPTER 4
FINDINGS

This chapter seeks to organize and describe the most salient findings that emerged while engaging in the data collection procedures of interviews, classroom observations, and collection of course documents and photographs. After using the Atlas.ti software to organize the findings into codes in conjunction with my conceptual and theoretical framework, the codes that surfaced were organized into four main categories: 1. Epistemic Orientation 2. Curricular Organization, 3. Pedagogical Processes and Practices, and 4. Programmatic and Institutional Support for EJ Faculty. From there, these codes were then divided into subcategories which eventually became the sub-themes described in this chapter and shown in the diagrams below.

The first section entitled Faculty Activist Epistemologies documents how each faculty member told stories of both personal and professional activism and expressed various activist or community engaged goals for their courses. In the section on Curricular Organization, Darren’s strategy of organizing his course via theoretical tools and Gabriela’s community engaged course design stood out most. In terms of Pedagogical Processes and Practices, approximately seven are outlined including: 1. Critical lecture, 2. The engagement and encouragement of protest and activism, 3. The process of integrating community partnerships into courses, 4. The practice of “decolonial field methods,” 5. Student directed, community
engaged and experiential course projects, 6. The invitation of guest speakers and educators, and finally 7. The use of a collaborative research laboratory. Please see the findings in relation to the three primary research questions in the figure below.

Figure 5

Findings from the First Three Research Questions

Finally, in the section on programmatic and institutional support, findings show that each faculty member’s unique organizational context provides them with distinct levels of support, encouragement, or impediments in their instructional experience. Whereas Gabriela and Darren have received both support and faced impediments, depending on their position and time frame, Paul and Samuel mainly received all support or all impediments respectively.
Faculty Activist Epistemic Orientations

While conducting the first round of interviews, I realized as I asked the first question on my interview protocol regarding their background that almost all the participants brought up activism in their personal or professional experiences. In many cases, they would tell stories of personal experience with activism at an individual level, connected to their family, or community. In other cases, their activism had ties to scholarly work in a specific place or with a particular community. And finally, they would also reference activism as a key part of their instructional goals. Thus, this section will highlight quotes related to the above themes.
**Personal Activist Experiences**

As mentioned above, in the first round of interviews as I asked questions about their stories and how they got involved in the movement or field of environmental justice, faculty would often discuss early experiences with some form of activism. All the faculty members mentioned activist issues being important in their families or having important and meaningful activist experiences as young people. For example, Darren describes growing up in an activist family in the South:

So, I grew up in a very political family. My father was a Yankee and specialized in School Law and Administration, and he became involved when we moved to the south, a lot of the big major school desegregation cases of the 1970's. So, I remember as a little kid picking up the phone and there'd be someone on the line saying "I'm going to kill your family". I'd say "Dad, it's for you!" We were used to the threats and so forth. So even at a young age I had exposure to some vehement racism.

Paul explained both the importance of having family who were activists, but also the experience of doing outdoor activities and not seeing people of color, an important area of discussion among some EJ scholars and practitioners:

So that's kind of how it all started. I guess I would also credit my father... He and my mom were both civil rights activists when they were in college, so there has always been that push in our family, and my dad would always regularly take me out to fishing holes and lakes, and we would go camping and hiking, and I would pretty much never see people of color in these spaces. So that kind of got the engines... The wheels turning in my brain early on that there was some disconnect that needed to be connected.
Samuel, whose initial training was in medicine, worked in a town with 12 sugar cane mills, where sugar cane, weeds and other material were often burned. Here is an excerpt of that story:

I visited the countryside, the farms, so I got to know a whole lot about sugar cane production at that time, and I was politically very active during my medical school years. So, I had knowledge about some of these issues. But it was not really at that time, we did not talk about Environmental Justice, it was mostly a workplace issue related to worker exposure.

And later, Samuel explained more about their teenage activism and community organizing, discussing how it is a part of their identity:

And then, it moved from students to workers, and then later on I got experience at different levels. As you mature, you get more experience. I had a lot of trial and error because I did it. I leafleted a lot of stuff; “I did graffiti at night. I was arrested. So, I had those experiences...

The final faculty member, Gabriela, also mentioned some important activism experiences as a young person, which connect both to her identity as a queer woman:

I think I was in high school, and I raised money for the City AIDS walk. And I went by myself to this AIDS walk because I didn't know any other 15-year-old that was into this stuff. And when I encountered this community, which is to say a queer activist community, I thought for the first time in my life, "These are my people." For the first time in my life, I feel like I have a culture and I feel like I belong.
Professional Activist Experiences

In addition, faculty described activism during different stages of their professional careers. Here, Darren described work in Central America and how that connected to issues in his region of Appalachia and how those two connected to spawn a long career in community engagement, activism, and environmental justice scholarship. In this case, there is evidence that activism is intricately tied into Darren’s work as an EJ scholar practitioner:

...I went to a college on the west coast and really became interested in the Nicaraguan revolution. We formed an organization there, and I can send you some information on this, but we formed an organization called the Environmental Project of Central America and we were looking at the connections between US foreign policy, human rights violations, poverty, and ecological crises. And so really, we're looking at environmental justice in Central America, and this was after the overthrow of the Somoza dictatorship and the Sandinista Revolution, and the implementation of what I call revolutionary ecology, where they were this poor, devastated country in the Global South was instituting these amazing programs for social transformation where ecological programs for sustainability, democracy, and environmental justice were integrated into everything they were doing...

For Darren, it seemed that these experiences extended into the meaning, motivation, and goals for his scholarship, as he discusses how to apply his scholarship and its accessibility for a wider audience:

I'm an editor with the journal and I teach theory, and I have a really deep appreciation of theoretical work and deep scholarly research, and I will publish in those journals as well. And I will write for a technical audience, but I'm also committed to what
Gramsci calls being an organic intellectual which is, how can you make your research accessible to a broader audience in a popular discourse, which is why we're forming the center. And how can it help inform larger movements for social change in their efforts?

Like Darren, Paul described how he got his start in EJ scholarship and then how this led to his identification as an activist scholar:

I got involved at that very moment in graduate school doing field work for a class on an organization we were supposed to study, and that organization was and is People for a Community of Recovery which is a great environmental justice group in the southeast side of Chicago. And that led to me writing a dissertation on some of the work that they've done.

Yeah. So, I do consider myself an activist scholar only in the sense that I feel like everything or most of the things I'm doing, I'm hoping are leading in some ways to improvement for people's lives, for our life support systems, our ecosystems, and I encourage my students to do that very explicitly in the class.

Slightly different from the other participants, Gabriela spent a lot of time explaining her disciplinary roots and their connection with activism. More specifically she brought up the importance of activism as integral to her training in Feminist studies:

...but when I was in school, and you don't keep in mind that all of our ... There are the rabble-rousing disciplines within academia, right? For us it's gender women's sexuality studies, LGBTQ studies, American Indian studies, Chicana studies, Africana studies, American Indian studies, maybe already said that we call these the race, indigeneity, gender and sexuality studies departments. These are like the kinds
of fields of knowledge that were never intended to be in the academic institution in the first place. We had to fight tooth and nail to get there. People were arrested at the Local State University to make it happen...

... It's always been subversive, and we have always fought to be here. And so, these knowledges that make up feminist studies, for example, or that make up critical race studies, they don't just come from some Greek Canon somewhere. They come from experience of lived oppression. And so, we take very seriously the often-false divide between thinking and doing, because access is everything to our fields.

Samuel, in response to a question about how important community or community organizing is in his scholarship and teaching, responded with this:

I believe it's very easy for me to do that, because it's not something that I learned by reading books. It's something that I learned, as I told you, from my first job, when I was a recent graduate from medical school...It's almost like I can't do it otherwise. There's got to be some way of community participation. And I understand there are different levels of participation. I always understood that.

**Student Learning Goals for Activism and Community Engagement**

Stemming from faculty activist personal and professional experiences, a key learning goal for all of them was for students to become more active in relation to environmental justice issues in the community beyond the classroom. In some cases, faculty spoke about a key objective being that students make an authentic “contribution to the [environmental justice] movement”. In other cases, faculty spoke of “student empowerment” or wanting to improve the lives of others. In at least two cases, faculty spoke about their identity as activist scholars and then later touched on how that may translate to activist teaching, and what they
hope to convey to students regarding their role as active members of their communities. Gabriela mentions that the primary objective is for students to “make a contribution” to the environmental justice movement:

...One objective is that there is an actual contribution that supersedes students themselves and that they are actually leaving something of themselves behind when they leave the class, when they graduate, et cetera. They have made an actual contribution.

Gabriela also has a very clear goal for the description of her EJ program at CSP:

By experimenting with a multitude of decolonial field methods and investigating dozens of approaches to environmental justice, students work to intervene in systems of injustice and ecological destruction by redistributing power through physical, scholarly, and financial contributions.

Darren touched on how the idea of “citizen empowerment” was important message to convey to their students during the course:

So, I think a big way that I want to try and teach this and convey this information is this notion of citizen empowerment, that really conveys to the students that you have the power to make changes, and with many of the institutions that you deal with, whether you work, live, or play, and that all these changes add up.

Paul touches on their identity as an activist scholar, and the explains how their primary objective for students is about more than a grade, and instead, about something that students can take with them into their lives that can “live on after class:”

Yeah. So, I do consider myself an activist scholar only in the sense that I feel like everything or most of the things I'm doing, I'm hoping are leading in some ways to
improvement for people's lives, for our life support systems, our ecosystems, and I encourage my students to do that very explicitly in the class.

My hope is that it's not just about a grade. It's about students getting something from this class that they can take into their lives that lives with them, lives on after the class. So, in some ways, the greatest gift and the greatest evidence of this course and my teaching being successful would be when students do something in the world that makes a difference for environmental justice and sustainability.

Paul also clearly states these activist and critical thinking goals in his syllabus:

How do we—as individuals and groups—contribute to ecological harm and how might we be a part of solutions to socio environmental crises? How shall we rethink, rebuild and recast our relationships with the more-than-human-world, the biosphere, and our shared ecosystems? How can we push beyond the limits of sustainability in both theory and practice through our everyday behaviors and direct action?

Samuel, when responding to a question about the goals for students, immediately pointed to the goal of trying to get students to “become more active.” Then he also related this with the Black Lives Matter Movement, and the pandemic as two issues that they believe are more relevant with students today:

I always try to do that, to encourage them to become more active, to encourage them... With the pandemic now, I decided that I'm not going to control my tongue no more.... And I believe this is very important for this generation to have a grasp, understanding of this, and hopefully become active. I believe they feel this, because I always encourage them to get involved in stuff. I send them emails when I can. I
invite them to participate in stuff. So, depending on this semester, I always show them that I'm not here just to teach, I'm also ... We should change the stuff.

In addition, when asked about how Samuel thinks about the community issues in his course he responded:

So, to me, I believed the students realized this not only by what I talked to, but also, I believe they feel it. This is at the level of the skin. They feel that when I say this stuff, this is not something that I learned in the book.

**Darren’s Community Engaged Mentoring Goals**

During one interview, Darren expressed that one of the main things they try to do while teaching is to empower students to use environmental justice principles (among other things) in their future college career, professional career and as a form of citizen empowerment. In a follow up question, I asked him if they thought that one way they do this is by being a mentor to students and helping funnel them into different EJ organizations in and outside of campus:

I get students all the time who want to do a particular kind of work given their interest around policy or organizing, so I'm able to channel a lot of them towards specific organizations because I'm just in such constant contact with such a wide variety of organizations. I feel really fortunate to be in that position and I think my students are really, really grateful because sometimes it's difficult to break into a movement where there's limited resources or limited job opportunities with decent pay, and so forth. Once they come out of that class, they go into a lot of other, more specialized classes like Environmental Justice and so forth, but again it's a fertile recruiting ground.

There are students who come to me and say "look, I want to work on this, can we
work with the New Center for Climate Justice? Can you get me an internship with Water for Everyone? Today I was writing five letters for helping students do that, and I'm very happy to help them do that, so it's very much a catalyst, that's the word I would use for them to engage in all types of other possibilities.

**Goals to Apply Theory to Societal Action and Change**

During the interviews, all faculty expressed explicit learning goals to show students that authentic EJ work involves moving beyond theory within the classroom and into societal application and action. Interestingly, they all expressed this in different ways, but all came to the same conclusion: the idea that EJ work is not really about theory; it is about making change in your community or in larger society, and that these problems are happening now, and the need to address them is dire. Gabriela focused on the difference between learning and doing environmental justice in these three related quotes:

I think that I believe that teaching environmental justice is really not the same thing as doing it. Learning about it is not the same thing as doing it...Maybe it's fundraising, maybe it's education, maybe it's scholarly labor that they contribute, whatever it might be. I work with a partner to figure out what they need from us, and then we make it happen so that they actually leave a mark is one objective. And so, we take very seriously the often-false divide between thinking and doing, because access is everything to our fields. They come from somewhere, they come from lived experience. So, I appreciate that and I value that very much.

Yes, it changes students' lives. That's wonderful. But can we do that while we're also amplifying a campaign while we're actually ascertaining grant money to get food at the people's bellies? Yes. We can do that too. And so, I'm still a little skeptical that
we're actually doing environmental justice when we merely talk about it or read about it. And I say that with the utmost respect, for standpoint, and for the importance of this entire field of knowledge coming from people's lived experiences of oppression.

Paul talked about the importance of using theories as a guide to move to application and practice. He even relates this to his own personal activist-based projects in conjunction with collaborative lab (described in the section below on pedagogy) and the movement to create a local Green New Deal in his region.

So, for me, that's really helpful that students realize, "Okay, theory can be useful. It's something that's a guide. It's an explanation of something that actually can be helpful for learning and action." And that's the other thing that I'm constantly trying to keep the focus on, that connection between theory and application, ideas and action, so that students will feel inspired, feel motivated, feel like they can actually make change in their lives and in their communities.

One is to have them go from the theory to the practice to really imagine what their community would look like, and to make this an exercise that always encourages them to flex that muscle so that maybe they could actually really do that in their communities and use this as energy that they can channel into that good work. But I also tell them that, with their permission, I will use this information in the actual process of trying to develop a Green New Deal for the community.

Samuel spoke with passion regarding the importance of showing students the severity of the issues affecting people’s lives and his need to demonstrate his own personal experience while explaining that EJ is not about theory:
Because as I told you before, environmental justice for me is not a theory, it's practice. So, if you don't have skin in the game, I don't think you can convince the students or actually give them a real profound understanding of the issue.

You can be very theoretical if you want, but I don't think the topic is well taught if it's only a theory. No... It's got to have a real ... Because Environmental Justice is very much real-life stuff. And because I know some of the people. I've been there, done that. So, this is not artificial to me. I know what can happen to people. We're talking about people dying, people getting injured, and I believe this is part of the deal, that this is not transmitted only on the theoretical level. There's an emotional component, that people have to feel this shit.

Darren discussed the importance of using dynamic and critical lecture to “make theory come alive:”

Pedagogically I think one of the most powerful techniques is to make a theoretical proposition, explain the theory, but then make it come alive, and you make it come alive by telling stories that illustrate the theory or diving into a particular example that happened within recent times, maybe that week, maybe even that day. I begin every class with announcements. We talk about what's happening in the world and then we use our material in the class to decode or deconstruct what happened. But making the theory come alive so that it's real for students I think is the most important thing. By illustrating it, they can help visualize it.

**Goals for a Paradigmatic Shift and Transformational Change**

Most of the faculty members expressed goals and values for creating tangible societal change in their teaching and scholarship. In the section below, both Darren and Gabriela
reference the idea of the EJ movement and academic field as a “paradigmatic shift.” In addition, they both explain the importance of critiquing and moving beyond more traditional environmental discourses and paradigms and helping students grasp the importance of the growing environmental justice paradigm. Here are two that specifically reference the idea of a “paradigmatic shift.” First, Darren mentions the need to engage in “transformative EJ politics”:

The liberal regime of environmental regulation is a crisis, it's proved to inadvertently displace harm onto working class communities and low-income communities of color. And so, there's really this need for a paradigm shift and the advent of what I call a more transformative environmental justice politics, one which doesn't just look to more equitably distribute environmental harm or risk, but rather go to the root causes of the ecological crisis.

Second, Gabriella also described her foundational learning and teaching goals in terms of a paradigm shift saying: “I call it the paradigm. It's a paradigmatic shift... Or two narratives. Two narratives, basically.”

Undoubtedly. Most people, I feel like the students that come to class and maybe this is changing more now, but they don't understand or appreciate the difference, the qualitative difference between enviro [mainstream environmentalism] and EJ. And so, because EJ began as a resistance movement, they were in large part not only resisting toxics, right, and environmental racism, but the ignorance of racism and classism and sexism within the environmental movement itself, whether we're talking about the mainstream movement or the radical environmental movement. Earth First,
the ELF. There was a lot of masochism going on in those movements too, and White supremacy happening there too.

The above section highlighted the most salient epistemic orientations expressed by faculty in their interviews. As stated above, faculty all discussed personal and professional aspects of activism, community building and community engagement as fundamental to the way they understand, value, and practice the sharing of knowledge with students and the community. After having reviewed the epistemic foundations of faculty instruction, it is now pertinent to review the most salient forms of curricular content organization, which was mainly derived from the observation of faculty syllabi, as well as with some conversation and verification during the second interview, and in the case of Gabriela, analysis of photographs from site visits.

**Curricular Organization**

Besides each faculty member largely relying on a thematic organization for their syllabi, two faculty member’s organizational processes stood out. As Darren mentioned above in the section on epistemic goals for student learning, he explains that his course is largely organized via theoretical tools designed to help address environmental injustices. As it turned out, many of these theoretical tools are interrelated with issues of capitalism, globalization, and labor, which stem from his experiences in Latin America and Appalachia. After I review Darren’s curricular organization, two different aspects of Gabriela’s course organization are explored. First, I document the use of community partners and community voices as a foundational aspect to Gabriela’s course design. This includes the integration of guest educators and site visits as course content organizational tools, and many course resources and materials stemming from the All We
Can Save Project (a project focused on centering women and women of color in the climate justice movement).

Second, Gabriela focuses an entire course around what she describes as “decolonial field methods” such as “build, feel, play, listen/tell, [and] paddle.” This course also ended with an entire section entitled “liberatory practices” in which many community-based and participatory research methodologies are discussed and practiced with students. These curricular and content organizational processes and practices will also be elaborated on in the section on pedagogy, as site visits, the invitation of guest speakers, and the practice of decolonial field methods were all very important pedagogical practices that Gabriela employed in the classroom. While documenting these curricular organizational strategies, I also demonstrate how they are undergirded by their epistemic orientations such as experiences and assumptions about the way learning is acquired.

**Focus on Capitalism and Theoretical Tools**

In the case of Darren, one noteworthy aspect of his personal experiences, identity, values, and beliefs, revolved around the connections between classism and environmental justice/injustice. For example, Darren spent time living in Latin America and Appalachia where he experienced (and wrote about) this kind of classist/political domination frame of environmental justice. This is evident in the quote below:

So, it was those two experiences, the internal colony being Kentucky, Appalachia, where there's an area to produce such tremendous wealth but had such huge poverty. And I just put together the similarities between Kentucky and Central America, the internal versus the external colony, and being an environmentalist always wanted to
bring together those two movements around social justice, human rights, labor, and environmentalism.

The above quotes highlight an epistemic connection to a course with a large focus on capitalist, labor and class content knowledge which seeks to explain the origins of environmental injustices. For example, various sections of the course contain key words regarding capitalism, globalization and their impact on climate change and environmental justice.

In addition to the topics and readings related to capitalism, labor and class, there are also various theories Darren seeks to explain and illustrate during his course. For example, “externality theory” is featured in various class sessions, lectures, and readings. This theory seeks to explain how companies and other organizations may externalize their environmental costs onto other communities not responsible for these costs. Below, Darren expresses his assumptions and beliefs on why focusing on theories and theoretical tools is important for him and his students:

I think that's the most important thing about my class, quite frankly, is that I'm giving them the tools of analysis. I'm empowering them to be able to make these analyses of whatever issue they care about, and we just cover the gamut. Theories of globalization, the contradictions of liberal or of neo-liberal regimes of environmental regulations, theories of technology, theories of consumption and what's problematic about them, externality theory, a lot of political economy. Most of the time, they've never been exposed to radical, political economy.

Whereas the above section focused on Darren’s course organization via theoretical tools, the next section will outline Gabriela’s use of community engagement, community
voices, and decolonial field methods as foundational aspects to her course design and implementation.

**Content Designed Around Community Engagement, Decolonial Field Methods, and Site Visits**

From interviews, classroom observations and analysis of syllabi and photographs, it was very evident that Gabriela is extremely dedicated to integrating her course content and pedagogical practices with community members, site visits with their organizations, and the EJ issues that are most prevalent in their local community. In fact, the three courses that Gabriela teaches as part of her program are intertwined with site visits in the local community, guest lecturers from local community organizations and relevant course material from EJ academics and community activists and organizers. Her epistemic values related to community engagement are summed up in many of the other sections in the findings, but here are two quotes that illustrate this clearly: The first explaining her belief that authentic EJ work must include “collaborative community engaged work” and the second describing one of her pedagogical techniques of first contributing to the EJ community, and then finding student learning. One very important detail here is that Gabriela organizes her course around these opportunities to contribute to EJ communities and to the EJ movement. From this lens, Gabriela’s curriculum emerges as a result from her epistemic orientation that is centered on contributing, acting, or “the doing” of environmental justice:

I feel like unless you're in the fields that value the endpoint and value first person perspective and mind the gaps of suppressed histories and actually do collaborative community engaged work, I don't think you're doing environmental justice.
I think that my job as a teacher is to be able to teach just about anything. If we're in the EJ movement doing EJ work, I can make that a teachable moment. It's my job to make that teachable. Right? It's not the other way around. So, I don't start off with a [community] partnership thinking, "What should students learn out of this?" Right? Instead, it's how can we service the EJ movement? What are we doing to build the movement? And then I go back and say, "Okay, what did we learn about this method from this? Or what did we learn about mapping from this? Or what did we learn about science from this? Or what did we learn about co-creation or co-governance from this?" That maybe, is part of the difference between a service-learning model and a thoroughly community engaged model where you're working on behalf of the movement.

In the intensive semester at City Semester Program (CSP), Gabriela sees the same students in three separate classes that meet each week. To present the schedule to students Gabriela shares a google document with them. To show Gabriela’s dedication to community engagement, it is important to note some observations regarding this schedule:

- In one semester, there are approximately 17 site visits integrated into the course and in many cases these site visits are directly connected to the syllabus topics, content readings, and community organization that are affiliated with the class. These visits include places such as sacred indigenous sites, a vacant lot that activists want to convert to an urban farm, a marina, a water protector welcome center (related to pipeline protests), parks and recreational spaces, an early childhood institute at a local state university, a women's environmental institute,
an animal farm sanctuary, a bike tour, and public gardens. In almost all of them, community guest educators visit with them on site.

- There are between 50-60 guest educators that participate in the three courses during one semester in the classroom and at specific sites. Below, I provide more details regarding the site visits using photographs.

**Site Visit Photographs**

To better share how site visits, guest educators and the course content are all integrated, here are examples from the three different courses that Gabriela teaches. In each class and site visit, there is an affiliation with one organization such as a local university program, a national park, or activist organization. In some cases, “decolonial field methods” are also integrated. To give more context, along with the syllabus, class-observations and interviews, Gabriela also was able to share a very detailed folder of photos which includes photos and video from most (or all) of their site visits, experiences, and activities within the community. Here are some notable photos from this folder with a description of the site visit:
Figure 7

Note. In the Climate and Environmental Justice class there is a lesson entitled: “Wilderness.” The students visited a marina in the local river and met with the Superintendent of the National River and Recreation area. The readings for that class were: Taylor, “People of Color: Access to and Control of Resources” + Cronon, “The Trouble with Wilderness, Or, Getting Back to the Wrong Nature” + Anfinson, Earth Day Watergate Marina essay. This photo shows students walking up to the Watergate Marina.
Figure 8

Photograph: “Play”

Note. In the Fields Methods course, there is a lesson with title of “Play” with the goal of students learning about and experimenting with the non-academic learning and research method of “Play.” The reading for this lesson was Powers & Ridge, “Nature Education,” in Nature-Based Learning for Young Children. For the site experience, the students visited a school for early childhood development at the local state university and met with a scholar and faculty member who writes about the benefits of outdoor play and nature-based education. This photo shows Gabriela and their students inside a playground listening to a guest educator during the above community site visit.
Note. In the Socio-Ecological Systems class there is a lesson entitled: “Pipeline Resistance.” The students visited a Water Protectors Welcome Center. The readings for that lesson were: Lindstrom, We are Water Protectors + Houska, “Sacred Resistance,” All We Can Save (AWCS). At this site visit, the students met with various guest educators such as: an indigenous leader from a local non-profit organization, and members of a local dance company made up of BIPOC women with a focus on dance for the power of social change. This photo shows the students intermingled with other protesters and guest educators at the pipeline.
Figure 10

Photograph: “Paddle”

*Note.* This photo was taken during a class activity in conjunction with a lesson entitled “Paddle,” as part of the series of decolonial field methods. The reading in conjunction with this lesson was: Underhill, “What We Learned from the River.” This reading discusses a college course from Augsburg College known as a “River Semester” in which students earned 16 credits while spending 110 days on the river.
Figure 11

Photograph: “Listen/Tell”

Note. This picture was taken during a bonfire story telling activity in conjunction with a lesson entitled “Listen/Tell” where students read: Kimmerer, “Learning the Grammar of Animacy” + Edmonds & Farritor, “Coyote & The Pebbles”.
Note. This photo depicts Gabriela and her students listening to an indigenous educator on a part of sacred Dakota land. Gabriela’s course begins with this site visit. Gabriela explains the sacredness of this land here: “this is the most sacred spot where [Dakota]people came to birth, to bear their children, and where people came to bury their dead, and where genocide occurred.”

A final piece of evidence that shows Gabriela’s intentionality of including voices and knowledge from the EJ activist community is that in addition to the above unit, Gabriela also features readings and material from one resource in all her courses. This resource is the *All We Can Save Project* (AWCS). The All We Can Save project is an organization (which features a book) with the mission: “To nurture a welcoming, connected, and leaderful climate community, rooted in the work and wisdom of women, to grow a life-giving future.” In addition, the AWCS vision is rooted in disrupting and transforming the leadership structure in the climate justice movement from mainly White men to one that much more equitably
includes women of color. The AWCS book includes an anthology of over sixty women leaders at the center of the climate justice movement, all attempting to create unique and powerful solutions. In total, Gabriela uses the AWCS resource in all her courses and utilizes this resource a total of 25 times in three courses.

The above section reviewed two innovative strategies for course content curricular organization. First, I outlined how Darren organizes a wide-ranging collection of theories based on political economy, capitalism, neoliberalism, and labor rights to review a large set of “theoretical tools” with his students, which he believes is the most important aspect of his course. Second, I demonstrated how Gabriela designs her course with an ethos of community engagement and a strong motivation to include community first-hand voices in both site visits and the course content material. Gabriela first finds ways her and her class can contribute to the EJ movement, and then designs the units and readings around this epistemic goal and vision. As stated in the conceptual and theoretical framework, curriculum can provide an important platform for pedagogical practices, so the next section seeks to document the extensive number of pedagogical strategies I observed during this study.

**Pedagogical Processes and Practices**

While visiting each faculty member’s classroom three separate times, I was able to observe many different pedagogical practices they employed. As described in my research design and methodology chapter, I then discussed these practices with the participants and attempted to better understand what pedagogical strategies they used, and why they decided to use them. This second question helped me verify the epistemic goals that were stated above by faculty and also aided to see if faculty did indeed include practices in their classrooms that helped advance the above goals. This section outlines the most innovative
and salient pedagogical practices I observed including 1. Critical lecture, 2. The engagement and encouragement of protest and activism, 3. The process of integrating community partnerships into courses, 4. The practice of “decolonial field methods,” 5. Student directed, community engaged and experiential course projects, 6. The invitation of guest speakers and educators, and finally 7. The use of a collaborative research laboratory.

**Critical Lecture**

Although all the faculty engaged in lecture at differing points during my class observations, Darren was the faculty member who most relied on this strategy for communicating knowledge in his class that caps at 115 students. This was notable on the syllabus, as the above list of topics in the section on curricular organization show many titles and themes for different class session lectures. What is more, Darren also described some of his goals for lecturing in interviews as he discussed the importance of “making theory come alive” and discussing his attempts to “tell stories,” and help students “visualize” the complex theories he teaches.

During classroom observations, I was able to see and verify some of these strategies in action. Lectures often used propositions, which like thesis or opinion statements, explained a particular position to the students. After having outlined these propositions, Darren would then use a mixture of empirical evidence, news stories, provocative photographs and, or video and theory to help support those above propositions. In many cases, these propositions were critical, and often criticized the status quo, the American government, or the American society or cultural practices such as “consumption.”
For example, in a class session entitled The Unfair Tradeoff: Globalization and the Export of Ecological Hazards, Darren outlined three propositions (these are from my observation notes of that session):

Proposition 1: Corporate led globalization is facilitating a massive transformation of the world and how we live. Any corporation can pick up and move to any part of the world where there is higher production and lower costs.

Proposition 2: Neoliberal corporate led globalization has appropriated massive ecological resources from the global south to the global north – through the vehicle of transnational corporations.

Proposition 3: Corporate led globalization is facilitating the massive displacement of ecological harm from the north to the south – increased export onto communities who lack political/economic power outside of the US (just like this happens in the US with communities of color and low-income communities).

After these propositions were outlined, Darren then went through each one explaining why they are true and how they function using different forms of content and sometimes critical and provocative photographs highlighting ecological harms that have been exported around the world by corporations. In one instance while lecturing, Darren also used a video that was sent to him by a student and related it to that day’s propositions. In a drastic shift from lecture, the next section seeks to explain the way in which faculty would encourage students to engage in activism and protest.

Engagement and Encouragement of Protest and Activism

As part of the creation of a welcoming classroom environment, and modeling to students how to be an active and empowered citizen, various faculty would either announce
or encourage safe participation in local and regional protests and other events. The findings here represent events that happened during classroom observations, and in some instances, contain the faculty member’s thoughts from interviews on why they do this in the classroom.

During one classroom observation, Paul announced that there was an environmental protest happening near the university. As it turned out, some students were taking the class from their cars on Zoom as they were on the way to the protest. This protest was about stopping a large housing development in a wildlife preserve area. One student spoke out and let the class know that they were on their way, and a few other students added that they were going in the chat. Paul was very encouraging about this, and reminded students to stay safe, and gave them some instructions in case they were arrested. This caused students to post helpful links to the district attorney's office, as well as other important phone numbers into the chat. Paul also posted his cellphone number and asked the class if they would be interested in starting a bail fund in case students were arrested.

After observing this class session, I was able to ask Paul some questions about this instance, and other similar moments in his classroom. Here he describes both why he frequently announces events and protests related to EJ issues, but also why he was encouraging his students to engage safely in the protest during that class session:

So, all sorts of things are going on in the community locally and regionally and nationally. And so, it's just been a practice that I've done that grounds students, that connects students from the class to the community, gives them possibilities of just getting involved, joining an organization, maybe getting a job, maybe getting paid,
but making a difference and just making that connection outside of the classroom realm.

The part about me offering to bail people out, that was new. That was improv, on the spot, also partially just to confess to you, part of it was my own embarrassment and not being more on top of what was happening with that particular protest. I thought, "Crap, I should have known about this. I should have made an announcement in the last class." And I've got students or at least one or two students who were at that very moment going to the protest ... and you're right, it was definitely a Zoom era thing that at this very moment, not only would people engage in the protest, but they were also in the class. That's only in the digital era.

As part of a unit entitled, “Pipeline Resistance,” Gabriela had students read articles entitled “We are Water Protectors” and “Sacred Resistance.” In addition, as part of the field methods course and site visit component, the class went to a “water protector welcome center” area nearby and met with seven guest educators/community members. This site visit is seen in the photo analysis in the above curricular organization section. In this way, the engagement of students into the protest spaces was integrated into both the course content, site visits, and pedagogical strategy of having community members participate a part of the educational experience in and with the community. This kind of experiential integration that encourages students to be active through instructor and community member led site visits, field work and trips is fully integrated into Gabriela’s program and was also discussed above as part of the way Gabriela designed and organized the courses.

Finally, although Samuel mentioned that he frequently encouraged students to become active in the section on Epistemic Goals. However, during my three observations I
was unable to witness him doing this. In terms of Darren, in the last class session of the semester, he spoke directly to the students and said this: “[It is] “key that you engage in these democratic movements. This is the only way we can protect and serve American Democracy.” This was the most salient observation I had of Darren encouraging his students to engage in activism or protest.

**Gabriela’s Process for Community Partnership Building**

Although all of the faculty discussed the importance of community action and societal change as foundational aspects of EJ practice (both scholarship and community engagement work), only Gabriela attempts to fully integrate her course with community members and organizations. In this section, Gabriela answers questions that I had mainly related to the long-term process of building community partners.

To begin, Gabriela explains how she began creating relationships with local EJ community organizations by forging reciprocal relationships and with work on her own time on nights and weekends:

Let's see, most of them have been from showing up on my own and doing the work on my own. And some of the partnerships have arisen directly from teaching too. So, I'm thinking there's an organization here in [my city] called Bikes and Food and they are a transportation and food justice organization, a Latin X organization. And I had not worked with them prior to reaching out in my capacity as an educator. And they did toxic tours and many years ago I was like, I would really love to have my students do these toxic tours by bike. And they were open to hosting us. And so that was the beginning of that relationship... And I just kept coming back to them with my students over and over again. And that first year when we biked with them, my
students also won a GIS mapping project, an environmental justice mapping project. And they won money for it, and they donated that money back to...But most... By and large, I'd say I've been cultivating partnerships with people that I've been meeting with nights and weekends doing organizing work.

Here, Gabriela goes into more depth about how relationships are started:

So, I would say reach out with mutualism. I found that in academic circles, mutualism might mean different things, but I strongly believe that in a position of power, which is what I occupy at Local State University. I have a responsibility to redistribute the resources that I can access. And so that's kind of the foot I lead with. And if there are... If there's student labor that I can complete, for example, grant writing...

...It's been years, at least a decade of building, building, building relationships. It's all happened at the speed of relationships. That's what George Samuel, who's the... My former... I'm in his position now, he's now the executive director of [another non-profit] And he always talks about building movements at the speed of relationships. And that's exactly how it's working in my life. Isn't that beautiful?

Gabriela gives more detail on implementing justice-based community engaged practices in the classroom:

I guess it fits with this kind of immersive place-based community engagement model teaching because you're doing it always in reaction to, or in response and response with the land, that's teaching you the water. That's teaching you, the elders who are teaching you, the experts teaching you. It's not like this preordained preplanned, there's emergence in this kind of teaching that you just have to respond to. And I guess in that sense, I have to think more about this, but I guess in that sense, I think
we're building a way we're building a practice of working through justice or on behalf of justice, by spotlighting underrepresented voices, by taking underrepresented ideas seriously and trying them on by learning in place, in the land that holds these layers and layers and layers of histories and geologies and stories, you know?

Gabriela continued the discussion of justice when I asked her more specifically about how this kind of instruction helps practice environmental *justice* in and outside the classroom:

So, there's the question of access, can everybody access the education and have the same opportunities? There's the question of representation? Who are you bringing in? Which ideas, which races with sexualities and genders are represented. There's also this idea of enactment or contribution, are you actually leaving something of yourself to the movement? Whether it's through like your blood, sweat and tears in the greenhouse, or whether it's through your scholarly, labor, justice has to be this doing, this contribution, right? It's not this passive thing where you just learn about the history of it by reading a book, right?

In response to a question I asked about what motivated her to begin shifting her pedagogical practice to a community engaged model of instruction, Gabriela responded by discussing aspects of her White identity and her feelings that lecturing in large classrooms was inadequate:

But the more and more I got into EJ, especially as a White educator, it struck me that this was not enough. The content wasn't enough, like me waxing on about how amazing EJ theory is or how incredible EJ history was, or is, it's great. There's enough there. But it's not true to what the movement is because the movement is a verb. The
movement is a practice. The movement is a doing, and I cannot speak from first-
person experience of environmental injustice. So that changed. That meant that I
would have to take on a different kind of role. I'd have to be a facilitator; I'd have to
be a redistributor of power. And that's frankly, the only way I can justify my position
in this field. I'm a super fan girl of, of environmental justice, but there's a real
problem of White saviorism in academia and in the nonprofit world. And I struggle
with whether or not I should even be here doing this. I've made good relationships
and good friendships, and I've succeeded in being able to redistribute resources. I still
don't know if that's enough. I just don't know, I grapple with this.

Like her innovative community engaged instructional model, Gabriela also
implements what she calls “decolonial field methods” which will be discussed below.

*Practicing Decolonial Research Methods*

Building off the findings above in the curricular content organization section,
Gabriela teaches an entire course within her environmental justice program entitled “Field
Methods.” This course is organized around research methods and asks students to think about
how we know and learn what we know, the difference between Eurocentric ways of knowing
vs. Traditional ecological knowledge (TEK), while also giving them a chance to question and
practice these forms of knowing in and outside the classroom. The course begins with an
introduction that contextualizes epistemology and presents both the epistemic history of
colonization and the devaluation and erasure of indigenous epistemologies, then moves into
more practical units with various themes based around “experimentation” or practice
using “decolonial field methods” such as “build, feel, play, listen/tell, sense/taste [and]
paddle.” A final unit has a concentration on community-based research methods and their importance in environmental and social justice issues.

In a one class session I observed, Gabriela was teaching the lesson on the “decolonial field method” of “feel.” For this lesson, students read an article entitled: Emotions in EJ by Bacon and Norgarrd, and Gabriela led the students in a fascinating discussion related to the ways in which emotions play a role in environmental justice – both as ways they can be a part of injustices, and the ways in which they could possibly be harnessed to understand or solve them. An opening question she asked the students to begin the discussion was “how is this [emotions/feeling] related to EJ themes and overall racism and oppressions and ‘isms?” Students responded with a large mix of interesting ideas and were extremely engaged and responsive, as they all had their cameras on during the Zoom session, and they all participated. Among their responses, students mentioned the stigma on mental health and emotional well-being, a bias towards quantitative knowledge in academic research, how a lack of emotions in education is “upholding a colonial way of knowing and learning” and much more. To see the detailed observation notes, please see Appendix B after the observation protocol.

During our interviews, Gabriela also discussed her ideas on teaching non-western or "decolonial field methods”. She discussed the process of allowing students to practice this during site visits, and the transformational act of first critiquing western ways of knowing, and then attempting to revitalize these non-western ways of knowing in the classroom.:

So, we'll sit down with a native and indigenous elder and learn about the animacy. What happens to our research when we approach the world as animate rather than inanimate?
There's this definitive subject/object thing. There are so many ways we can talk about colonial research methods and how they still are perpetuated in academia. And so, we spend the first two or three weeks critiquing that Western lens in order to set up something different and to experiment with different research methods the rest of the semester. And those research methods are always informed by traditional ecological knowledge or non-Eurocentric Northern ways of conducting research. And they can be pretty experimental, Sensing is one of the research methods that we're bringing to the table. So, what are the emotions of environmental justice? What are the senses of environmental justice? We talk about appreciating storytelling and adequacy is one. So, we'll sit down with a native and indigenous elder and learn about the animacy. What happens to our research when we approach the world as animate rather than inanimate?

Hopefully, this semester building will be one of our research methods, and we're going to be building solar arrays with a really cool renewable energy specialist. So, I'm trying to get students to use their bodies and use their minds in rethinking their methodological relationship and how they can apply their intellectual skills.

In addition to the community engaged instructional practices and decolonial field methods described above, Gabriela and Paul also implement student directed, community engaged and experiential projects in their courses. The next section seeks to better understand their practices.

**Student Directed, Community Engaged and Experiential Final Projects**

Two faculty members (Gabriela and Paul), include community engaged and student directed final projects as part of their course. In the case of Paul, he provides a wide range of
options for his final project, some of which involve work in or with the community. Here he is discussing these projects:

I also have students do final projects where they have a choice between an artistic project, a community-based project, they can do a term paper, an analytical paper. They can also do what I call a strategy paper, and this is an idea I think a lot of folks are using that I stole from somebody where they're unsolicited advice to an organization. It could be a government agency, a corporation, a university, a social movement group... "This is how I think you could take your operations to the next level based on what I've learned from the class..."

Here Paul responds to follow up questions about why he does this, and what kinds of projects students create:

But in terms of the community-based projects that students are doing. Students have done some fabulous stuff including working with or working for non-governmental organizations, but also starting up their own organizations or taking existing student and community-based organizations to the next level, like community gardening. One student created this thing called the [Local Community] Trading Post, [a local neighborhood] Area, which is the community right northwest of our campus where a lot of students live, Trading Post, where it's essentially like... In some ways like a Goodwill, but it's more like... You don't even have to pay. You come in, and you can just get clothing that is donated. And they do all these pop-up events teaching people how to sew, how to repair and mend clothing, teaching people the benefits of the sharing and the reusing and regenerative economy.
I also asked Paul how he goes about providing direction and or scaffolding for this kind of project design in his course:

The final project of course for the class allows students to do a whole range of things, but primarily, all those projects require some level of research project or whether it's the strategy paper or the analytical paper, even the community-based work, creative project, students have to do some sort of research. And then the idea there is of course to give unlike probably most or all of the other assignments in the class, to give them really the freedom, or as much freedom to define what that project is and how they're going to go about it.

Like Paul, Gabriela also has an experiential and community engaged final project that is intricately connected with community organizations. In fact, students work on this project as part of their internship (a 4th class in the EJ program at CSP), so in a sense, this project is a semester long project that students can relate all the material and experiences they have in the other three classes within the program. During their internship students work with an EJ organization and their final project is mainly directed by the organization. To begin describing these projects, Gabriela speaks about the internship component within CSP (an off-campus study program where students take four courses all related to one topic such as Environmental Justice):

And I would also maybe add to that, that a core component of every CSP course, no matter where it is in the world is the internship...I think part of the mission of community partnerships occurs through student labor on behalf of these different social justice organizations. In my program, they're all EJ organizations.
And here more specifically, Gabriela explains some aspects of their project, which involves writing up a story map (kind of like a blog post) for their community organization based on their needs:

But everybody, every student has chosen one [local city] org, and they do an interview. They showcase a science study, a policy study, a map of inequality, quotes. They talk about method. There's going to be all kinds of different posts that come.

And so, every EJ org is amplified and showcased by one student in the program.

Gabriela also emphasized how this project was a collaboration between the community organization and the student:

So, I just want to make that clear that this is part student voice coming to the floor, and part [community] partner voice coming to the floor, that it's really a collaboration between them. Because nothing can be published until it's approved.

In the same way Gabriela integrates community organizations into her course’s final project, three out of the four faculty member participants in this study also integrate other community members into their courses by inviting guest speakers to the class. The next subsection will highlight this common practice among the faculty.

**Guest Speakers and Educators**

One of the most salient and consistent pedagogical practices I saw classroom observations was the use of guest speakers or guest educators in the classroom. Three out of the four faculty members utilize guest speakers, and I was able to observe 4 class sessions (with three different faculty) where guest speakers came to the class. One interesting aspect of this pedagogical practice is that the guest speaker interactions were remarkably similar for all three faculty members. During each visit, the guest speaker usually gave a short talk or
presentation, and then this was usually followed by a Q+A session between the students, the faculty member, and the speaker. In this section, I will give a brief overview of each class session, the guest speaker, and how it related to the overall course design of the faculty member. For much more detailed observation notes of the guest speaker activities, please go to section B of the appendix.

Gabriela employs somewhere between 50-60 guest educators during her three courses either within the traditional classroom, or outside and in the community during site visits. In the guest speaker visit that I observed, Gabriela invited Matt Daniels (pseudonym for study), a Professor of Forestry at the Local State University (LSU) and a member of the Potawatomi tribe. This class session was on agnotology, and featured readings such as: Schiebinger, *A Feminist History of Colonial Science* and LaDuke, *Wild Rice*. As mentioned above, the session began with a short presentation by Daniels and ended in a short Q+A session with the students and instructor. One of the main themes of the talk was how institutions can conduct responsible community-based research with indigenous tribes. He also spoke about tribal sovereignty and the unique identity and environmental context of each tribe. For example, at one point in his talk Daniels mentioned:

Each tribal government is sovereign and not every citizen is going to agree. They have the right to make their own decisions and environmental activists and tribal activists can converge and diverge. We [non-native people or members of other tribes] don’t understand their culture and how they have evolved with the ecosystem.

During this class session, I noticed that the students were again very engaged (all asking interesting questions and keeping their Zoom cameras on), and again noticed a strong theme of community and community-based research. This was connected to another strong
theme of Gabriela’s course which was the inclusion of content materials and guests from
different indigenous tribes with a focus on indigenous aspects of EJ.

For Samuel’s guest speaker, he invited Melisa Rodriguez (pseudonym for
study), a coordinator for a worker rights organization. This was tied into a unit related
to workers’ rights, health, and safety, which is closely tied to Samuel’s background
as a workplace epidemiologist. Rodriguez first gave a talk that focused on her organization’s
model to organize workers across the country and also discussed their model for training,
which is closely tied to popular education created by Freire (1970) where they would use
participatory and collaborative teaching methodologies to educate workers about their
rights.

In many instances Rodriguez described how many issues combine to create difficult
situations for a very diverse group of workers. For example, issues of workplace health
might collide with problems that undocumented workers face, or the pandemic had
exacerbated many of the common problems related with workplace health and safety. Here
Rodriguez describes this by using terms such as “diverse,” “intersectionality” and
“interconnection” pointing to the complex way worker rights and justice function:

“It is important to have diverse groups affiliated with [her organization’s]
coalitions. There is an intersectionality with these groups. We build worker power
by seeking alignment with other issues, and focus on BIPOC communities, the front-
line workers and the most vulnerable. There is a large interconnection to worker
rights with racial, economic, environmental, [and even] language justice.”

After the talk, during the Q+A session, Samuel asked Rodriguez a question about
worker justice not being often discussed in circles of EJ. Rodriguez responded by saying:
“From my perspective, the lack of focus is related to the workers movement and the fact that the workplace hazards mainly impact the BIPOC community. In addition, the most popular issues are usually related to climate justice and are more ‘environmental’ in the traditional sense. Plus, there may be other disconnects between EJ and the workers movement, including the large focus on wage, but not on safety and health.”

After observing this class session, I was able to ask Samuel about the reasons and goals related to inviting other EJ experts into the class and mentioned the idea of representation, and the importance for students to see people of color who work in those organizations:

I asked them to do that [referring to how worker rights connect to economic, environmental and immigrant justice]. Some did a bit better than others, but I believe it was good for them to see people of color who led organizations, who work in these organizations, because if not, it becomes very theoretical.

While observing Paul’s teaching, I saw two different class sessions with guest speakers. In one of the class sessions, ex-students of Paul came to discuss their experience doing research in another course related to regional Green New Deals (GND) around the country which were inspired by Alexandria Ocasio Cortez’s advocacy for a National GND that was never passed. During this activity, the two students gave a presentation and then led a Q+A and Paul largely remained a participant, only interacting and asking some questions towards the very end of the class.

For the other guest speaker session I observed, Paul brought students and a faculty colleague from his university (a Sociologist named Frank Johnson -
pseudonym) who participate in a student created community organization called Green View (pseudonym for study). Green View is a student run organization that serves several functions and hopes to be an inclusive and sustainable hub in a local community near campus with projects such as creating organic food forests, attempting to move to sustainable energy, creating a local economy, and much more. Interestingly, this community organization was started by students in Paul’s class for their community engaged final project (who have since graduated), but then was furthered when they attended Frank Johnson’s class.

From this lens, this class session also highlighted Paul’s use of student-directed projects and their ability to create permanent structures in the campus and local community. While discussing the importance of Green View, Frank Johnson, in relation to his teaching, explained that: “Creating organizations is a new kind of pedagogy; we cannot do business as usual. We have to build the new world that we want. GreenView is like that - a systemic alternative.” Upon asking Paul about these class session observations, he responded with ideas about collaborating with other faculty, and the importance of showing students a real example of how activities in his class became catalysts for real community and social change:

I'm proud to say and Frank Johnson mentioned this as well, that the very idea of GreenView was birthed in his class and my class. Two or three students who were taking my class started the idea, but then they really ... maybe in my class, but they really took it to the next level in his class because his whole class was focused on community-based learning and applications.
It's just a thrill to have these students coming back, talking about a real project in a real community that pretty much 100% of the students either live in or live next to anyway, GreenView is right next to campus. So, there's a real, non-abstract real grounded sense, that this is not theoretical, that it makes a difference and that this is an opportunity for other students to get involved in. So, I think it really does the work of making that connection between the university, the classroom and the community and the possibility of social change.

As noted earlier, one of Paul’s guest speaker activities focused on student research related to regional GNDs around the country. This may be due to work he has done attempting to collaborate with activists in building a local Green New Deal in his West-Coast Region. Paul does this work in his collaborative laboratory, an on-campus collaborative research laboratory that provides a space for local community members, students, and faculty to participate together on local real-world issues. The next section will review Paul’s collaborative lab and how it relates to his teaching.

**A Collaborative Research Laboratory**

Along with having guest speakers come to the class and providing students with a community-engaged final project option, Paul also has created a space where community members, students and faculty can collaborate. We can call this the collaborative laboratory. Paul mentioned this collaborative laboratory during his class sessions and hopes that students will help contribute to long-term and larger-scale projects in the community. Some examples of projects that Paul mentions are a project related to prisons and incarcerated people as important environmental justice communities and an attempt to
develop a local Green New Deal for the community/region near his university on the West Coast. First, Paul describes who can get involved with the collaborative laboratory:

It's mostly undergrads, there's some grads and I guess it's a two-way street as you saw. On the one hand, I have essentially recruited ... well, I guess there's a formal recruitment. I do say to students, "Hey, if you're interested in learning more or working with me, let me know, reach out, we'll talk about it." And luckily there's always at least a small, a handful of students who are. And then on the other hand, of course, as you thought, I'm always interested in having those students or some of those students reporting back to the class about the work they're doing.

Paul also describes why this collaborative laboratory has worked so well in his current university because of his current position and the process of making connections between students, community leaders/ activists and other university stakeholders:

And just a great set of community activists and leaders who are interested in working with me and the students and who were just simpatico with basically my skill set and aren't asking me to be a water scientist or a physicist or something that I'm not. And so, it's just been a really nice, easy match up, not only between myself and the community leaders, but importantly between the students and the community leaders. And so, I've done some great matchmaking between those two elements and that's worked out pretty well.

Here Paul discusses some projects and activities that they have worked on in the lab. In this quote, Paul references a web page with one of their projects. Paul also describes the importance of learning about research methods in the laboratory:
This is our latest annual report, came out at the end of last year. You and I have a number of names I use for this thing. There's the ... I call it a “Collaborative Lab”, there's the Prison Environmental Justice Project, which itself is an initiative of the global environmental justice project.

And another thing that we've done is through one of the grad students I work with, they do periodic workshops, skill shares, where they're teaching students and having guests teaching students various skills, like how to do really good interviewing, how to code data, qualitative data in particular, things like that. And there was a workshop recently where it was just a survey or an overview of different research methods. And so those are some things that we've been doing over the last couple of years in addition to working on this Green New Deal project.

The above section provided documentation of the myriad pedagogical practices that the four different faculty employed in their courses, as well as some commentary to confirm and verify how and why these practices are implemented. The next section seeks to demonstrate to what extent faculty have been either supported or impeded by their program, department or institution, and what effect that has had on their instructional processes and practices.

**Programmatic and Institutional Support for EJ Faculty**

A key component that may dictate the success of a college course or faculty member’s instructional process is if it is authentically supported by the program or institution. This is highly related to the research of Garibay et al., (2016) in that they found that EJ course content had yet to be fully implemented into the overall IES curriculum. In this study, at least three out of the four faculty discussed not being fully supported in their
instruction of EJ courses/course content whereas two faculty discussed salient areas of support. Whereas Darren and Samuel seem to have mainly faced barriers in their instructional practices, Paul has mainly received support stemming from coming to his current position as a full professor. Gabriela on the other hand, experienced both a low context of support with her adjunct work at Local State University and a very high context of support with her new job at CSP.

Gabriela discussed her earlier teaching job at Local State University and how it was much more difficult to teach in her desired community engaged format:

And I had also been very frustrated in my teaching at the Local State University and at another small liberal arts college and not being able to do as many project-based community-engaged off-campus partnership work. We can do some of that at those sites but it's very hard. I think I've shared this with you before. There's such a bureaucracy, I have to go through so many people to make decisions, I don't have a lot of freedom as an educator. I don't get to just pay people what I want them to pay, I don't have a budget.

It always has to go through someone, and then it's just this ridiculous thing Chris, where if I wanted to invite you to the classroom to tell us about EJ pedagogy, let's say. And I would say I value your work, Chris; I want to compensate you. I first of all couldn't say, "I believe I owe you $200." I would first have to run it through my department. Well, if I'm running it through a well-endowed department, we might have a ton of money for you. And if I'm running it through a struggling department, they might have nothing for you. And so, there's not an ethical way to compensate people across different disciplines and colleges at the U. And that's really
frustrating because there's not... You can't set a precedent for what faithful compensation looks like.

Conversely, at Gabriela’s current job at City Semester Program (CSP), she feels that she can do the “project-based community-engaged off-campus partnership work” that she believes in and has worked so hard to develop:

So, coming to CSP was like a dream because they were like, "Oh, here's a budget, do whatever you want." There was almost no oversight, Chris. I got to do whatever I wanted.

In addition, Gabriela’s current organization not only encourages, but may even have the unstated expectation that faculty create partnerships with community organizations:

Yeah. Yeah, absolutely. And I think that has everything to do with the expectation. I would even say like there's an unstated requirement that we work with community partners, that this isn't about brilliant professor so-and-so imparting their wisdom in that banking method of education, but really that the mic is passed and that students are not only doing experiential education, so they are constantly encountering difference and encountering others, but also applying their skills and applying their labor, applying their money, their intellectual skills, their physical labor, and leaving a mark in the communities that we work with.

Gabriela also receives a budget to pay guest educators 100 dollars per hour:

I have a budget and so I get to pay people that I work with. And so last semester, even during the pandemic, we got to do 16 different site visits. We learned outside almost every day. We did a five-day paddle down the Mississippi river. We did a three-day
camping trip on a regenerative farm. We did a few toxic tours. It was all outdoors, for
the most part, until the last few weeks of the semester. And I got to pay people $100
an hour for educating us and coming into the virtual or the outdoor classroom.
As described above, different from Gabriela, Paul has mainly received systems of
support from his current program and institution:

Yeah, absolutely. And I have to say, yes, in the unit number of universities that I've
held jobs at, this has been the one ... I don't know why. Just the one time where there's
just been a nice convergence of really, really interested students, a university that's
given me the space and the resources to do this.
It's also the case, of course, that I arrived here, my first job ever in environmental
studies, as a tenured faculty member, full professor, and all of that.
Different from the other participants, Samuel discussed mainly feeling a lack of
support for EJ studies and for his teaching overall, including not having enough training or
professional development. Firstly, he spoke about wanting more support for community
partnerships and engagement:

The ideal situation would be for City Public to have relationships with community
groups that are more ongoing and long term so that it would become easier
to plug students into different projects, into different activities that the university was
promoting. I've been advocating this for a long time. Universities are not
good in doing that and that becomes, I believe, the major obstacle.
Secondly, Samuel mentioned he got a TA which was helpful for his course, but
besides that, he wished there was more support and commitment to the field of EJ in his
program:
Beyond that, I don't think so. I believe if you look at the composition of our school and the faculty, I'm probably the only one that really focuses a lot on this. Other faculty talk about it, but no, they are not committed to environmental justice as a school for the environment should be, no. Because of the composition, and I'm not blaming anybody, I'm just saying it's a reality.

I believe it should be a lot more [focus on environmental justice], especially if you consider that we are an urban public university. So, themes like gentrification should be a very important theme of a school for the environment because in the urban environment, gentrification is one of the major problems. Transportation issues, we are concerned about, yes. Housing we are concerned about, but it should be more. Finally, Samuel also mentioned wanting to learn more about different pedagogical methodologies including “experiential” methods:

Well, people talk a lot about experiential learning. I believe my practice is based on this for sure. I don't know enough about the epistemological, theoretical approaches to teaching beyond my own experience and some courses that I took. I would like to learn from people who know more about this than I do.

Darren mentioned being supported by his college and feeling more supported now (with the growing popularity of EJ studies). However, initially he did not feel supported, and felt like his institution almost got “rid of him.”

I think the university of late has been trying to build its reputation around sustainability, resilience, and so forth. They see me now as useful to that. Now they don't mess with me, but for 20 years they messed with me all the time. They wouldn't give me raises, and so forth.
In reference to his class-size being a plus for the university, Darren mentioned: “Plus, my classes make so much money for them, because they're so big.” But almost paradoxically, he also mentioned the size of his class as an impediment to doing more community engaged work, such as involving students with community members on projects for example as he said: “But I can't do that with 115 students right?”

Related to a recent increase in support for sustainability and environmental justice, Darren described a “mixed bag” of impediments and support for EJ content knowledge, faculty, and students:

Yeah. It's still a neoliberal institution. There is a conversation taking place. They're doing things which are completely contradictory to environmental justice. I had students want to come to the graduate program, who one for example came out of a little village which is Environmental Justice Group of Chicago, was offered a full ride to Ohio State, but because the university values its rankings more than anything else, she was denied entry into our graduate program, a Latina woman who had been great. I wanted to work with her. She would be a star, but her test scores weren't high enough, where it wouldn't look good for their rankings. They were adequate, they were fine.

That wasn't consistent with the mission. That is not consistent with being in a place where you do EJ scholarship. So, what are you doing? We have so few students of color. You bring in all these premier EJ scholars, but you're not bringing in any students. It's a mixed bag.
Conclusion

This chapter sought to describe the most salient findings that emerged while speaking with, observing, and analyzing important course documents from the four faculty participants in this study. In line with my conceptual and theoretical framework, findings were organized into four main categories beginning with epistemology, and followed by curriculum, pedagogy and programmatic and institutional support and impediments for faculty. To provide more detail, all the faculty expressed different personal and professional stories of activism, as well as activist and community related epistemic goals for their courses, which led to the theme of activism emerging most saliently in the epistemic category of the findings.

In terms of curriculum, Darren’s strategy of organizing his course around theoretical tools, and Gabriela’s fully integrated community engaged course design stood out as the most unique models for curricular organization. In the pedagogical area of the findings, approximately seven distinct processes and practices were outlined, which included: 1. Critical Lecture. 2. The engagement and encouragement of protest and activism, 3. The process of integrating community partnerships into courses, 4. The practice of “decolonial field methods,” 5. Student directed, community engaged and experiential course projects, 6. The invitation of guest speakers and educators, and finally 7. The use of a collaborative research laboratory.

Finally, the theme of programmatic and institutional support showed how faculty members’ unique institutional context provides distinct levels of both support and impediments. Darren and Gabriela have received a mixture of support and impediments depending on the time period and position. Possibly most noteworthy, Gabriela experienced
various impediments to her preferred model of community engaged instruction while teaching at Local State University (LSU), but at City Semester Program (CSP), she has felt unleashed and encouraged to flourish in her style of teaching. In terms of Paul and Samuel, Paul reported a feeling of full support, while Samuel mentioned at least three ways he is impeded in teaching EJ at Urban Public University (UPU).

The primary goal of the next chapter is to use the literature organized in the conceptual and theoretical framework to analyze the above findings. More specifically, due to the strong epistemic foundation of activism in all the faculty members, I will discuss to what extent each faculty member manifests their activist epistemic orientations into their courses. During this process, I attempt to understand how and why they are successful (or not) in doing so, and the role that certain programmatic and instructional supports play in aiding their instructional practices.
CHAPTER 5
CONSTRUCTING A CONTINUUM OF COMMUNITY ENGAGED EJ INSTRUCTION

As outlined in the findings in the previous chapter, one of the most salient themes that emerged during data collection was that all four faculty members pointed to activist experiences at both personal and professional levels as important stepping stones to their careers as EJ scholars and faculty. Perhaps more strikingly, these activist experiences extended into the ethos of their instructional process, as they all expressed different goals for student activism, community engagement, or social change in their courses (to see a list of the faculty member’s primary goals, please refer to table 4 below). Because these activist themes emerged in the first interview before I had observed their teaching, I began to wonder: How would each faculty member translate these ambitious and inspiring goals for social and community change into tangible curricular and pedagogical practices?
Table 2

*Faculty Primary Learning Goals*

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Key Learning Goals</th>
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<tbody>
<tr>
<td>Darren</td>
<td>I think a big way that I want to try and teach this and convey this information is this notion of citizen empowerment, that really convey to the students that you have the power to make changes, and with many of the institutions that you deal with, whether you work, live, or play, and that all these changes add up.</td>
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| Samuel   | I always try to do that, to encourage them to become more active, to encourage them ... With the pandemic now, I decided that I'm not going to control my tongue no more.... And I believe this is very important for this generation to have a grasp, understanding of this, and hopefully become active.  
So, to me, I believed the students realized this not only by what I talked to, but also, I believe they feel it. This is at the level of the skin. They feel that when I say this stuff, this is not something that I learned in the book. |
| Paul     | I feel like everything or most of the things I'm doing, I'm hoping are leading in some ways to improvement for people's lives, for our life support systems, our ecosystems, and I encourage my students to do that very explicitly in the class.  
My hope is that it's not just about a grade. It's about students getting something from this class that they can take into their lives that lives with them, lives on after the class.  
How do we—as individuals and groups—contribute to ecological harm and how might we be a part of solutions to socioenvironmental crises? How shall we rethink, rebuild, and recast our relationships with the more-than-human-world, the biosphere, and our shared ecosystems? How can we push beyond the limits of sustainability in both theory and practice through our everyday behaviors and direct action? |
| Gabriela | One objective is that there is an actual contribution that supersedes students themselves.  
By experimenting with a multitude of decolonial field methods and investigating dozens of approaches to environmental justice, students work to intervene in systems of injustice and ecological destruction by redistributing power through physical, scholarly, and financial contributions. |

As the classroom observations and analysis of syllabi progressed, I started to realize that faculty were manifesting their activist epistemic orientations to different extents, levels of intensity, or intentionality with their implementation of distinct curricular and pedagogical practices in the classroom. It was during this process that I began constructing a diagram
(please see Figure 13 below) to represent a continuum of community engaged EJ instruction among the four faculty. In addition, I later recognized that when faculty members implemented community engaged instruction with EJ activists, they were simultaneously practicing different aspects of justice in conjunction with community members. For some faculty, including the voices of marginalized EJ activists into their classrooms (or meeting with them in the community) was of critical importance, thus practicing aspects of participatory or recognition-based justice discussed by EJ and CRT scholars (Schlossberg, 2013; Yosso, 2005).

**Figure 13**

*A Continuum of Community Engaged EJ Instruction*

Due to these practices of justice, I titled the left-hand side of the continuum “Separate from Justice” which is derived from Rendón’s (2009) discussion of problematic
“agreements” (such as the agreement of separation p. 33) in higher education that seek to enforce oppressive Eurocentric practices of teaching and learning, as these practices do very little or nothing to practice community engaged justice. In contrast, the far-right side of the continuum is entitled “Embodied Justice” and is meant to signify the opposite of “Separate” and explain faculty instructional practices that *embody* their full activist epistemic orientations. The term “embodiment” was first inspired by Gabriela’s passionate statement: “I believe that teaching environmental justice is really not the same thing as doing it.”

This quote signified the problematic divide there is today between academia and community-based activism and demonstrated the importance of embodying the voices of the EJ community within college courses and academic research (Temper & Bernal, 2016). Later, the term “embodied” was further developed with use of Wilcox’s (2009) concept of “embodied ways of knowing” or “embodied pedagogies,” which refer to the utilization of knowledge that stems from the body, such as intelligences like feeling, sensing, experience, creativity, and performance, to describe and discuss Gabriela’s practice of “decolonial field methods more fully.” Echoing the above EJ and CRT scholars, Wilcox (2009) also explains that a crucial part of embodied pedagogy includes the integration of community member first-hand experiential knowledge.

The diagram above for community engaged EJ instruction serves as an organization tool for this chapter. During the discussion of this continuum, I explore the three main research questions, which are: 1. How does EJ faculty epistemic orientation influence instruction? 2. How do EJ faculty organize course content knowledge? And 3. What pedagogical processes and practices do EJ faculty employ to meet their goals? During
the chapter, I move from left to right of the continuum’s sections discussing each faculty member’s primary instructional practices. More specifically, I highlight what tangible curricular and pedagogical practices faculty employed that most embodied their activist epistemic orientations, and how they may involve EJ community activists in the instructional process. In addition, I explain nuances in faculty epistemic orientations, and discuss factors related to their organizational contexts as reasons for why particular faculty members implement (or do not implement) specific instructional practices.

**Separate from Justice**

In her book, *Sentipensante*, Laura Rendón (2009) discusses various implicit agreements that exist in higher education that stem from historical practices rooted in Eurocentric knowledge. These agreements describe common and oppressive epistemic assumptions about the way learning continues to function despite decades of struggle to change them to better support Students of Color, indigenous and low-income students. Although many of the agreements apply to the discussion of problematic practices (and how to change them) in general, the *agreement of separation* is particularly useful in describing faculty practices in the continuum that are effective in some ways, but still perpetuate a learning environment for students that exists separately from more embodied forms of knowledge (Wilcox 2009), and community activist voices and spaces (Ollis, 2020; Yosso, 2005) that have been so important in forming the EJ movement (Taylor, 2000).

More specifically Rendón (2009) outlines several aspects of the agreement of separation referring to the 1.) linearity of teaching and learning, 2.) faculty occupying the role of “sole expert,” 3.) teaching being separate from learning, 4.) faculty not communicating with students on a personal level, and 5.) students attempting to solve
problems within the course from only one academic discipline (p. 33). In addition to the agreement of separation, Rendón (2009) also describes an agreement that privileges academic and intellectual forms of intelligences and devalues other ways of knowing such experiential, socio-emotional, kinesthetic, spiritual, and even intelligences that involve use of the whole body (Gardner, 2004, as cited in Wilcox, 2009 & Rendón, 2009). This agreement is also useful in contrasting EJ faculty who mainly implement traditional pedagogical practices that prioritize rational/cognitive learning (such as lecture) as opposed to faculty who employ practices where students can experience learning in ways such as directly interacting with community activists (guest speakers and site visits).

**Towards Integrated Justice**

After an analysis of each EJ faculty member’s key practices, I determined that all of them employ at least some effective strategies to advance their main pedagogical goals of encouraging student EJ activism. Thus, none of the faculty members were placed on the far left or “separate from justice” area of the continuum (seen in the figure above). I define “towards integrated justice” as faculty curricular and pedagogical practices that fall somewhere between “separate from justice” and “more fully integrated justice” in the continuum for EJ activist and community engaged Instructional practices. In other words, these are effective practices that cause students to begin critically questioning the causes of environmental injustice, encouraging, and motivating them to get involved with activist issues, and the mentoring of students to involve themselves into local EJ related community organizations. To begin the area of “towards integration,” I will describe Darren’s main pedagogical and curricular practices, which include the frequent use of critical
lecture, the encouragement of student empowerment and engagement in democracy and finally, the mentoring of students into local community EJ organizations.

**Critical Lecture**

When observing Darren’s class, it doesn’t take long to see that he is a very well-experienced, charismatic, and critical lecturer. With a very popular class that caps at 115 students, Darren has employed this pedagogical practice as the main way to communicate EJ content knowledge to his students. I describe the lecturing as “critical lecture” due to Darren’s constant discussion and use of neoliberal and economic theory to demonstrate the causes of the global climate crisis to students. I would describe his personality and style of lecturing as Noam Chomsky-esque with a wide array of complex socio-political economic theory, propositions, examples, and provocative photos and video, Darren most certainly makes theory “come alive” as he describes here:

> “Pedagogically I think one of the most powerful techniques is to make a theoretical proposition, explain the theory, but then make it come alive, and you make it come alive by telling stories that illustrate the theory or diving into a particular example that happened within recent times, maybe that week, maybe even that day.”

I noticed this strategy in all my class visits, as Darren led the class in lectures regarding 1.) Globalization and the export of ecological hazards, 2.) The polluter-industrial complex and the colonization of the state, and 3.) The future of environmentalism. In each lecture, Darren offered up propositions and then argued them with a fascinating use of theory, real-life examples through photos, and in some cases, the use of student generated material. In one example, during the first-class session on the globalization of ecological hazards, a student had previously sent a video to Darren on the destruction of indigenous
lands in Equator due to a drilling operation by the Chevron oil and gas company. As this video connected well with the day’s topic, Darren played it and used it as another important example to demonstrate how large multinational corporations export ecological destruction in the global south, often focusing on areas where people lack political and economic power, such as indigenous and low-income groups, a key process that defines many environmental injustices around the world. This use of student generated material is an excellent way to better involve student ideas and participation in a large lecture style classroom.

Another effective aspect of Darren’s course curricular organization and pedagogical practices was his use of theories stemming from a variety of academic disciplines and his ability to clearly organize them and present them to students in an engaging way with his extensive knowledge and engaging lecturing. Rendón (2009) points to the importance of faculty not only residing in or utilizing one disciplines’ knowledge to help students understand complex societal problems. From this lens, Darren does utilize a multidisciplinary framework in his course, another key principle from the EJ field. Although Darren is a sociologist, much of his course uses economic and anti-neoliberal theory to help explain the nuanced problems of ecological and environmental injustices. For example, his course brings in interconnecting issues such as climate and immigration, theories of consumption, globalization, economic policy, and mixes this with core theory from environmental justice, such as environmental racism and intersectionality.

In addition, Darren expertly employs theory to communicate a key underlying theme that Darren describes as “a more transformative environmental justice politics, one which doesn’t just look to more equitably distribute environmental harm or risk, but rather go to the root causes of the ecological crisis.” Darren attempts to show students that many
environmental interventions continue to redistribute environmental harms on the most vulnerable populations, thus perpetuating environmental injustice and racism. During this process, Darren hopes to communicate various “theoretical tools” to allow students to deconstruct specific environmental justice issues around the globe and be able to see their root causes, and understand and implement more systemic, transformational solutions. In fact, Darren was adamant that this was the most important part of his course explaining that:

I think that's the most important thing about my class, quite frankly, is that I'm giving them the tools of analysis. I'm empowering them to be able to make these analyses of whatever issue they care about, and we just cover the gamut.

From this lens, Darren’s course organization via “theoretical tools” is innovative, in that it shows students that through theory, they can better address and possibly solve the complex causes of environmental injustices.

However, there were aspects of Darren’s lecturing and use of theory that kept his course instructional practices in the “towards integration” area of the continuum. For example, in the class sessions that I observed, there was rarely any student to student or student to faculty interaction. In addition, although Darren espoused creating “critical hegemonic spaces,” or fostering “citizen empowerment,” most of his classroom pedagogy focused on the use of lecture. Even though I would describe his lecture style as highly engaging with the use of critical anti-neoliberal theories, photographs and video, students were usually in a passive role while acquiring course content knowledge via rote learning without the additions of other pedagogical interventions such as group work, free-writing or presentations, to only name a few.
Although these theories and his way of presenting them were engaging, students were only able to apply these tools within exams and papers. This meant that the sharing of knowledge was primarily mono-directional from faculty to student, and only existed within a decontextualized academic context. What is more, students missed the opportunity to learn from community members from a variety of social identities outside the course who have been working on the ground experiencing and fighting these complex injustices (Ollis, 2020; Wilcox, 2009; Yosso, 2005.) In this way, these aspects of Darren’s course remained separate from the community. Rendón (2009) also describes this as another aspect of the agreement of separation. Not only are academic disciplines disconnected from each other, but academic institutions are often separated from the communities that they inhabit.

Due to the siloed nature of traditional Eurocentric academia, Rendón, CRT Scholars (Yosso, 2005) and transdisciplinary scholars (McGregor, 2005, 2014) advocate for a transdisciplinary approach to teaching and learning where societal problems are explored using multi and interdisciplinary work in conjunction with the community outside of the institution. If faculty such as Darren hope to effectively transform systems and structures that contribute to environmental injustices, they could be taking steps towards integrating their instructional practices more with community organizations and jointly working towards these goals.

**Mentoring Students**

When I asked Darren follow up questions about how he attempts to involve the community in his course, he mentioned his use of mentoring as a fundamental tool to help students enter community organizations. For example: Darren discussed this at length in our interviews:
“There are students who come to me and say "look, I want to work on this, can I work with the Center for Environmental Justice? Can you get me an internship with Clean Action? Can you help me [get one] and I do that. Today I was writing five letters for helping students do that, and I'm very happy to help them do that, so it's very much a catalyst, that's the word I would use for them to engage in all types of other possibilities.” (The organizations’ names were changed for this study).

Mentoring in higher education has been studied extensively and has been shown to have wide ranging benefits for undergraduate students. For example, an international review on the practice of mentoring in higher education scholars explains that mentoring can improve student academic performance, aid in students transition to college, help with retention, aiding student changing into new disciplines, deal with challenging experiences, learn about research practices and much more (Lunsford et al., 2017). Because Darren teaches this multidisciplinary course on the environment with students from many different majors (Darren mentioned this in our interviews), this places Darren’s mentoring most in the category of helping students transition into a new area disciplinary area of environmental justice and sustainability.

In addition, Darren works at a four-year private university that has a focus on internships as part of their graduation requirements. He also has a long career and presence in various on campus student led environmental organizations as well as membership in dozens of non-profit EJ related organizations around his local city. This makes Darren’s ability and willingness to help students plug into these organizations an extremely important and effective tool to help students engage with local EJ issues. Although Darren’s effort and assistance with placing students into internships is most likely an effective practice to
engage students more authentically with community issues, it is quite a different practice from more fully integrating his experience with community organizations into his course.

With such a wealth of experience, presence, and sway within these organizations, it seemed disconnected when Darren’s course content was not more integrated with local issues and community voices. With a large class this could be challenging, but one way to start would be to begin inviting guest speakers or guest lecturers to the class from the community. In other words, Darren’s effort to mentor students represents an important support system and tool for student-community engagement, but in other ways it is another example of how community engagement is still separate and disconnected from student learning within the course (Rendón, 2009).

**Encouraging and Notifying Students about Protest and Activism**

In addition to mentoring, all four faculty members encouraged students to become active in society in different ways. Interestingly, and like the continuum overall, with this pedagogical practice, faculty engaged in this practice at different levels of frequency, intensity, contextuality and application. In the case of Samuel, I was only able to learn about this through interviews where he stated:

“I always try to do that, to encourage them to become more active, to encourage them... I believe they feel this, because I always encourage them to get involved in stuff. I send them e-mails when I can. I invite them to participate in stuff. So, depending on this semester, I always show them that I'm not here just to teach, I'm also ... We should change the stuff.”

Although I was able to see Samuel’s passionate style of instructing during observations, I was not able to witness him directly encouraging or sharing a particular opportunity to
engage in activism or protest. Thus, in this case, Samuel’s understanding of his hope for students to engage in EJ solutions was somewhat vague, as he was unable to state a specific curricular or pedagogical strategy that allowed students to do this within the course. Nevertheless, the passion and goals that Samuel expressed were important, and there were maybe ways that Samuel does engage in this practice that I was unable to observe.

In terms of Darren, not only did he express goals to encourage “citizen empowerment” among his students, but I was also able to watch the last class session of the semester. After engaging students in a lecture related to the challenges facing the EJ movement, in the last section entitled “The Future of Environmentalism” Darren concluded the course by talking about the importance of “democratizing the environmental movement, forging a new environmental citizenship” and how “solutions need to be grounded in participating in our communities.” In the very last words of the course, Darren also seemed to deliberately profess the importance of his student's involvement as he stated: “[It is] “key that you engage in these democratic movements. This is the only way we can protect and serve American Democracy.”

This last section of the class was powerful, and it was an excellent way to conclude the course. There was a flurry of activity in the Zoom chat, as students said thank you and directly expressed the desire to get more involved with EJ issues. Yet, this practice still represents encouragement and seemed to only happen rarely, or maybe this was the only direct recommendation from the instructor for students to actively engage in American democracy to attempt to build solutions for important EJ issues. Thus, the practice of mere recommendation or encouragement continues to only reside in the classroom, which does not facilitate student involvement in EJ issues in the community directly.
In contrast to Samuel and Darren, Paul and Gabriela employed this practice more frequently (in the beginning of many of the class-sessions I observed), with more intentionality, and in some cases, within the context of their course content or in relation to site visits with the community. It was after visiting Paul’s course on one day, and Gabriela’s the next, that I noticed both were doing this as a routine to begin their classes, and after announcing specific events happening on campus or in the local community (including actual protests) they would often ask the students if they knew of additional opportunities to get involved. In at least two sessions with Paul, students would either unmute and announce something, or more often, students would fill the chat with different local opportunities.

In one of Paul’s class sessions, students announced that they were on their way to a protest related to a luxury housing development in a local area with undeveloped natural space. As students explained they were going to participate, Paul encouraged this by asking if it was possible to create a bail fund, sharing his cell phone number, and asking the other students if they could offer resources. In an exciting first few minutes of class, students were helping each other by sharing resources in the chat and providing possible strategies in case students were arrested or encountered other obstacles during the protest. Although possibly coincidental, I was inspired to see students openly share that instead of class, they were going to engage in protest, and as opposed to penalizing this activity, their instructor openly encouraged them. This kind of classroom practice would move slightly beyond encouragement, and into the realm of aiding in the engagement of safe and responsible activism and protest.

Similarly, Gabriela would also announce different events and opportunities for her students to get involved at the beginning of each class. In addition to this, Gabriela provided
ample site visits, field work and guest speakers for students to fully participate in EJ community issues. What is more, I was able to observe several occasions where Gabriela would use their site visits to help students make connection with their readings in the course. Or, in another context, to prepare her students for a guest speaker, she asked students to remember their experience with another speaker during a site visit. Thus, Gabriela’s practice goes far beyond the encouragement of activism and represents a full course design that is integrated with community members and community events. This course design, as well as various other practices employed by Gabriela will be explored in much more depth in the section on “Embodied Justice.”

**Integrated Justice**

Moving to the right of the continuum, the “Integrated Justice” section seeks to describe EJ faculty practices that more fully integrate student interaction, engagement, and or experience with EJ community members into their overall course design. Within this section there is also a mini continuum, as each additional practice adds another layer of student and community collaboration and provides more frequent and meaningful opportunities for these experiences. This section begins with a discussion of guest speaker activities, and the addition of student-directed community engaged final projects. To end the section, I describe more complex pedagogical practices within Paul’s course that include students collaborating with faculty members to build and organize community organizations, and the use of a collaborative research laboratory to provide space for student, faculty, and community cooperation on important EJ issues. One notable aspect of this section is that as the collaboration between groups increases (faculty, student, and community) the opportunity for transformational change seems to become more possible,
pointing to the need for more collaborative pedagogical strategies if faculty wish to truly affect change in the EJ movement.

**Inviting Guest Speakers**

One of the pedagogical practices that most unites this group of faculty members is their use of guest speakers and educators in the classroom. Although there is not an extensive amount of research on guest speakers (Kong, 2018), early research showed that faculty found that there were three key goals for their guest speaker usage as an important pedagogical tool. More specifically, Payne et al. (2003) found that faculty often added guest speakers to their lessons to 1.) bring in knowledge from the field, 2.) open students’ minds to multiple viewpoints and 3.) alter students' ideas and perceptions in positive ways. Like Payne et al. (2019), faculty in this study invited guests to allow for a break or change of speaker (Paul), and or, share direct experiences from the field (Samuel). In contrast to the above research, Paul also wanted to bring ex-students to the class to model the new skills and knowledge that they are currently applying to their undergraduate research on regional Green New Deals, and Samuel hoped to show important representation of POC in EJ organizations.

For example, Paul mentioned the need to “give the students in the class a break from just hearing me all the time and to break things up a little bit.” During a class observation, I could see Paul relishing the role of Master of Ceremonies (MC) while introducing the ex-students in a very fun and professional way. In addition to this, when the students had finished their presentation, Paul noticed that students were already raising their hands and putting things in the Zoom chat, so he directed the guest speakers to lead the Q+A portion. In fact, during this Q+A session, I noticed an increase in student questions and
student-to-student interaction than in other sessions I observed. From this lens, Paul very
deliberately decentered himself during this class session and opened a space for student-to-
student collaborative learning.

Kong (2018), while discussing key theory in relation to their study on the use of guest
speakers in a course entitled *Foreign Civilization and Culture* with a focus on China, relied
on theory from the social constructivist paradigm to better understand the impacts of guest
speakers on student learning. Similar with the collaborative learning in Paul’s course, Kong
(2018) references and explains the concept of “community of practice” theorized by Lane
and Wenger (1991). Communities of practice are groups of people who participate in similar
activities on a frequent basis, and as they consistently practice, they learn to do it more
effectively (Wenger, 2011).

This kind of community of practice was particularly apparent in both Paul’s and
Gabriela’s classes. In Paul’s class, I observed two class sessions where ex-students came to
share their experiences with current students. Kong (2018) states: “The beauty of this
approach is to allow and encourage connections among people across organizational and
geographic boundaries” (p. 267). In Paul’s case, students can connect across the boundaries
of college courses and share, reflect, and communicate their experiences. While in
Gabriela’s course, guest speakers visited the course so frequently that I could see the students
had developed a routine and had become very comfortable talking with the guest speaker(s)
from different organizations, geographical locations, and social identities. As mentioned
above, Gabriela would often reference earlier speakers either in the class or at site visits as
ways to introduce new guests. From this lens, students were able to frequently engage in a
community of practice with individuals and groups attempting to understand and remedy the same issues being learned in their EJ courses.

The opportunity to bring guest speakers who have EJ experiences directly connects to the CRT tenets put forth by Yosso (2005) previously introduced in the theoretical framework known as the “the centrality of experiential knowledge” and the “transdisciplinary perspective” (p. 74). If the goal is for students to connect more authentically with EJ issues, it is critical for them to interact with people of color or other individuals who have faced environmental injustices and have learned context dependent strategies to mitigate them. In addition, Yosso explains that a CRT methodology utilizes various forms of storytelling to allow these individuals to share their unique experiences as valuable and legitimate knowledge. Similarly, a transdisciplinary perspective should encourage faculty and institutions to break down the barriers of the discipline and course to create space for student, faculty, and community interaction. Although guest speakers seem like a simple pedagogical activity, they represent important first steps into the community and direct interaction with the voices of historically marginalized people. Thus, the guest speaker practice provides a wealth of knowledge from outside the classroom that the faculty members themselves often cannot solely provide.

In addition to firsthand experiences, guest speakers can also demonstrate to students how people of color occupy prominent roles in vital EJ organizations and communities. This may allow for the critical practices of justice known as access or representational based justice. Cann and Demeulenaere (2020) in referencing activist pedagogy, point to the importance of identity and “how it is defined, considered, and navigated in classroom spaces?” In relation to this, Samuel noted representation as an important reason
to include guest speakers in his course: “I believe it was good for them to see people of color who led organizations, who work in these organizations, because if not, it becomes very theoretical.” This is a critical reason to invite guest speakers as Samuel works for a four-year public institution that has a majority population of Students of Color (SOC). It is even more essential that SOC can see people like themselves doing important EJ work in future career paths, especially considering that despite some improvements, there is a continued lack of diversity represented in environmental organizations across the U.S. (Taylor, 2014).

Towards Embodied Justice

Whereas Samuel was placed near the beginning of the “Integrated Justice” area of the continuum due to his use of guest speakers, many of the practices in this area were observed in Paul’s class. Paul was placed in the towards embodiment area because employed pedagogical practices that served to integrate community issues more deeply within his overall course design. Examples of these included: providing a selection of student directed final projects, more consistently inviting guest speakers (including ex-students), and creating a collaboration laboratory where students (from inside and outside his courses) can work together on both academic and community related projects.

Student Directed Projects

One of the more innovative practices Paul employs in his course is to provide a selection of four different final project options, which students could choose based on their interests. The projects are listed in detail in the findings section and consist of an analytical paper, a strategy paper, a community engaged project and an artistic project. This strategy is innovative for a variety of reasons. First, it provides important options for students and allows them to choose a project that can best support their learning styles and secondly, it
provides important student-direction where they can choose the level of community engagement they are comfortable with, while self-selecting a context for meaningful learning.

As Rendón (2009) discusses in the agreement of privileging intellectual/rational knowing, students are frequently only provided with the opportunities to practice their cognitive and academic knowledge, while not being able to tap into other knowledge and skill bases such as socioemotional intelligence, interpersonal, and artistic skills, for example. Wilcox, in her discussion of embodied knowledge, echoes this sentiment. Wilcox (2009) relies on feminist theorists to broaden the definition of “performance” to include opportunities to be imaginative, engage in inquiry, and even citizenship as ways to embody the knowledge one is learning or communicating. From the lens of Rendón and Wilcox, these final project options provide students a chance to practice their interpersonal skills by writing a strategy letter to an organization or engaging with community members in a community engaged project. In addition, they can engage in a more creative performance-like project by creating art to express themselves and communicate an EJ issue in non-traditional ways. One prominent example of art projects students have worked on is EJ and sustainability related children's books that have been published by several different mediums.

In addition to providing students with the opportunity to express their learning in non-cognitive/intellectual means, this project also allows students to engage with the community at different levels of comfort. For example, if learners are not ready to create a student-led community organization or begin a new campaign for an important issue on campus, students can choose a project that meets them where they are. In other words, student-directed
projects are excellent pedagogical strategies to allow for learner differentiation where students can adapt their project to meet their own needs.

Finally, allowing for student decision making in forming their own project can provide students with freedom to intuitively find the context for their project, thus taking it out of the realm of academic-decontextualization, and into a space where students can create a project that matters to them. For example, Paul mentions he wants to “give them really the freedom, or as much freedom to define what that project is and how they're going to go about it.” In relation to this, Breunig (2017) classifies more student-directed activities as a transformative pedagogy where faculty may be asking questions such as: “How can I better facilitate instruction?” or “How can I encourage students to be actively engaged in their learning?” Thus, one way Paul meets his student-activist goals is to provide them with the freedom to create their own final project in which they have the agency to be actively engaged in their own learning.

**Creating and Modeling Systemic Alternatives**

In some cases, the above final project options encouraged students to form new community organizations. In one specific example, two students from Paul’s course had the idea to create an organization, which was later called “GreenView.” Although the idea for this organization began in Paul’s course, these two students took the idea to Frank Johnson’s sociology course and expanded and more officially founded the organization. In other words, the final project from Paul’s course spilled into another course, where a collaborative faculty member helped it continue and blossom into something larger. In this case, the project became something different where faculty, student and community collaboration played an
integral role in the formation of a new organizational structure that sought to reshape the current environmental paradigm.

In a combination of pedagogical strategies, Paul modeled how students from his course used their final project to create a new organization and invited guest speakers to engage with the class to communicate this process. Instead of merely explaining examples of previous final projects, Paul could provide a living example with students and faculty from the campus community. What is more, Paul asks this question in the goals area of his syllabus: “How do we—as individuals and groups—contribute to ecological harm and how might we be a part of solutions to socioenvironmental crises?” From this lens, Paul is allowing his current students to examine how previous students had attempted to engage with this important course goal. This was a very clear example of how Paul utilizes pedagogical practices to advance this justice-based goal of allowing students to “be a part of solutions to socioenvironmental crises.”

From another perspective, Green View represents a new system or structure that can transform the current socioenvironmental narrative. During this observation, the guest faculty member David Johnson who advocates for “systemic alternatives’’ explained that “Creating organizations is a new kind of pedagogy; we cannot do business as usual. We have to build the new world that we want. GreenView is like that - a systemic alternative.” This points to a new form of pedagogy that attempts to provide students (and faculty) with opportunities to change or create organizational systems or structures in the community. Although there is very little research on pedagogical strategies like this one, in a recent article by Foster (2020) argues that sociology courses should offer more applied skills around community organizing to impact social change. Thus, practices that provide
motivation and scaffolding on the community building and organizational process could be an integral part of an EJ course that hopes to advance student activist and transformational justice-based goals such as being a part of socioenvironmental change in the community.

**Providing a Third Space: The Collaborative Laboratory**

The above community building project that happened because of Paul’s student directed final project may have been effective because it encouraged student, faculty, and community collaboration. However, this community organization project was more of a single case scenario that was initiated by students and was not necessarily a pedagogical practice integrated throughout the course design. With that in mind, it is important to know that Paul also has a more permanent space where students, faculty and the community can come together to address local EJ problems and remedy them with collective solutions. Paul calls this the *Collaborative Lab*. It is a research collaborative laboratory where students can engage in both academic and community EJ related projects.

In relation to how Paul can advance his primary course goals of students engaging more deeply with the community and making change happen, the collaborative lab seems to act as an important “third space” that exists somewhere in between academia and the community where students and community activists alike can collaborate on shared goals, which could serve in allowing both faculty, students, and community to build a shared epistemology of activism. This kind of space can certainly foster collaborative learning, and create a community of practice (Kong, 2018) as students engage with other speakers, but it also serves as place for students to communicate directly with activists and learn from them firsthand.
In a very recent study of informal learning in activist spaces during a campaign against fracking in Australia, Ollis (2020) describes how learning through activism is both “relational” and “embedded in practice” (p. 219). In addition, Ollis points out how it is critical for activists to make spaces for these forms of learning to occur and discusses the history of social movements and how informal meetings and discussions would usually take place to strategize and prepare for how best to meet the current activist agenda. Like the employment of guest speakers as a strategy in the classroom, the collaborative lab offers a more permanent environment for students to learn informally, outside of a more decontextualized environment of the classroom, and closer to the activists who are directly engaging with a specific and locally situated EJ issue.

However, one key reason why some of these pedagogical interventions exist in the integrated justice area and not the embodied justice space on the continuum is that it is still unclear how or if Paul fully integrates the projects in the collaborative lab with his course or courses. Although Paul mentioned that the collaborative lab is working on an EJ in prisons project and has worked on energy justice issues in relation to campaigns for a local Green New Deal (which are all issues in his course), the collaborative lab is a space that continues to exist separate from his course. The next section will review the “Embodied Justice” area of the continuum and focuses on four instructional processes and practices implemented by Gabriela.

**Embodied Justice**

The term “embodied justice” was inspired by an exchange during my first interview with Gabriela where she expressed: “I believe that teaching environmental justice is really not the same thing as doing it.” She also later stated: “And so, we take very seriously, the
often-false divide between thinking and doing, because access is everything to our fields.” In other words, this was a critique of the separation between learning EJ theory and academic knowledge in the classroom and engaging in real-time experience with EJ activism in the community. This critique references an important dichotomy also mentioned by Rendón (2009) and Wilcox (2009) in which only academic, rational, or intellectual epistemologies are privileged in higher education, thus creating a decontextualized academic environment that severs marginalized EJ activist voices from student learning in higher education. More specifically, Rendón discusses the idea of dualism and non-dualism, explaining that ancient epistemologies of the global south (such as indigenous knowledge) centered non-dualism – a much more holistic learning experience that fully engaged the mind, body, spirit, and the natural world.

Wilcox (2009) provides much needed context to the term “embodiment” as she explains that “embodied ways of knowing” or “embodied pedagogies” are terms she uses to “signal an epistemological shift that draws attention to the bodies as agents of knowledge production” (p. 105). In a critique of Eurocentric knowledge that favors mind over body and claims to be objective, Wilcox explains that feminist theories have illuminated that this purported objectivity is based on White male subjectivity. A focus on embodied ways of knowing not only provides access for student learning that stems from other bodily senses and experiences (such as socioemotional senses and lived experiences), but also allows for voices to be heard that have been historically marginalized in the mainstream environmental movement (Taylor, 2000), IES programs (Garibay et al., 2016), and higher education overall (Museus et al., 2015; Yosso, 2005).
A course with an embodied justice foundation may be a way to combine and reinforce other forms of justice theorized by EJ scholars (Schlosberg, 2013; Temper & Bernal, 2016; Walker, 2009). In connection with the above theories on justice, Gabriela discusses how she views the practice of justice in her course:

I think we're building a way; we're building a practice of working through justice or on behalf of justice, by spotlighting underrepresented voices, by taking underrepresented ideas seriously and trying them on by learning in place, in the land that holds these layers and layers and layers of histories and genealogies and stories, you know?

Wilcox’s (2009) theory (and Gabriela’s practices) of inviting speakers from EJ communities, and engaging students in real-time activities within community spaces, practices the concept of participatory justice, which allows marginalized communities most affected by EJ issues to participate in the course. This course design also mixes recognition-based justice (Schlosberg, 2013) and epistemic justice (Temper & Bernal, 2016) as EJ community members knowledge and other forms of knowledge such as bodily senses, and community-based learning are recognized, valued, and practiced.

From this lens, I use the term “embodied justice” in the continuum to signify epistemic, curricular, and pedagogical practices that embody student learning that is co-created with EJ activist communities and allows for the integration of embodied knowledge and multiple forms of intelligences. This process allows for Gabriela to more fully advance her pedagogical goals of allowing students to make “an actual contribution [to the EJ movement] that supersedes students themselves.” Or as stated in her syllabus:
“By experimenting with a multitude of decolonial field methods and investigating dozens of approaches to environmental justice, students work to intervene in systems of injustice and ecological destruction by redistributing power through physical, scholarly, and financial contributions.”

More so than any other faculty member, Gabriela embodies her pedagogical goals in conjunction with EJ activists within her full course design from curricular development to pedagogical implementation.

In relation with Wilcox’s notion of embodied pedagogy (and other notions of justice espoused by EJ scholars), Gabriela engages in these practices in an aspirational way in which she 1.) Designs her course while prioritizing the EJ movement and the integration of EJ activist voices, 2.) Establishes co-learning and co-design with community partners 3.) Allows for a plethora of site visits and guest educators, and 4.) Practices “decolonial field methods.”

**Prioritization and Integration of the EJ Community in Course Design**

Gabriela embodies the process of collaborating with activists and educators from the EJ movement into her courses. This kind of course design reimagines academia by focusing more on advancing EJ activist goals and finding student learning in the process. Here she describes part of her pedagogical stance: “I think that my job as a teacher is to be able to teach just about anything. If we're in the EJ movement doing EJ work, I can make that a teachable moment.” Historic literature on pedagogy (Freire, 1970) and recent research on activist and EJ learning (Morales-Doyle, 2017; Ollis, 2020; Trudeau, 2017) echoes this idea. This kind of pedagogical approach is consistent with Paulo Freire’s (1970) notion of popular education, which stemmed from his attempt to evoke critical consciousness and
action among rural farmers in Brazil. It was also recently applied in Morales-Doyle's (2017) research using a justice-centered science framework on student learning in urban communities of Chicago. Gabriela seems to intuitively understand this and seeks to construct her course based on the community partnerships she has worked hard to develop over the years.

More specifically related to Gabriela’s community-first curricular design approach, Crother et al. (2005) in a book discussing popular education, describe key tenets of popular education: 1.) “Its curriculum comes out of the concrete experience and material interests of people in communities of resistance and struggle” 2.) “Its pedagogy is collective, focused primarily on a group as distinct from individual learning and development” and 3.) “It attempts where possible, to forge a direct link between education and social action” (p. 2). All of these tenets help describe Gabriela’s curricular and pedagogical design. It is easy to see how Gabriela relishes this process as she explains:

It's right in front of you, it's all teachable. Like the whole world is your lab when you're engaged with it. And when you're working the soil, or when you're listening to a Dakota elder speaker around a fire, like it's right there in front of you, you know? As opposed to seeing herself as the “sole expert” (Rendón, 2009, p. 33), Gabriela sees the local environment and community activist voices as the principal context for student learning and course design.

Establish Co-Learning and Co-Design with Community Partners

When faculty members provide a context for the co-production of knowledge with community members and experiences, some community-engaged scholars refer to this as co-learning (Rubin et al., 2012) or co-design (Temper & Bernal, 2016). In a 2012 paper,
researchers presented findings related to a program entitled “Building Your Capacity (BYC): Advancing research through community engagement.” This program sought to improve the readiness of community health centers located in a collection of Boston area health centers. During this process, researchers implemented a community engaged curriculum and pedagogy and found that effective aspects of this design were 1.) A relational approach to creating partners, 2.) Establishing a learning community, 3.) Having an organic curricular model where feedback from community members led to the design of the next session, and 4.) Collaborative teaching with diverse faculty. One of the main findings of this research showed that this kind of instructional design allowed for bi-directional learning where community members realized that they could engage in knowledge production and sharing along with faculty members.

Gabriela implements some of the above community-engaged curricular and pedagogical practices with her long-term relationship and trust building work establishing community partners based on mutuality. Gabriela explained her process creating community partners here:

That's what George Samuel, who's the... My former... I'm in his position now, he's now the executive director of [another non-profit] And he always talks about building movements at the speed of relationships. And that's exactly how it's working in my life. Isn't that beautiful?

She also explains how she would reach out with a shared interest or “mutuality:”

I found that in academic circles, mutualism might mean different things, but I strongly believe that in a position of power, which is what I occupy at Local State
University. I have a responsibility to redistribute the resources that I can access. And so that's kind of the foot I lead with.

From this lens, Gabriela both understands the concept of a relational approach to community partnerships, creating a learning community (with her frequent site visits and guest invitations), and an organic learning model (Rubin, et al. 2012), where learning is sparked by student interaction with people and place (Ollis, 2020).

In addition, Temper and Bernal (2016) who engaged in a study of co-designed scholarship with EJ activist communities, point to the importance of EJ epistemic justice and sharing of epistemologies when co-designing research projects that aid in advancing critical EJ issues around the globe. Temper and Bernal (2016) state: “Recognizing the role of social movements, not as objects to be studied, yet as creators of knowledge, calls for the blurring of established scientific boundaries to promote a more relational-symmetrical approach” (p. 42). This quote demonstrates the need to co-design projects (whether research or pedagogical) with EJ activist communities, while recognizing these communities as key knowledge producers, thus deconstructing the lines of academia and the role of faculty in courses of higher education or lead researchers in community-based studies (McGregor, 2014).

This research works well in conjunction with Yosso’s (2005) tenet of CRT and Wilcox’s (2009) conception of embodied knowledges that calls for a transdisciplinary (McGregor, 2014) perspective and the experiences of People of Color and other marginalized groups to be prioritized and heard during the pedagogical, or research process within higher education. This collection of research and theory illustrates that long held paradigms in higher education that center faculty as the sole producers of knowledge
and pedagogical process needs to change. In addition, this literature helps explain how and why Gabriela’s community engaged approach to EJ instruction can be effective for both prioritizing voices from the community and generating organic, context-dependent, and experiential student learning.

*Site Visits and Guest Educators*

To take advantage of the above context for learning, Gabriela plans and coordinates a set of guest educators both in and outside the classroom along with various site visits and community building activities. Gabriela’s three courses are centered around approximately 17 local site visits, and between 50-60 guest educators and EJ community activists. To tie the visits and guest educators together, Gabriela effectively organizes activist course materials and seminal EJ research articles in conjunction with the themes and topics that these guests and visits revolve around. This design is visible in various photographs presented in the findings in which Gabriela organizes site visits in the community with guest educators. To give one specific example that I observed, in a course sequence, Gabriela assigned readings on agnotology, and a chapter from Wynona Leduke that centered on the indigenous production of wild rice. These readings and lecture slides were paired with a visit from Matt Daniels, a member of the Potawatomi tribe, and Professor of Forestry at a Local State University.

During this class session, the presentation by Daniels and the subsequent discussion with students, focused on how to do responsible community-based research with tribal peoples, but also touched on the history of tribal lands, tribal identities as sovereign people, the land back movement, and much more. I was struck by how comfortably the students interacted with Daniels (they all had their cameras on, and many of them added questions and
comments), as it was notable that Gabriela had built an important informal space for a community of practice (Kong, 2018) and informal learning with EJ community members, scholars, and activists (Ollis, 2020). During the Q+A portion of the visit, I took extra notice of the way Gabriela drew attention to how Daniels managed his role in multiple EJ communities as a member of the Potawatomi Tribe, a Forestry Scholar and Professor working for a large land grant university, and an EJ and Tribal activist.

More specifically, Gabriela asked Daniels how he understands these multiple, and in some cases, conflicting roles:

Your work is very multi and interdisciplinary and includes forestry science but also the socio-cultural and political aspects of dealing with American Indian Tribes. Plus, you are at a land grant institution and also an enrolled tribal member – how do you feel as you straddle these different communities?

Daniels responded by saying: “I see myself as a public servant.” Then added: “How do we serve the people we need to – and how can we meet their needs? We haven’t met the needs of tribal people.” This interaction during the class-session provided students with the opportunity to see how activists straddle multiple communities and identities, but also put ample attention on the continued fight to meet the needs of tribal communities both in terms of land sovereignty and food rights.

Considering that one focus of the class session was on how American universities have oppressively stolen the rights to many tribal crops and misused, devalued and eliminated tribal knowledge, the question by Gabriela put much needed focus on the epistemic tensions between higher education and certain EJ communities. This is a great example of how the curriculum, pedagogy and student learning stems from the guest
speaker and their communities as much as it is generated by the faculty member or the students (Crother et al., 2005; Ollis, 2020; Robin et al., 2012; Wilcox, 2009).

**Decolonial Field Methods**

In a fascinating interconnection of epistemology, curriculum and pedagogy, Gabriela also works to deconstruct Eurocentric knowledge and revitalize traditional ecological knowledge (TEK) in her course entitled Field Methods. More specifically, after spending the first portion of the course critiquing and deconstructing Western, Colonial ways of knowing, Gabriela dedicates an entire “trajectory” called “experimentation” in the course to what she calls in her syllabus: “Decolonial Field Methods.” This part of the course allows students to engage with content and site visits where they can learn about and practice different decolonial ways of knowing, many of which connect to the bodily senses. These include class sessions with titles such as “build, feel, play, listen/tell, sense/taste [and] paddle.” It is also visible in three photographs shown in the findings where students are depicted in a playground practicing “play,” kayaking while engaged in “paddle” and huddled around a bonfire immersed in the field method of “listen/tell.”

Gabriela’s focus on decolonial ways of knowing provides a unique opportunity for students to use multiple intelligences, and tap into their embodied knowledge (Wilcox, 2009). As previously mentioned, both Wilcox (2009) and Rendón (2009) and others (Trudeau, 2014, 2017) advocate for a resistance to the oppressive Eurocentric biases in higher education that only privilege cognitive, academic, and intellectual ways of knowing and push for students to experience a more holistic learning experience. Wilcox (2009) relies on sociological and anthropological definitions of “performance” to create a more all-encompassing understanding of intelligences that focus on the whole body. More
specifically, Wilcox describes performance in a more traditional way including “dance, music and theater” (107), and “performance capable of cultivating creativity, critique and citizenship” (p. 108). Like Rendón, Wilcox also references the famous psychologist Howard Gardner’s theory of multiple intelligences and describes bodily intelligence as "the ability to use one's body in highly differentiated and skilled ways, for expressive as well as goal-directed purposes" (Gardner, 2004, p. 206 as cited in Wilcox, 2009). From this lens, students in Gabriela’s course can tap into an embodied form of learning, both through readings in the course, and reflection of their bodily senses during site visits.

To give one specific example of this process, I observed one of the above class-sessions entitled “feel” which sought to explore the role of feelings and emotions in the EJ movement. As opposed to lecturing or explaining academic theory or concepts to students, Gabriela began with various questions (citing Bacon & Norgaard: *Emotions of Environmental Justice* – that day’s reading) about why emotions and feelings have not been fully examined in EJ work. These questions made the students in the course noticeably curious as they began to unmute, one by one, offering various theories and critiques of why emotions are not included sufficiently in EJ research and research in general. Students mentioned the stigma of mental health still being prominent in society, a bias towards quantitative knowledge in research or a “colonial way of knowing,” and the role sexism plays on women having emotional burdens and their perspectives not being considered.

During this class discussion, I can remember a vivid feeling of surprise and wonder as these students furthered a fascinating discussion that deconstructed Eurocentric knowledge biases and helped illuminate why emotional senses are still not considered legitimate forms of knowing in academic research, including research in the EJ field. Later in the session,
Gabriela also asked the class “how can emotions be harnessed to cultivate more environmentally just research?” Although this question was harder for students to grapple with, at least one student commented that: “researchers should not be controlled by their set plan or their hypothesis.” This comment again pointed to a more organic form of learning that is provided when one opens to the bodily senses, as student engaged in a multitude or field experiences, they could rely on more informal (Ollis, 2020) and organic learning (Robin et al., 2012) that encourages students to be more present and aware of their feelings and emotions.

Although students helped point out that feeling and emotions are still not prominent in EJ research, the role of indigenous ways of knowing in educational and more critical environmental research has been growing (Lowan-Trudeau, 2017; Maina-Okori et al., 2018; McCarthy & Lee, 2014). In a recent study entitled: Protest as Pedagogy: Exploring teaching and Learning in Indigenous Environmental Movements, Lowan-Trudeau (2017) utilizes decolonization and revitalization as a core part of their theoretical framework.

Like Gabriela’s community engaged course design that includes partnership with indigenous leaders, Lowan-Trudeau citing Batiste (2005), explains that the process of decolonization and revitalization not only involves a strong critique of colonial knowledge and “ongoing oppression of indigenous peoples, but also partnership building, and the respectful sharing and recognition of ecological knowledge for the benefit of all members of society.” Once again, Gabriela more fully embodies this process with her consistent attempt to lead students in critiquing Eurocentric knowledge, while also collaborating with local indigenous peoples as guest educators in her courses where there is a mutual and respectful sharing of knowledge.
Although Gabriela had so many innovative community engaged instructional practices to learn from, some questions remain regarding her community-engaged instructional design. Most notably during this study, due to the COVID-19 Pandemic, I was unable to attend site visits, meet or greet with community partners, and learn more about how Gabriela's partnerships create a mutual benefit for all parties. What is more, although I could see excellent engagement and passion from her students, exactly how some of these practices impact student learning remains to be known. Thus, impact on the community and students will be further discussed in the implications.

It is also very important to note that Gabriela chose to work at City Semester Program (CSP), where she has a non-tenure track position designed for full-time teaching faculty. This position allows Gabriela to dedicate her entire focus on the instructional process without having to worry about research and the tenure process which are traditional obstacles that tenure track faculty grapple with.

**Conclusion**

This chapter sought to construct and analyze a continuum for community engaged EJ instruction while exploring the three primary research questions. One of the most important areas of discussion overall was the idea that for students to authentically learn about EJ, they must experience and participate in EJ work in and with the community. This was very notable with Samuel’s reasoning for doing guest speakers, Paul’s collaboration with ex-students, faculty members and EJ activists in the collaborative laboratory, and Gabriela’s various practices that sought to embody the participation of community partners within her course. In relation to students being engaged in real-world, experiential understanding of EJ
issues, in Gabriela’s and Paul’s courses more specifically, collaboration and student direction were also core components of engaging EJ instruction.

To briefly revisit the main sections of the continuum, Darren was first described in the “towards integrated justice” area with his main curricular and pedagogical practices of 1. Critical lecture, 2.) Curricular organization via theoretical tools, and 3.) Encouragement of democratic participation and mentoring of students. Samuel and Paul are next described as they get closer to more thoroughly integrating community engaged practices into their overall courses. Their practices included the 1.) Invitation of guest speakers, and Paul’s 2.) Employment of student-directed (and community engaged) final projects, 3. The modeling of systemic alternatives and 4.) The use of a collaborative laboratory for student, faculty, and community collaboration.

Finally, Gabriela’s embodied justice practices were explored with her 1.) Prioritization of the EJ movement and the integration of EJ activist voices, 2.) The establishment of co-learning and co-design with community partners 3.) Allowing for a plethora of site visits and guest educators, and 4.) The practice of “decolonial field methods.” In relation to findings that highlight how important the institutional context is for faculty such as Gabriela, the next chapter seeks to explore the final research question more deeply regarding programmatic and institutional factors that help support or impeded faculty in their EJ instructional development and practices.
CHAPTER 6

PROGRAMMATIC AND INSTITUTIONAL SUPPORT FOR EJ FACULTY

Support for EJ knowledge and education has been a key area of discussion in previous research and theory regarding the inclusivity of environmental education. Garibay et al.’s (2016) quantitative research revealed that there were many IES programs that had yet to more fully include EJ content knowledge within their programmatic offerings. This research was in line with theoretical articles and essays by various EJ scholars (Agyeman, 2003; Cole, 2007; Haluza-Delay, 2013; Taylor, 1996) which argued that EJ education in general was still not sufficiently valued within the overall umbrella of environmental education overall. This theory and empirical research point to the critical need for both the valuing, inclusion, and support for and epistemic paradigm represented in environmental justice studies.

However, up to this point, the only research that has looked at support for EJ content knowledge and courses has been the large-scale quantitative work of Garibay et al (2016) and has not focused specifically on faculty and their EJ instructional experiences. Thus, this study was able to shed important light on the relationship between EJ instruction and programmatic/institutional support. This chapter seeks to explore the final research questions: What programmatic and institutional factors support or impeded EJ faculty instruction?
A discussion of the findings reveals that whereas Darren and Samuel expressed more of a lack of support or incentives for EJ related pedagogical innovation, Paul and Gabriela experienced a much higher level and diverse array of support, which seemed to provide a context for more innovative and community-engaged pedagogical practices. In addition, the subsequent analysis points to an important relationship between the level of support for EJ faculty and their ability to advance more ambitious pedagogical goals and reach a much more embodied level of justice within their overall instructional design.

**Darren**

Earlier in his career, Darren mentioned receiving less support from university leadership as a lot of his scholarship critiqued the role of neoliberalism in the global ecological crisis, and it was critical towards university corporate partners and sponsors. However, with a renewed push towards sustainability to improve their reputation, Darren explains that institutional leadership has reversed course:

I think the university of late has been trying to build its reputation around sustainability, resilience, and so forth. They see me now as useful to that. Now they don't mess with me, but for 20 years they messed with me all the time. They wouldn't give me raises, and so forth.

In addition to a renewed level of support, and being a full professor, Darren also mentions the fact that his class represents a large revenue source for the university pointing to another form of neoliberalism in relationship to his instruction: “Plus, my classes make so much money for them, because they're so big.” Conversely, when referring to another more advanced EJ course where the faculty member does more community engaged practices such as inviting guest speakers, Darren discusses that these smaller course contexts provide a
space for doing community engagement, and references that the number of students in his class as an impediment: “But I can't do that with 115 students right?”

Paradoxically, the large class seems to be both part of a system of rewards for Darren, as the university rewards courses that represent larger revenue streams, but also exists as an impediment to new pedagogical innovation. This may be another sign that Darren’s instructional practices are highly influenced by an academic system that rewards faculty to communicate mainly expert-based cognitive and intellectual knowledge (Rendón, 2009) to large groups of people in the form of lecturing and scholarship. On the other hand, this academic system fails to reward Darren for shifting his epistemic and pedagogical focus to one that includes collaborative partnership-based knowledge that increases student and community participation within his course.

In relation to large-class sizes and student outcomes, recent research on one large land grant university (Belanger et al., 2019) showed that after taking larger classes, students received lower grades in follow-up courses. In addition, a study involving STEM education in the UK shows that large class sizes usually result in significantly lower student grades and outcomes (Kara et al., 2021). This points to the problematic aspects of a neoliberal model that financially rewards faculty and institutions for increasing class sizes. From an environmental justice standpoint, it seems that neoliberal models of education that focus on ranking, increasing student numbers, and a bias towards STEM content (Garibay et al., 2016) could be another obstacle for EJ knowledge to become more fully included within IES programs across higher education.

From another lens, there are many ways to shift the pedagogical focus in a large class to simulate a “small class feel” as Lynch and Pappas (2017) point out in a recent paper.
arguing for a new pedagogical model for teaching large classes. This “small class” model for larger classes “relies on the role of teaching assistants and graders, small group work, instructor presence, writing skills support, student mentoring and large class discussion, among others (p. 199). This model for large classes connects well with the findings from this study showing that increasing participation and collaboration among students, and decentering knowledge of the faculty member can lead to increased connections between faculty and students, more peer learning, additional feedback for learners, incentivized class participation and more (p. 199).

With recent research on large class size and the creation of more dynamic large class teaching models in mind, important questions on why Darren does not begin shifting either the class size, or his foundational instructional practices remain unknown. As of now, one of the only answers is that there are no rewards systems in place to initiate these changes to happen and from another lens, higher education institutions continue to be confined within the academic agreements of separation and the privileging of mainly intellectual knowledge (Rendón, 2009). In fact, faculty are rewarded for these practices. For these reasons, intuitions and faculty may be unable to shift to a new epistemic paradigm of environmental justice, community engagement, embodied knowledge (Wilcox, 2009) and transdisciplinarity (Ashhurst & Clarke, 2018; McGregor, 2005, 2014).

**Samuel**

Besides mentioning that his program provides a TA for his course, Samuel expressed not having enough support from the institution for creating university and community partnerships, a lack of support for EJ education overall within his program (especially considering that they are an urban university), and a personal acknowledgement
that faculty may need more time to focus on their teaching, and possibly additional training on pedagogy and instruction.

In terms of support for community engaged instruction, Samuel discusses a lack of community relationship building from the university overall: “The ideal situation would be for Urban Public University to have relationships with community groups that are more ongoing and long term, so that it would become easier to plug students into different projects.” Samuel is not alone in feeling this way as recent research points to institutional support from leadership as a key incentive in implementing community engagement across academic units, especially adding a focus on “community engaged service” to the institutional mission (Cunningham & Smith, 2020). However, more importantly than the university providing spaces to “plug in” to community partners, would be to attempt to develop much deeper relationships where community partners become co-designers and co-producers of knowledge in a systemic way based on mutuality as Gabriela and other researchers note (Rubin et al., 2012; Temper & Bernal, 2016). This idea is echoed by Mitchell (2008) in her discussion of critical service learning where university and community relationships should be more authentic, work to redistribute power, and have an orientation towards social change.

In addition to institutional support for building community partner relationships, Samuel expressed a need for more time to think about teaching, and a need for additional instructional training on new pedagogical methodologies. He states:

In our division of teaching, research, and service, thinking about the teaching is not something that I spend as much time on as I've done in service and research. So, I believe I got good enough, but my self-criticism is that I do the practical stuff....
I don't have time to really research it … I don't know enough about the epistemological, theoretical approaches to teaching beyond my own experience and some courses that I took. I would like to learn from people who know more about this than I do.

Samuel’s experience of a lack of time and training for pedagogical development may be a shared sentiment across higher education as a recent essay discusses how faculty are slow to make changes to more student-centered, participative pedagogies even though their benefits are well-known (Grunspan et al., 2018).

Other recent research on pedagogy and pedagogical training in higher education has shown that students can sense the level of pedagogical competency of their instructors (Kaynardağ, 2019), instructional training “can increase the extent to which teachers adopt a student focus” (Stes et al., 2009, p. 201) and can even help faculty develop more inclusive curricular and pedagogical practices in chemistry courses (Kennedy et al., 2021). This research demonstrates both the need for pedagogical training and the effectiveness it has at motivating faculty to move from more traditional instructional methods to a more student-centered and inclusive approach.

More importantly, Samuel’s comments, like Darren’s situation, demonstrate the need to balance faculty reward systems more equitably from research success and more towards pedagogical development and competency. In a recent essay discussing the need for rewards for teaching in STEM education, Dennin et al. (2017) argue that most faculty at research universities are assessed and promoted based mainly on research success. In addition, they explain that even if there are policies regarding the evaluation of teaching, most evaluation practices do not usually match the stated departmental policies. For these reasons, they
suggest various practices that would help align the policies with practices and provide various institutional examples of where these suggestions are being applied. From this lens, more research and departmental practices could focus on how to shift faculty recognition and development towards gaining pedagogical competence and effectiveness as opposed to primarily focusing on research.

Finally, Samuel discussed a general lack of support for EJ courses and content knowledge within his department at City Public University. He explains:

I believe if you look at the composition of our school and the faculty, I'm probably the only one that really focuses a lot on this. Other faculty talk about it, but no, they are not committed to environmental justice as a school for the environment should be, no.

This feeling of a lack of overall commitment for EJ within the program provides important qualitative support for Garibay et al.’s (2016) large scale quantitative research that showed that EJ content knowledge still had not been fully included with Interdisciplinary Environmental and Sustainability (IES) degree programs across higher education.

This finding related to a lack of commitment to EJ knowledge may hold greater importance considering that Samuel resides at an urban public school with a majority population of Students of Color (SOC). According to research relevant to this topic (Garibay et al., 2016; Garibay & Vincent, 2018; Taylor, 1996), EJ content knowledge may be more relevant to Students of Color or low-income students especially in urban contexts, as EJ has aided in a redefining of the environment to include urban issues (Taylor, 1996, 2000).

Samuel even echoed this sentiment:
I believe [there] should be a lot more [focus on environmental justice], especially if you consider that we are an urban public university. So, themes like gentrification should be a very important theme of a school for the environment because in the urban environment, gentrification is one of the major problems.

More specifically, this finding shows that Taylor’s (1996) article on multicultural environmental education is still relevant today, as she argued that urban environmental issues should be more included within environmental education as a way to better represent the lived experiences of SOC as Taylor states (1996): “Students of color, even when they are unfamiliar with the environmental justice movement and with environmental activists of color, define the environment in the broader way espoused by environmental justice activists” (p. 4). Thus, it is extremely unfortunate that in a context in which EJ courses and content knowledge could most benefit SOC and possibly improve SOC enrollment in the program (Taylor, 2007; Garibay & Vincent, 2018), the program (or possibly institution) has not tried to add more programmatic focus on EJ education overall.

Paul

Conversely from Darren and Samuel, Paul only described different ways he is supported by his institution, including arriving as a tenured and full professor, and receiving resources for his collaborative laboratory. Firstly, Paul is not just a faculty member, he is also the chair of the environmental studies program. Secondly, Paul was hired as a full tenured professor with an agreement that he would be doing this kind of work as he states here:
Yeah. I came in and just didn't have to fight for anything. It was like, "Well Paul, this is the job. Basically, we'd like to hire you for this. What do you want to do?" "Well, this is what I'd like to do. Are you willing to hire me for that?" "Sure." "Okay.

From this lens, it seems that Paul’s long career and reputation as one of the top EJ scholars in the country has aided him in his larger scale projects such as the collaborative lab. In addition to the support he received upon when being hired, Paul also mentioned that there was a “nice convergence” of factors that allowed him to have success in creating his collaborative lab:

In the number of universities that I've held jobs at, this has been the one ... I don't know why. Just the one time where there's just been a nice convergence of really, really interested students, a university that's given me the space and the resources to do this.

This quote helps understand that to create a specific organizational structure or system for community-institutional collaboration and relationship building, some form of university resource is needed. This finding is important as it shows that Paul, unlike Samuel for example, had university support for the process of community-partnership building. From this lens, institutional support for community engaged practices like this one may be critical to provide context for community engaged instructional practices to thrive. However, one aspect of Paul’s case that remains unknown is the possibility that Paul’s supervisors hired him and support him knowing that it would increase engagement, and thus increase institutional resources. The extent to which academic capitalism may have played a role here remains unknown. This kind of support for community engagement is even more important when analyzing the support systems in place for Gabriela.
Gabriela

In relation to support, Gabriela represents an important case within this study, as she recently changed jobs, so she was able to share her experiences in a context of high support and low support for EJ activity and community engaged instruction. More specifically, Gabriela had previously held a position as an adjunct EJ instructor at Local State University where she explained that there were many more obstacles to doing her preferred “community-engaged partnership work.” And later, because her goal was to do as much community-engaged teaching as possible, she moved to a program known as CSP (City Semester Program) in which students come from a variety of colleges and universities to engage in a one-semester program where they take a set of classes that revolve around one urban issue (Environmental Justice for example) and participate in an internship. This semester allows students to do a very “deep dive” in the topic, as Gabriela explains. Within CSP Gabriela has found her “dream” job and describes it as her “playground” in which she hopes to reach her full potential as an EJ community-engaged instructor with deep and long-lasting community partnerships built through mutual goals.

Firstly, it is important to understand what kinds of obstacles impeded Gabriela from doing community-engaged instruction at Local State University and at least one other local liberal arts college. Firstly, Gabriela noted being an adjunct faculty member, which may have played a pivotal role as an obstacle, where usually tenure-track faculty have much greater access to resources and institutional power. In relation to a lack of resources and institutional power, Gabriela listed “bureaucracy,” “needing to go through too many people,” a lack of freedom as an educator, and not having a budget to do site visits or pay guest educators. More specifically related to budget, she explained how certain “well-endowed”
departments may have large budgets for extra costs, where “struggling departments might have nothing for you.” Like Darren’s case, Gabriela's comment points to another obstacle related to neoliberalism, or more specifically academic capitalism, a theory developed by Slaughter and Rhodes (2004) that explains that activities, actors, and organizations within higher education have needed to shift their practices to gain resources based on external market pressures. In this case, departments that have larger student enrollment receive more corporate research funding and resources, or disciplines closer to market prestige may have more funding for faculty and staff.

Not only does this create economic injustice between departments, but it also shines light on the difficulty to compensate guest educators from the community in an equitable way within the structure of a traditional state university, as Gabriela pointedly explains here: “And so, there's not an ethical way to compensate people across different disciplines and colleges at Local State. And that's really frustrating because there's not... You can't set a precedent for what faithful compensation looks like.” This comment highlights that to support community-engaged instructors it is of critical importance to both have guest educators and provide adequate and equitable funding for them. In addition, it points to the desire that Gabriela has to decenter her instruction, and how if there isn’t a chance to bring in guest educators, then she may feel that her instructional practices are inadequate or less effective. Equitable payment for EJ activists may take on even greater importance when they are individuals and groups that have already experienced greater environmental burdens due to their race, gender, class, sexuality, ability, or other marginalized identity (Taylor, 2000; Wilcox, 2009; Yosso, 2005).
Conversely, once Gabriela moved to CSP, she has experienced the opposite end of the spectrum, receiving both financial support and pedagogical freedom in all three of the courses she teaches as part of a semester long EJ program. In addition, and of paramount importance, CSP organizational epistemic values are almost a perfect match for the values expressed in Gabriela pedagogical goals and practices. On their organizational website, CSP states that their key values are rooted in interdisciplinarity, learning that integrates theory and practice, as well as both experiential and holistic learning. It is now much easier to understand how and why CSP provides an ideal context for Gabriela to develop and implement a course that prioritizes both her own, and the organizations epistemic and pedagogical goals.

Thus, a critical finding of this study is that EJ activist and community engaged faculty need a departmental, programmatic, or even institutional home that holds values in line with activist and community-based teaching and learning, such as the instruction employed by Gabriela. These goals among others include: an ability to create and nurture community partnerships, allow students to learn from experience and participation with EJ community members, both interdisciplinary and transdisciplinary learning, and a focus on more holistic or embodied knowledge that allows students to utilize a diverse set of their multiple intelligences. In some ways, this finding is also congruent with Samuel’s expressed need for more time and training to implement pedagogical innovations. EJ Faculty will most likely need extra time, additional training and need to feel supported via organizational values to reach their full potential.
In addition to explicitly stated organizational goals, Gabriela mentioned that there are also unstated goals for including community-partnership work in the instruction at CSP. Here Gabriela explains:

I would even say like there's an unstated requirement that we work with community partners, that this isn't about brilliant professor so-and-so imparting their wisdom in that banking method of education, but really that the mic is passed and that students are [doing it with] experiential education, so they are constantly encountering difference and encountering others, but also applying their skills and applying their labor, applying their money, their intellectual skills, their physical labor, and leaving a mark in the communities that we work with.

Unstated values or requirements could also be referred to as an aspect of organizational culture. This quote seems to imply that there is also a cultural norm (or practices) at CSP where administration, staff, and faculty hope that students can connect with community organizations and “leave their mark” with the varied skills that they have. Thus, this quote adds another nuance to the findings above showing that cultural norms and practices could also play a crucial role in supporting or incentivizing faculty to employ more pedagogical practices involving community partners. Institutions or programs looking to infuse more community-engaged pedagogical practices (in an EJ context or not) may look to generate a cultural shift as a tool to bring on pragmatic changes as some research in higher education has shown (Kezar & Eccles, 2012).

Perhaps most importantly, in addition to being supported with pedagogical freedom, organizational values and cultural norms, Gabriela is also provided crucial funding for guest educators, a key pedagogical practice of EJ activist and community engaged instruction.
described earlier. Within the three courses taught in the semester, Gabriela can invite somewhere between 50-60 guest educators inside the classroom and pay them 100$ an hour. Although Gabriela’s strong desire to employ a community engaged instructional methodology is a critical factor for her innovative courses, pedagogical, cultural, and financial support also plays a key role. To reiterate, this kind of instructional methodology was not possible in either Local State University or a local liberal arts college. From this lens, a vast array of supports (such as those within CSP) seem to increase the likelihood for both community engaged instruction and pedagogical innovation overall.

**Conclusion**

After reviewing the way in which each faculty member was either supported or impeded while engaging in EJ instruction at their differing institutions, it is perhaps not surprising to find that the faculty who were able to most advance their pedagogic goals, were also supported more, and in a variety of ways. In other words, various supports for EJ content knowledge including valuing diverse kinds of learning (such as experiential or integrated learning), valuing community collaboration, providing funding for guest educators, among others, seems to be directly connected with an increase in both community-engaged practices, and pedagogical innovation, overall.

Although faculty identity, motivation, and experience also play a critical role in their instructional methodologies, one important control for these variables would be Gabriela’s experience in both a low, and high context of support. That is, Gabriela was only able to do a low-level of community-engaged partnership work at Local State University due to the lack of funding for guest educators, a heavy bureaucratic structure that impeded decision making, and a much larger class size designed for lecturing. Conversely, at the opposite end of the
support spectrum, while teaching at CPS, Gabriela was able to experience her “dream” teaching scenario and much more fully implement her desired community-engaged pedagogical model. Thus, an extremely important finding from this study is that programmatic, organizational, and institutional support play a critical role in providing a rich context for faculty to more fully advance their pedagogical goals which, in this study, placed a critical importance in fostering student activism and engagement with EJ issues in the community. The following chapter will review the key implications, recommendations, and limitations of this study.
CHAPTER 7

IMPLICATIONS & RECOMMENDATIONS: PROPOSING SOLUTIONS FOR EJ KNOWLEDGE INCLUSION

Revisiting the Research Problem

In Chapter 1, I defined the research problem as a form of EJ epistemic exclusion in IES programs where not only EJ content knowledge is excluded, but also those who embody that knowledge are also discounted (i.e., Students of Color and Faculty of Color) (Garibay & Vincent, 2018; Taylor, 2010, 2008), as well as others who may have experienced environmental injustices based on their social identity (Taylor, 2002, 2010). This research problem was primarily based on two large scale quantitative studies (Garibay et al., 2016; Garibay & Vincent, 2018) that both looked at the inclusion of EJ knowledge and its relationship towards aiding the inclusion of SOC. These recent quantitative studies bolstered theoretical discussions that also argued that EJ knowledge was still not sufficiently included in environment education (Agyeman, 2003; Cole, 2007; Haluza-Delay, 2013; Taylor, 1996). One primary goal of this study was to try to better understand (through the lens of epistemology, curriculum, and pedagogy) why EJ knowledge has been and is still systemically excluded from IES programs.

To further address the problem of EJ knowledge exclusion, this implications section seeks to propose solutions for EJ knowledge inclusion. This chapter is organized into
sections that discuss implications and recommendations for IES programs, reasons to include community engaged EJ instruction, and recommendations for faculty and curricular decision makers. A final section will include a discussion of the main limitations of this study and areas for future research.

**New Insights for EJ Knowledge Exclusion**

Findings from this study add additional support to the above empirical and theoretical work on EJ content knowledge in higher education as both Samuel, Gabriela at Local State University (and Darren to some extent) expressed a lack of support for their EJ teaching, which demonstrates more evidence of a culture within environmental education that does not fully include and support EJ knowledge and faculty. Samuel may have given the most direct example where he expressed a specific lack of support for the EJ content area overall within his department, and a need for instructional training. Gabriela, on the other hand, provided an example of how the culture of research universities does not adequately provide support systems for community engaged EJ instruction. Similarly, the continuum discussed in Chapter 6 also shows that although all the faculty members espoused some level of student engagement with the community, at least two out of the four were unable to fully implement both curricular and pedagogical practices that helped achieve their student activist or community based epistemic goals.

More specifically, the findings and discussion of this study show an intricate relationship between EJ content knowledge and community engaged instructional practices. This connection had been previously observed as Garibay and Vincent’s (2018) study demonstrated that “IES programs that had a greater emphasis in community engagement in the actual curriculum” (p. 213) had a statistically significant relationship with
an increase in the enrollment of SOC in IES programs. The findings from this study and Garibay and Vincent’s (2018) show that faculty who espouse EJ knowledge may seek to organize and communicate this knowledge through involvement and participation in a reciprocal way with the EJ community partners.

Thus, a new insight from the current study may be that EJ content knowledge and community engaged instructional methods suffer from simultaneous exclusions. In this case, not only the knowledge, but also the model for communicating it are both marginalized from IES programs. For this reason, it is important to discuss implications and recommendations for including and implementing educational practices related to both EJ instruction in general, and community engagement practices within IES programs.

**Implications for IES Programs**

The first, and perhaps most important implication for IES programs is to attempt to shift to a culture that both values and practices EJ content knowledge and community engaged instruction. Garibay and Vincent (2018) discuss this in a quote from their 2018 study:

> Given that community engagement can be considered a fundamental element of environmental justice education (Kaza, 2002), IES programs that contain both EJ and community engagement in the curriculum may signal to many students of color that the ethos of environmental justice is more fundamentally integrated into the program as opposed to minimally included in the curriculum or included as an afterthought. (p. 214)

Here, Garibay and Vincent use the term “ethos” to describe values, practices, or overall customs and culture of an IES program. However, something that Garibay and
Vincent do not fully elaborate on is that to create a curriculum that contains both EJ content and community engaged practices, it is critical to have faculty who can co-develop this content with community partners. Thus, it is essential to shift the IES program culture from both inside and out, by changing the internal ethos of the program in the form of values, practices, systems, and structures, but also by recruiting faculty who may already have experience with community building with the local community of the institution such as Gabriela.

For example, Gabriela and Samuel described how various practices and cultural values at traditional research universities impeded them to implement a community engaged instructional model. Gabriela described limited and non-equitable funding for guest educators and an overly bureaucratic organizational structure that slowed decision making. In addition, Samuel spoke of a lack of support for EJ content, and not enough time for teaching and a need for professional development. However, when Gabriela moved to CSP she was attracted to pedagogical autonomy, epistemic values for community engaged partnership work, and extra funding and resources for guest educators. Thus, the case of Gabriela highlights how important it is to create an organizational program culture that attracts experienced, dedicated, and competent community engaged EJ faculty.

The first way to create this change would be to calibrate and express foundational program or organizational values that align with the epistemic values of both EJ content in general, and community engaged instruction. For example, at CSP, the organization where Gabriela feels free and uninhibited to implement her preferred model of community engaged instruction, the key values are interdisciplinary, integrated, experiential and holistic learning. It is interesting to note that by describing their foundational values in the context of learning,
they are explaining to prospective faculty and partners their epistemic philosophy. It is not a coincidence that Gabriela enacts all these values in her teaching. After having created an epistemic foundation for the program that espouses values in line with community engagement and EJ content, it is important for the program to enact these values in important systems and structures that dictate faculty practices such as teaching and research.

Another way to create meaningful and long-term programmatic change is to review and expand the tenure-track and non-tenure track rewards systems for faculty to make space for the valuing of instructional practices related to EJ and community engaged instruction. This implication also comes from the experiences of Darren, Samuel, and Gabriela, where in different contexts, they all experienced a lack of support and incentives for creating curricular and pedagogical modifications towards community engaged EJ instruction. However, researchers have pointed out that most faculty are primarily rewarded for research, and a lack of successful research cannot be made up for excellence in teaching (Schimanski & Alperin, 2018). In addition, due to a continued trend towards prioritizing research based on prestige (Gonzales et al., 2014; O'Meara & Bloomgarden, 2011), it is very unlikely that tenure-track (and non-tenure-track) guidelines and reward systems will undergo a full-scale reform.

Although changing faculty rewards systems, particularly rewards for tenure-track faculty represents a difficult challenge, it is still important to open the epistemic possibilities of these reward systems for more epistemic inclusion of pedagogies such as community engagement and EJ instruction. Faculty could be rewarded or recognized in some ways for building relationships with community partners, and or attempting community engaged pedagogical strategies, or other strategies for inclusive teaching, such as utilizing multiple (or
embodied) forms of knowledge, for example. It is important to note that faculty rewards may be more difficult to change than faculty recognition, as rewards are connected to policy and require longer term, institutional and systemic change. Related to systems of rewards, program leaders and influential faculty may be hesitant to modify their instructional models to include practices described in the continuum for community engaged EJ instruction without substantial evidence that they are effective for student learning, or helpful for faculty research. Thus, it may be important to create an argument for why community engaged EJ instruction should be included into an IES program ethos. Below is a brief list of reasons why community engaged EJ instruction may be effective for student learning and faculty action research:

**Benefits of Community Engaged EJ Instruction**

*Embodied Knowledge and Multiple Forms of Learning*

EJ instruction (and community engaged EJ instruction) may be effective because it allows students to utilize multiple modes of knowledge and learning such as embodied knowledges (Wilcox, 2009) associated with bodily senses, such as feeling, sensing, building, direct-experience, reflection as well as other multiple intelligences (Gardner, 2004). It may also provide a context for artistic intelligences in the case of Paul’s student directed final project.

*Cultural Relevance*

It may be culturally relevant (Ladson-Billing, 1995) for students of color and low-income students and indigenous students. This was previously shown in earlier empirical examples (Blanchette-Cohen & Reilly, 2013; Morales-Doyle, 2017) and theoretical discussions (Taylor, 1996) due to the use of knowledge and experience that is more relevant
and connected to the lived experiences of communities of color, low-income groups, and indigenous peoples. But now, this study sheds new light on this area, as it shows that cultural relevance may be connected not only to content knowledge from the EJ movement, but it also may be due to activities and experiences in the community (Ollis, 2020; Taylor, 2007), and the above utilization of multiple forms of learning. These pedagogical strategies may provide a diverse array of learning opportunities for students who may have traditionally struggled with learning that only focuses on intellectual and rational forms of knowing that can often be decontextualized from real-life experiences. If more students of color can access environmental education, this could also improve a historic underrepresentation of people of color within environmental organizations (Taylor, 2014).

It Allows Students, Faculty, and Community to Engage in the Practice of Justice

As I have described above, EJ researchers and scholars have described distributive, participatory, and recognition-based forms of justice (Schlosberg, 2013, Walker, 2009). Engaging in a community engaged model of EJ instruction allows members from the community who have previously experienced environmental injustices due to their social identity to participate in the knowledge production and communication within the course. This is a key tenet of critical race theory that calls for the knowledge of people of color who have experienced racism and other forms of marginalization to be seen as “legitimate, appropriate and central to understanding” (Yosso, 2005, p. 74) This is closely related to the recognition, and participatory aspects of justice. From another lens, this form of instruction allows for the practicing of epistemic justice, as Temper and Bernal (2016) explain that activists within social movements should be seen as key knowledge producers within academia, which can help transform the way research and teaching functions within
academia. Finally, embodied knowledges (Wilcox, 2009) encapsulate various of these ideas with both the importance of community voices, and the inclusion of other ways of knowing (Rendón, 2009).

**It Encapsulates Various High Impact Practices**

The influential higher education scholar George Kuh has done extensive research on what he calls “high impact practices” and argues that one main experience students should have to enhance engagement and success is to participate in at least two of these practices during their college career (Kuh, 2008). In fact, community engaged EJ instruction seems to include various of these practices including 1.) Collaborative projects and assignments (as with activities and experiences with community members), 2. Diversity and global learning (learning from community members with diverse backgrounds and learning about the racial, social, class aspects of EJ), 3.) Service and or community-based learning, (as in Gabriela's course, and Paul’s to some extent) and possibly 4. Undergraduate research (as in Paul and Gabriela’s student-directed final projects) and even 5. Internships (which are part of Gabriela’s EJ program).

**Could Serve as a Context for Meaningful Participatory Action or Community-Based Research**

Faculty could work with community members and students to engage in real-world, and context dependent community-based research that seeks to develop both the course learning goals and the research question on a particular collaboration with the community in addressing a specific problem. In some cases, institutes and centers are emerging within institutions of higher education with the goal of collaborating, funding, and facilitating this kind of community-based climate justice research.
The above arguments for EJ community engaged effectiveness and inclusivity should be considered as critical reasons to both recognize and incentivize faculty members who seek to implement these changes into their teaching and research. In addition, these areas of effectiveness could be helpful in convincing program leaders to modify the foundational mission or epistemic values of a program or begin to create more opportunities and resources for building community partnerships. Finally, an emphasis on these areas may aid in the recruitment of more experienced community engaged EJ faculty that already have relationships with local community members, thus fortifying the number of faculty who utilize these practices in their teaching and scholarship. Over time, these practices could work together to create an IES program ethos that values EJ content and community engaged instruction.

However, although the above changes are all critically important to build a long-term IES program culture that values and practices EJ content and community engaged instructional practices, it still may be important to better understand how to implement some of these practices at the instructional level. In other words, individual EJ faculty (whether prospective, new, or experienced) might want to immediately integrate some of these practices into their curriculum and pedagogy. For this reason, the next section seeks to provide more short-term recommendations for both curricular decision makers and EJ faculty that seek to modify their instructional practices.

**Implications for Faculty and Curricular Decision Makers**

Faculty looking to integrate aspects of EJ into their course design, regardless of their programmatic context, should look to the side of the continuum that contains practices more associated with “embodied justice.” Based on my experience observing both Paul and
Gabriela (and Samuel to some extent), the practices closer to the area of embodied justice do a great job of allowing for more participation from community partners (or members) and students, which usually create a context for overall increased student engagement, and most likely an increase in student learning (although this needs to be studied more extensively). What is more, as discussed in Chapter 5, Samuel, Paul, and Gabriela’s practices much more fully integrated community voices and experiences into the classroom, creating the possibility for historically marginalized EJ community members to participate in the knowledge sharing process. For these reasons, I recommend faculty to take a transitional approach towards the integration of new instructional practices which include: a community engaged course design, invitation of guest speakers, organizing site visits, and providing more opportunities for both student-directed learning, and socio-emotional or embodied learning. What follows is a brief guide for faculty to begin integrating these practices.

**Prioritize Relationships, Then Find Learning**

Faculty and their programs/institutions should work together to build long-term relationships with community members and organizations in EJ contexts. This could happen at both the program and institutional level, as programs may want to establish relationships with offices of community partnerships, or service learning. Once relationships have been established with a sense of long-term mutuality (as Gabriela explains), the meaningful interactions and group meetings in the community can provide an excellent context for student learning and curricular planning. Because this kind of learning happens in a context of EJ activism, this learning 1.) Provides space for the historically silenced activist voices of the EJ movement (Taylor, 2002; Wilcox, 2009), 2.) Is embedded in the practice of solving EJ issues and based on relationships (Ollis, 2020), 3.) Helps build a community of practice
(Wenger, 2011), 4.) Allows the curriculum to be more organic in nature and flows out of activist resistance and struggle (Crother et al., 2005; Freire, 1970), 5.) And could also possibly provide significant life experiences (SLEs) (Lowan-Trudeau, 2017). Thus, program administrators, faculty, and other curricular decision makers (Conrad & Pratt, 1983) should understand that the curriculum in an activist and community-engaged EJ instructional context is built on the foundations of meaningful and long-term relationships with community partners. Even after meaningful community relationships and activities are organized, Gabriela shows that a lot of the content knowledge in her courses also stems from activist voices. She heavily relies on the All We Can Save Project, which seeks to center the voices of women of color in the climate and environmental justice movement. An authentic EJ curriculum that seeks to spur positive change in the EJ movement is built heavily on the foundation of EJ activists’ voices and communities.

Re-Envision the Classroom with Site Visits and Experiences

In describing critical pedagogical shifts faculty may need to transition from a multi or interdisciplinary course to a transdisciplinary course; Ashhurst and Clarke (2018) discuss the importance of revisioning the classroom space. These authors begin with a simple question: “What is a classroom?” (p. 160). When examining the instructional processes and practices of Paul and Gabriela, it is apparent that both have done this in different ways. Paul, for example, has utilized his collaborative lab as a unique space between the academic institution and EJ community activists, thus providing a critical context for student, faculty, and community participation.

Gabriela on the on other hand has taken Ashhurst and Clarke’s (2018) recommendation to another level with 50-60 guest educators and around 16-17 site visits for
each semester. From this lens, Gabriela has completely re-envisioned the classroom in a physical and relational sense. Most of the site visits and community-based activities implemented by Gabriela are based on her long-standing relationships with community members, which again points to the need to develop curriculum first based on relationships and spaces within the community, and then move to content and student learning later.

Although Gabriela’s design is aspirational in its organization around community partners, Gabriela mentioned that it has taken about a decade of community organizing and relationship building to get to this point. Faculty members or IES programs may first choose to create a space on our off campus for institutional and community relationship building such as Paul’s collaborative lab, as this represents a more incremental shift to an integrated community engaged EJ course or program.

**Pass the Mic**

In referring to the pedagogical practice of including other voices in the classroom and decentering oneself as the faculty “sole expert,” Gabriela often used a famous hip hop phrase to emphasize that it was her job to “pass the mic.” More importantly, inviting guest educators was the most practiced pedagogical strategy in this study, with three out of the four faculty believing this was a crucial way to enrich student learning with knowledge outside of academia. This is evidence that EJ faculty may share a common interest and willingness to include EJ community voices within their courses. What is more, inviting guest educators is an excellent way to begin forging relationships with both EJ activists and community members, and begin creating partnerships with entire organizations. Thus, this practice should be seen as an entry to a community engaged course design and could be an important recommendation for prospective or new EJ faculty members. Because courses like Gabriela’s
are not built over one semester, an incremental change for faculty may be more realistic, and
guest speakers and educators are a fantastic way to start.

However, the invitation of guest educators into the course should be made with an
emphasis on the hope of long-term reciprocal benefit. An important aspect of this is to
provide equitable and transparent pay for guest educators and their community organization.
It is extremely important for not only the faculty member to be involved in this process, but
also the program and institution. If an IES program wishes to add more EJ courses and bring
in more EJ faculty, a critical aspect of this is to secure funding for both guest educators and
outside events and activities with communities.

**Practice Student-Directed Learning**

Another key implication of this study is that an effective EJ community-engaged
pedagogy provides opportunities for student-directed learning. This could be a large-
scale final project connected to internships as in Gabriela’s course, or it could mean
providing options (with necessary instructor scaffolding) for a final (or other large-scale)
project such as in Paul’s course. In fact, a more specific recommendation for prospective or
newer EJ faculty is to start with Paul’s model for student direction. This model provides
students with flexibility for them to tailor their projects based on their own specific interests
and learning styles.

Students from differing racial, linguistic, or socioeconomic backgrounds may have
different interests, passions or needs regarding the long list of complex socioenvironmental
problems that many EJ courses cover. From this lens, students can have the opportunity
to do a deep dive on one topic of personal interest to them and gain research, or community
engaged experience in the process.
Include and Practice Embodied Learning

Another implication for teaching and learning that arose in this study is the need to provide opportunities for knowledge that is more connected with bodily intelligence (Wilcox, 2009), such as feeling, sensing, building, telling, and listening, for example. The need for this kind of pedagogy is also bolstered by Gardner’s (2004) concept of multiple intelligences, and Rendón’s (2009) notion of Sentipensante Pedagogy, or “sensing and thinking” pedagogy. Gabriela’s course and “decolonial field methods” provide a model for doing this with individual class sessions dedicated to focus on one bodily sense (such as feeling), and then an additional activity or experience within the community to practice this form of learning in the field.

Although this pedagogical modification may seem abstract for some faculty, Gabriela showed in one of her class sessions that just the practice of asking students the role that “feeling” played in EJ issues, began an engaging discussion on the role of feelings and emotions in EJ work. Students were able to reflect on why socio-emotional variables were not often present in EJ research and reflect on their own feelings in relation to the often emotionally jarring aspects of environmental injustices.

Another specific recommendation for faculty regarding this practice is to use different modes of learning (i.e., art, feeling, play, building etc.) as an additional way to organize key content material in the course, setting the stage for students to practice it more fully. For example, Gabriela used the term “play” to organize a lesson around a form of early childhood education centered on nature-based play. Thus, new modes of learning could become organizational tools to develop curriculum, while also providing a more diverse array of
learning opportunities, as opposed to only privileging cognitive, rational and or intellectual kinds of knowledge and learning.

An important final point regarding these practices is how they extend way beyond the realm of just environmental justice, or even community-engaged learning. It is critical to emphasize that these practices are important for any kind of faculty member in any disciplinary context who may be interested in fostering a more collaborative, participative, culturally relevant, and justice-centered approach to learning for their students. If faculty wish to create social change with their teaching (as the faculty espouse in this study), focusing on collaboration between local community members, the academic institution, and students can be an important step in working towards real-world and societal change. Perhaps even more importantly, when students can engage in local, real-world issues in conjunction with their coursework, they are finally able to see tangible applications to academic theory and knowledge that is too often taught in faculty-centered and decontextualized fashion.

**Limitations and Areas for Future Research**

This study sought to better understand how EJ faculty develop and implement their courses at the epistemic, curricular, and pedagogical levels. Due to this focus, I was able to gain much needed insight on how EJ faculty organize their curricula and describe the most innovative curricular organizational tools and pedagogical strategies.

This inquiry also provided important implications for understanding additional reasons why EJ knowledge is excluded from IES programs, and possible reasons and strategies to increase its inclusion moving forward. However, this study left other questions regarding EJ instruction unanswered. For example, there is a critical need for future research
to explore: 1.) The impact of community engaged EJ instruction on community members and organizational partners; 2.) How EJ instruction in general (or community engaged EJ instruction) impacts student learning; and 3.) The role of faculty identity, and how faculty address the complex issues of social identity in their EJ courses.

One limitation of this study was not being able to focus more on how community organizations were impacted by their relationships with faculty members, and their courses. During interviews and class-session observations, I was able to learn some information about the impact of Gabriela’s instruction on community partners. For example, Gabriela mentioned how guest educators were compensated, she discussed how her students helped secure funding for an entire organization by writing a grant proposal, and overall, she discussed having long-term and meaningful relationships with various community organizations and members. However, I was unable to fully understand the effect of EJ community instruction on community members, especially how it impacts the complex and challenging EJ issues that these communities are experiencing.

Future studies on community engaged EJ instruction could explore the relationship building aspect between faculty and community members much more directly with the attempt to understand the impact on community organizations. More specifically, how does the relationship aid in the addressing of environmental injustices? How are the environmental injustices identified and communicated between partners and faculty members? What aspect of this relationship (funding, resources, collaboration, extra labor) contribute to progress? Or is it possible that in some circumstances the academic institution or the faculty member could have a negative impact on the community organization? With so much emphasis on the uneven distribution of environmental and social harms on EJ
communities, this line of research should take priority in follow-up studies to learn more about community members’ experiences with community engaged instruction.

Another limitation of this study is that it was unable to measure student learning. Because faculty were the main unit of analysis in this study, the main findings only peripherally explored the impact of EJ instruction on student learning. Although peripheral, I could still see certain areas where students seemed engaged, such as during guest speaker activities, and during Gabriela’s class-session on the role of emotions in EJ, among other areas. Inquiring about the specific impacts on student learning in EJ courses could provide much needed empirical evidence on why and how EJ instruction is effective. In addition, this study could seek to further understand why and how EJ curricular content, pedagogy and a community engaged model of instruction creates a more inclusive context for students of color in IES programs. This kind of study should include interviews with students to understand their nuanced experiences attempting to process the myriad and complex areas of EJ.

A study on student learning could seek to understand how students acquire environmental justice literacy. Previous studies have attempted to explore how students in environmental courses can develop environmental literacy (Shepard et al., 2014; Teksoz et al., 2011), but this form of literacy usually does not include various critical aspects of EJ such as environmental racism, or the systemic and uneven distribution of environmental harms. Recently, at least one theoretical piece has emerged attempting to define climate justice literacy (Damico et al., 2020). This kind of framework could be applied in an empirical format in a course such as Gabriela’s to understand the impact of such a course on student's climate justice literacy and awareness, and even psycho-social or emotional
processing of the current climate crisis. In addition, as climate catastrophes continue to become front and center in the world’s attention, understanding how EJ education at all levels can help students become change agents and future environmental justice leaders is of paramount importance.

Another limitation was that this study could not fully illustrate the role of faculty identity on their instruction. What is more, because this study looked more at how EJ instruction takes place, it did not explore at a larger scale who is teaching EJ. Other researchers have theorized that EJ faculty may tend to be faculty of color (Taylor, 2010), or faculty who have experienced EJ issues in their lives. Thus, a future study on EJ instruction could use quantitative methodology to try and better understand the overall makeup of EJ faculty in higher education.

In addition, future research should seek to illustrate how EJ faculty employ the instruction of intersectionality, as the use of intersectionality in EJ and sustainability education research is growing (Maina-Okori et al., 2018; Malin & Ryder, 2018), but little is known about how exactly EJ faculty (or faculty in general) approach the instruction of this theory. For example, all the faculty in this study mentioned they discuss intersectionality in their course as ways to help students understand environmental racism, and the role that identity plays in the continued uneven burdens of environmental harms on people of color and other marginalized groups. However, it was difficult to observe the specific scope and sequence of explaining intersectionality or other activities and strategies that faculty may employ to aid in the comprehension of this theory.

A final limitation to this study was that in the case of Paul, Samuel, and Darren, I only observed one course they were teaching. This is an important limitation in that faculty
members may alter their instructional methodology and course design depending on their course and its characteristics. This limitation might be the most important when thinking about my discussion of Darren’s course and his reliance on lecture as his primary pedagogical practice. For example, it could be that when teaching a course with a smaller number of students, Darren may use more student directed practices such as student directed research, group work, or guest speakers, for example. For this reason, future studies may look to include multiple courses for each faculty member. This was helpful in the case of Gabriela, as different courses such as her Fields Methods course called for the integration of “decolonial field methods.” Thus, it is important to understand that Darren may rely on more lectures depending on the course and its context.

**Conclusion: EJ Instruction and Beyond**

This study explored the curricular and pedagogical practices of EJ faculty. The most salient findings showed that all the faculty espoused learning goals related to activism, community engagement and social change. However, only two of the faculty were able to fully integrate or embody a more comprehensive community engaged model of EJ instruction. These models included innovative curricular and pedagogical practices such as organizing the curricula in collaboration with community partnerships and experiences, inviting guest educators, student directed projects, utilizing a collaboration laboratory for community-student-faculty interaction, and the inclusion and practice of “decolonial field methods” (and embodied knowledges). Similar to previous research (Garibay et al., 2016; Garibay & Vincent, 2018), these findings show that EJ and community engaged instruction are interrelated. Thus, if IES programs are to increase their inclusion, they should create a program culture that values and practices both EJ knowledge and community engagement,
especially as COVID-19 has recently garnered much attention on various EJ issues around the world.

As The COVID-19 pandemic continues to exacerbate systemic racism, environmental and economic inequality in the US, it is critical that institutions of higher education begin to more comprehensively address EJ issues. Based on this study, much more focus could be placed on the EJ instructional process within institutions, and how students are making sense of different EJ problems, their socioemotional reactions, and their perceptions on creating and participating in systemic solutions. In addition, how collaborations between faculty, students and EJ activists can address context dependent environmental injustices in communities warrants much more attention. As climate change and environmental justice issues increase and compound, there is a paramount need for pedagogical innovation in the IES classroom, as well as other disciplinary contexts that may be related with environmental justice issues. As Frank Johnson said in his visit to Paul’s class referring to implementing new pedagogical strategies such as the creation of organizations: “…We cannot do business as usual. We have to build the new world that we want.”

Moving beyond EJ education, this study has overarching implications related to inclusive, justice-based pedagogies and instructional practices overall that extend across disciplinary boundaries. First, the conceptual and theoretical framework employed in this study could help program leaders and faculty review and develop their instructional processes and practices through the lens of epistemic orientation, organization of content knowledge, and pedagogical practices. Although challenging, it may be helpful for faculty to engage in an open discussion regarding their epistemic orientations to identify how their varying assumptions about knowledge are informing their curricular and pedagogical
practices. Through this lens, faculty and program leaders can recalibrate the foundational epistemic values of their program and make critical decisions regarding which kind of knowledge is included in their program, how this knowledge is valued, who will generate and communicate this knowledge, and what processes and practices are used to enable this process. Thus, the conceptual and theoretical framework used in this study could be utilized as a tool for instructional and professional development, as well as innovation with faculty across the disciplinary spectrum within higher education.

Second, this study shed new light on more specific inclusive and justice-based instructional processes and practices. This study explored how and why community engaged EJ instruction may aid in both recognition, participatory, representational, and epistemic justice as in the case of Samuel’s (to some extent) Paul’s and Gabriela’s courses, EJ activists could participate in the knowledge development and communication process with students. In addition, this study may add to a growing body of literature that discusses how EJ education can provide a more culturally relevant context for students (Blanchette-Cohen & Reilly, 2013; Djonko-Moore, 2018; Marouli, 2002; Morales-Doyle, 2017; Taylor, 1996).

This cultural relevance may come from the content knowledge that is more connected to students from historically marginalized backgrounds, but according to faculty practices in this study, it may also emerge from the utilization of guest speakers, experiences with EJ activists of color during site visits, and the inclusion of other forms of knowledge and intelligences such as embodied knowledge (Wilcox, 2009) and multiple intelligences or what Gabriela refers to as “decolonial” research methods.

From the perspective of EJ instruction specifically, or inclusive instructional practices overall, the findings from this study could aid higher education in responding to the myriad
EJ issues that continue to occur around the globe while also sparking further discussions about how to develop and implement more culturally relevant, inclusive, and justice-centered (Morales-Doyle, 2017) instructional practices within many different disciplinary and higher education contexts.
APPENDIX A

INTERVIEW PROTOCOL

Interview Protocol

1. Could you provide some general background information regarding your doctoral degree and your training within your academic discipline?
   a. How many years have you taught in your department/institution?

2. Could you tell me how you got involved with teaching EJ content/courses?
   a. How long have you been teaching EJ courses?
   b. Were there any experiences (either professional or personal) that lead to this?

3. Could you describe the EJ course I will be observing?

4. Related to the above question, how did you approach the design of your EJ course(s)?
   a. When designing your course, are there any areas of literature or theories (either from the EJ field or your discipline) that help you build the content?
   b. How is your course content organized (theoretically/thematically/historically)? Why did you choose this format?
   c. What goals (personal, professional) do you have in mind when designing the course?

*The above question could include specific questions about the faculty member’s syllabus. These would have to be developed after being granted access to the syllabus and other pertinent course documents. Alternatively, specific questions related to the syllabus could be generated after the first interview.

5. How do you define environmental justice? How do you integrate the definition of EJ within the course content?

6. What kinds of theories (either EJ or discipline specific) do you hope students learn within your course? Why?

7. When teaching, are there any pedagogical theories (i.e. critical pedagogy) that guide your practice? If not, why not?
   a. What is your main method to deliver course content to your students?
   b. What are the key projects in your course?
   c. What goals do you have for student learning?
   d. How do the above student learning goals relate to your personal goals regarding EJ?
8. How do you describe the most salient aspects of your social identity? By social identity I am referring to age, gender, sexuality, race, ethnicity, social class, religion, etc.

9. How do the most salient aspects of your social identity relate with your EJ instructional practices?
   a. Are there any personal/professional experiences that highlight this relationship?
   b. How do you think your personal identity/experiences are expressed in the development and implementation of your course?
   c. Do you ever share aspects of your social identity or personal experiences with your students during class? Why or why not?

10. Relatedly, when teaching this course, is there a specific issue/theory/area of research within the field of EJ that you are most drawn to? Why? How do you think these manifest within your course?

11. In your experience teaching (and in other scholarly work related to your EJ courses) how have you been professionally supported (by either your department, program or institution)? Why or why not?
   a. If yes, how so?
   b. If not, are there ways that you would like to be supported?
   c. If you moved from teaching more traditional courses within your discipline to teaching more EJ related courses, how was this shift received by your supervisors and colleagues? How do they react to your interest in EJ?

12. At this point in time, do you have any other information about your course or experience teaching that you would like to add? Is there anything that I did not ask that you wish I had asked?

13. Do you have any questions for me at this point?

If there is nothing else, thank you again for taking the time to meet with me and participate in my study.
APPENDIX B

OBSERVATION PROTOCOL

Core Question:
How do environmental justice faculty from different academic disciplines develop and organize their curricula and deliver it via pedagogical practices?

Sub Questions:

o How do faculty from different academic disciplines approach the development and delivery of their EJ course(s)?
  1. How does the faculty member exhibit their disciplinary background during the class?
     a. What terminology is used to describe certain EJ phenomena?
        i. Are sociological, literary, economic, public health, natural science, or philosophical terms used?
     b. How does the faculty member relate EJ concepts to their discipline? How do EJ concepts and disciplinary concepts overlap?
     c. What aspects of the discipline are present within the class’ activities? For example: journaling (literature/writing course), engaging in a scientific experiment (more natural sciences), debate (political science or Law).
     d. What other ways is the disciplinary background of the instructor apparent while teaching?

o How does faculty social identity and experiences influence the delivery of their EJ course(s)?
  2. Does the faculty member share aspects of their social identity during the class session? If so, how? If not, are there any reasons to observe why?
     a. Does the faculty member tell any personal stories, or relate content or activities to personal experiences? Any stories or examples based on experiences with the community or a particular kind of field work?
     b. Are there any nonverbal/nonwritten ways the faculty member’s identity is apparent? What are the differences between student identity and faculty identity, for example?
     c. What ways can faculty identity expression/manifestation be interpreted/extracted from the class session (and then confirmed via interviewing and member checking)?

o What are the key personal or pedagogical goals that motivate these faculty to teach EJ courses?
  3. Does the faculty member at any point during the class session express (in any way verbal/nonverbal) their student learning or personal goals? If yes, how so? If not, is there any explanation for why not?
a. Are there any activities/discussions that exhibit a goal whether student learning, personal to the faculty member or broader?
b. What goals can be interpreted/extracted (and then confirmed through interviewing and member checking) from the class session’s activities, or other materials (example: slides, discussion questions, case study, homework etc.)?
c. Do students express comments or questions in relation to a faculty goal (whether personal or academic)?

What theoretical or epistemic foundations do faculty use when teaching their EJ course(s)?

4. Does the faculty member specifically mention a particular theory while teaching? If so, in what context and why? If not, is there any observable reason why not?
   a. How does the faculty member integrate theory into the class session?
      i. Are theoretical (or other academic concepts) the core aspect of the class session, or are they tangential or nonexistent?
   b. Are the use or application of theories observable in any class activities or other course materials?

5. What pedagogical practices are observable based on the way the class session is conducted?
   a. How is the room organized if the class is in person? How does the class manage or interact with students if on Zoom?
   b. How does the faculty member interact with students in general? Does the class feel cold, stressful or is there a friendly atmosphere? How would I describe this based on the observation alone?
   c. Is knowledge delivered, communicated, shared or co-created?
      i. Is knowledge delivered via faculty lecture in a monodirectional form? Or is knowledge co-created between faculty and student bidirectionally, or is knowledge co-created via student to student discussion multi-directionally?
      ii. What is the key mode of communication or knowledge transfer: lecture, discussion, group work/activities, student presentation, or some combination?
   d. How do these observable pedagogical practices relate to what the faculty member discussed in their interview?

What other notable observations were there from this class session that may be outside the scope of the research questions, but important to report and analyze? What novel information could be added to the conceptual framework?
APPENDIX C

DOCUMENT ANALYSIS PROTOCOL

*For this protocol, I have focused mainly on the syllabus and course description.

Core Question:
How do environmental justice faculty from different academic disciplines develop and organize their curricula and deliver it via pedagogical practices?

Sub Questions:

1. How do faculty from different academic disciplines approach the development and delivery of their EJ course(s)?
   a. How does the faculty member exhibit their disciplinary background within their syllabus or other pertinent course documents?
      i. Is content knowledge on the syllabus organized by issues from the EJ field or from the academic discipline? How do EJ concepts and disciplinary concepts overlap?
      ii. Does the course description include more disciplinary based terminology or terminology from the EJ field?
         a. What terminology is used to describe certain EJ phenomena within the syllabus?
         b. Are sociological, literary, economic, public health, natural science, or philosophical terms used?
   b. What aspects of the academic discipline are present within the class’ projects listed on the syllabus? For example: journaling (literature/writing course), engaging in a scientific experiment (more natural sciences), debate (political science or Law).
   c. What other ways does the disciplinary background of the instructor observable on the syllabus or course description? For example, does the faculty member explain how this course would relate to the requirements of the department or major?

2. How is social identity (in general) illustrated on the course documents? This is an important aspect of EJ, so this question could be slightly modified.
   a. Does the faculty member include terminology related to social identity in the syllabus or course description?
      i. Are units or course content knowledge organization related to identity/culture/group background?
      ii. How prominent is social identity when reading the course documents?
      iii. Do course projects/assignments listed on the syllabus or course description have any relationship with social identity?
      iv. What other ways could social identity play a role in the development or organization of the course syllabus or course description?
What are the key personal or pedagogical goals that motivate these faculty to teach EJ courses?

3. Based on the syllabus/course description/project prompts what can be inferred/extracted regarding the pedagogical theory implemented by the faculty member?
   a. What kinds of projects are listed? Student directed projects? Group projects? Exams? Activist projects (I have found this in one example syllabus)?
   b. Based on these projects, assignments and activities, what are the ways that faculty want to communicate EJ/disciplinary knowledge? Is it possible to infer this from observing the documents alone? Why or why not?
   c. Are aspects of the syllabus negotiable?
   d. How is EJ presented in the course description or syllabus? Is it presented as something students are encouraged to understand to change the world? Or is it presented more like an academic content area that needs to be learned as a requirement?

What theoretical or epistemic foundations do faculty list and explain on documents related to their EJ course(s)?

4. Does the faculty member specifically mention theories/concepts on the syllabus and course description? If so, in what context and why? If not, is there any observable reason why not?
   a. How does the faculty member integrate theory into the observable sections/categories of the syllabus or course description?
   b. Are the use or application of theories observable in any prompts or explanations of projects, assignments or activities on the syllabus or course description?
   c. Is EJ theory more prominent or disciplinary theory? Is there an observable explanation for this? Why?

What other notable information is there on the syllabus or course description that is worthy of observing and analysis? What novel information could be added to the conceptual framework?
APPENDIX D

OBSERVATION NOTES

Class Observation: Gabriela’s Class on the Decolonial Method: “Feel”

Warmup Activity:

After asking everyone how they were doing to begin the class, Gabriela then gave students a “River of Life,” community building question. To do this, Gabriela gave the students a question and then allowed them to turn their cameras off and brainstorm for some time. After, students all shared their responses. Once students had visibly become more comfortable from this short warm-up activity, Gabriela then began the main topic for the day’s lesson.

While showing them a slide the contained a diagram about the process for attaining knowledge: Gabriela asked the students: “What does an environmentally just research method look like?”

She followed this question by saying “some methods are sanctioned and some are devalued,” On another slide she showed various non-academic or non-Eurocentric research methods such as craft, sensing, play, and feeling.

Beginning the Discussion:

From here, Gabriela said a few words about the importance of emotions in research, and their importance in doing field work on their site visits, eliciting to students to start thinking about how they actually feel – or the emotions they feel – while experiencing things related to environmental justice while doing their site visits.
After this, she then quickly told the students that she does not fully know the answers to the questions she asked and will ask not only during the lecture but in general about the role of emotions in research and environmental justice.

The above comments were also on the class slides that say:

- “These are the questions I ask in presenting ‘feeling’ as an EJ method. But to be honest, I don’t have much experience with how to guide a class on this kind of methodology...much of it feels new, and unexplored to me.”
- “Bacon and Norgarrd, in ‘Emotions of EJ,’ [one of the readings for that class session] agree that much of our literature fails to examine the importance of emotions in our work.”

She also asked: “how is this [emotions/feeling] related to EJ themes and overall racism and oppressions and ‘isms?”

At this point, Gabriela closed the slides on Zoom (I noticed this as common strategy in her class), closing the slides signaled to students that more free-flowing discussion could happen.

When she closed the slides, a discussion began:

**Full Class Discussion**

Students 1&2 jumped in and mentioned the stigma of mental health and the hidden impacts of mental and emotional well-being.

During the discussion, Gabriela said things like “Yes!” and “Oh my god! I have never thought about that!” Students seemed engaged and eager to participate. All of their cameras were on.
Student 3 mentioned that one reason there is a lack of information or knowledge about the role of emotions in environmental issues is because of the bias towards quantitative knowledge and the idea that emotions are much more difficult to quantify in large-scale studies.

Gabriela then asked: “What are the consequences of the gap in the EJ literature on feeling/psychological well-being? - The questions we ask ourselves are affected by this when we cut off the body from our emotional understanding?”

Student 4 responded by saying “we create a lot more work for ourselves.”

Gabriela followed with “Yes, we are funneled into the pathway of knowing.”

Student 5: “We keep upholding a colonial way of knowing and learning.”

Gabriela interjected: “This is exactly why we need to experiment with new methods of knowing.”

Student 6: “What would life be like without feeling – it is the driver of life – if you take feeling out of life what is life?

Gabriela: “Yes...There is a constant battle between mind/body dualism – all empirical study is based on sensing, or sensory derived observation.”

From here, the class shifted to a bit more explanation from Gabriela where she mentioned emerging issues and findings from the realm of psychology in relation to environmental issues and climate change which all had accompanying slides such as ecoanxiety, peritraumatic stress disorder.

This opened up a discussion where some of the students discussed a fear of not being able to have a family because of their climate related anxiety, they shared conversations they have
had about this topic with their parents, and shared personal stories about not wanting to have kids.

Gabriela then tried to shift the class discussion to think about the advantages of emotions in the climate/environmental movement. She asked:

“How can our emotions be harnessed to effect change? And how can they get in the way of change making?”

Student 2 gave a long comment about the need to create resources for people to work with their emotions such as counselors and centers for people to discuss aspects of mental health.

Gabriela responds: “OK, yes, so an emerging field may be the need for mental/emotional health resources and research in EJ communities with these issues.”

Student 7 brought up the idea that women may often feel the emotional burden, and there may be extra despair from women about change. They added an idea about how emotions can be used to oppress women.

This caused another mini-discussion and various students added comments about how women are oppressed based on their emotions or other aspects and issues that are related to emotions.

This was followed by a final question by Gabriela and the idea about “how can emotions be harnessed to cultivate more environmentally just research?”

A final student said, “researchers should not be controlled by their set plan or their hypothesis.”

[end of observation]
Gabriela: Class on Agnotology, Food Justice and Biopiracy

**Key Quote:** “Each tribal government is sovereign and not every citizen is going to agree. They have the right to make their own decisions and environmental activists and tribal activists can converge and diverge. We [non-native people or members of other tribes] don’t understand their culture and how they have evolved with the ecosystem.” - Matt Daniels, Guest Speaker/Educator

**Class Material on Syllabus:**

**Topic:** Agnotology + Institutional Intersections


**Overview:**

In my first classroom observation of Gabriela, the day’s topic was centered around agnotology, the study of culturally induced ignorance, sometimes used to sell products. However, although this is the title of that day’s class on the syllabus, the class was multi themed and multidisciplinary and also discussed issues related to food justice (especially in relation to wild rice (manoomin), and important food staple of many indigenous peoples across the Americas), biopiracy (which was also related to wild rice), and the relationship between indigenous land, manoomin ecology, policy among tribes, treaty organizations and the local state university.

In this class, Matt Daniels (pseudonym) a professor of forestry at the local state university and a member of the Potawatomi tribe spoke at the end of the course. Matt spoke for about 40 minutes and his talk included topics around the history of tribal land in the US, the idea
that all land is tribal land (this part of the talk had a lot to do with land restoration), the management of these lands, tribal sovereignty, the relationship of local tribes to the local land grant university, and the final part of the talk focused on how universities can make partnerships with local tribes.

**Most notable aspect of presentation:**

He included questions such as: What are our/your obligations to these tribes and how can we go about these obligations? He also related this to a wild rice project in collaboration with the university that looked at the holistic and ceremonial aspects of harvesting and eating the rice, which involved art, science, and relationship building (this was connected to the readings that students did on agnotology, but also a reading from Wynona Laduke on wild rice.

He then gave several strategies for creating partnerships with tribes including:

1. Acknowledge past and present harms
2. Collaborate as equals – respect tribal knowledge
3. Data ownership – the tribes should keep ownership of the data
4. Foster personal relationships (need to hang out, eat food together, go to powwows, go beyond the scope of a typical research project)
5. Navigate the institutional barrier
6. Engage native and non-native students, teach the next generation about how to build relationships with tribes
**Post Presentation Discussion:**

In the discussion after Matt’s talk, Michele and the students asked several questions about how to deal with controversial issues and protests such as the protests at various pipelines across the US. In reference to these questions and comments, Matt said:

“Each tribal government is sovereign and not every citizen is going to agree. They have the right to make their own decisions and environmental activists and tribal activists can converge and diverge. We [non-native people or members of other tribes] don’t understand their culture and how they have evolved with the ecosystem.”

Afterwards Gabriela responded: “Matt’s comment helps us understand the context specificity within EJ issues.”

The class ended with more comments about the unjust nature of treaties, and Matt gave a lot of information about how although there have been so many terrible issues in the past, tribes are actually gaining more economic and political power and the movement for land restoration is continuing to gain steam.

Gabriela also asked an interesting question about how Matt straddles his work with both tribal nations and a large land grant university, she commented and asked:

“Your work is very multi and interdisciplinary and includes forestry science but also the socio-cultural and political aspects of dealing with American Indian Tribes. Plus, you are at a land grant institution and also an enrolled tribal member – how do you feel as you straddle these different communities?

Matt responded: “I see myself as a public servant.” He added: “How do we serve the people we need to – and how can we meet their needs? We haven't met the needs of tribal people.
Gabriela responded with a comment about how interesting and important this idea is – the idea of research as public service and noted it was an important frame for “straddling” these different and complex stakeholder groups.

**End of class:**

The class ended with Gabriela further connecting Matt’s talk with the material. This included a short bit of lecture that connected Matt’s suggestions for creating partnerships. She mentioned how the knowledge and kind of research Matt works with is so different from traditional research and knowledge that comes from the historic academic cannon.

**Paul: Class on Local Green New Deals**

**Key Quote:** “AOC’s bill was great in starting a movement .. a patchwork is the only thing we have right now. They are geographically accurate and connect to each population which is being served.” - Ex-student Guest Speaker discussing personal research on local/regional Green New Deals

**Class Material on Syllabus:**

**Topic:** Justice, Sustainability and the Green New Deals

**Readings:** “California Green New Deal,” “San Diego Regional Green New Deal Strategic Plan,” “A Feminist Agenda for a Green New Deal,” “The Red Deal” and “Four Principles of the Red Deal” Jasper Bernes, and “Between the Devil and the Green New Deal

**Overview:**
In the first classroom observation of Paul, I was also able to see two ex-students of Paul’s come and speak to the class on a research project they are doing on the development of local Green New Deals (GND) around the country. Paul began the class by announcing several different events around campus related to sustainability and environmental justice, and then introduced the topic of the day by saying: “By building a green economy that is inclusive for all people and happening through a just transition – it is not just environmental but is also connected to all kinds of services.”

Then Paul in an “MC” style introduced the two ex-student guest speakers who have gone on to continue research on regional and local GNDs they began in this very same class. He also mentioned that “The federal green new deal is a template for anyone to make one at any political level ecologically sustainable and socially just.”

Ex-Student Presentation on Regional/Local Green New Deals Around the Country:

They discussed:

- The need to include BIPOC workers and laborers into GNDS
- Transportation and green energy are a huge aspect of any GND
- Discussed the need for support from multiple stakeholders
  - Support from stakeholders: when bipartisan support helped GND bills pass – various organizations helped get bills started or passed – this would be under what encouraged GND legislation.
- Discussed an analysis of funds to congress/political parties from fossil fuels – the more money they get from fossil fuels, the less likely a bill will pass.
  - Speakers gave a conclusion in which one speaker said “Both parties suck...” “Both parties take too much from the fossil fuel industry – a key
area is to vote out politicians who take too much money from fossil fuels – you can go to ‘follow the money website.’”

Post Presentation Discussion:

Student 1 asked the presenters: “What kinds of pressures on legislators get these GND to pass, or can help them pass?” The presenters responded that the use of protest can be a very effective measure to put pressure on legislators. One presenter explained: “It is important to begin at the local level and then expand outward with a large constituency and support for the GND.”

As other students raise their hands, Paul then told the presenters that they could facilitate the discussion. After a short discussion between only students and the presenters, Paul then offered some of his own personal comments and questions. More specifically, Paul asked “Is there a GND that you think is a model?”

The presenters responded with: “NY is the most comprehensive – Washington’s is also ambitious,” and offered more information to explain why. Then Paul asked: “What do you think about the idea of creating a patchwork of GND legislation – should it be federal or local?”

One guest speaker responded by saying that: “AOC’s bill was great in starting a movement .. - a patchwork is the only thing we have right now. They are geographically accurate and connect to each population which is being served.”

End of Class:

Paul then made more “wrap up” comments. He said that he is hopeful of the local level action and talked about how some aspects of the GND are fairly republican and that the Biden administration has not fully embraced the GND which is very problematic.
He then thanked the class very much and reminded them about the TEST II.

The guest speakers want to hold a house meeting to discuss the movement to create a local GND in their area. Paul then explained how the GND movement in the West Coast has been very bottom-up which Paul and his group [the collaborative lab] is working on.

Class Observation with Paul and Green View

“Creating organizations is a new kind of pedagogy; we cannot do business as usual. We have to build the new world that we want. GreenView is like that - a systemic alternative.” - Visiting Professor Frank Johnson

In one of my classroom observations, Paul brought students and one faculty member to talk about a community organization they created. Two students who were in Paul's course came up with the idea for an organization which would be later called GreenView (a pseudonym for this study). However, although they had the idea for Greenview in Paul's course, it really expanded and came to life in Dr. Frank Johnson's (pseudonym for this study) course. In order to present this finding, I will first give a brief summary of the class observation, and then provide quotes from Paul on how GreenView came to fruition and why he brough them into his course to talk about it.

Class Observation Summary:

Class session on Syllabus:

Topic: What Do Sustainable Communities Look Like and How Can We Build and Support Them?

Course material:
Beginning of the class:

- Paul announces protest happening nearby and other important EJ related events (This was the same class discussed earlier when Paul provided encouragement to students on their way to the protest).

Introduction of Presenters:

- Paul announces all of the presenters (various ex-students from the class and Frank Johnson, a sociologist professor who helped found GreenView)
- Paul also gives a short introduction about the GreenView organization and how it was founded as part of collaboration between students in his course, Frank and other community members and students (during this process Paul completely centers himself and clearly shows the class that the students and guest professor are the stars of the class).

Watching Movie on GreenView Founding and Mission

- Frank Johnson begins their guest speaking appearance by playing a video they made about GreenView. This video highlights a lot of different systemic environmental issue and how those are entangled with social issues. The video states that GreenView is a creative outlet to realize sustainable and just dreams. The video also explains (paraphrased here) that GreenView is an organization that seeks to create a green community (in a particular neighborhood near campus) through the use of renewable energy, creation of public gardens, a cooperative of affordable and sustainable housing, the creation of a circular economy... all determined by the people of the community independently and
with priorities also determined by the community. (may need to work on this paraphrasing).

**Guest Speaker Comments:**

- One student explained that they are a “doomer” and this is why they wanted to get involved with Greenview
- Another student said they got involved because they just want to help dream about the possibility of creating a space for any neighborhood
- They mention that GreenView is a very inclusive space with many college age students but others from the community, too
- Different speakers went on to explain how GreenView started:
  - The idea was conceived in Paul’s class
  - Then they built up a small group of people and had meetings to create the organization and created the GreenView Climate Justice Press and the Green View Catalog
- At one point the visiting professor, Dr. Johnson stated: “Creating organizations is a new kind of pedagogy, we cannot do business as usual. We have to build the new world that we want. GreenView is like that, a systemic alternative.”
- Dr. Johnson also mentioned a book called *Pluriverse: A Post? Development Dictionary*, which contains over 100 essays about the development of initiatives that are alternatives to modern capitalism and global development.
Green View Project Examples:

- The class then ended with the guest students showing examples of projects Greenview has done and is currently doing.
- These examples included a food forest project, a community trading post, getting funding from grants

End of Class: Student questions:

- The class ended with student questions
- Paul asked the guests what kinds of challenges they faced when doing work on GreenView projects.
- Class ended

Samuel: Class on Worker Rights, Health and Safety

Key Quote: “It is important to have diverse groups affiliated with COSH coalitions. There is an intersectionality with these groups. We build worker power by seeking alignment with other issues, and focus on BIPOC communities, the front-line workers and the most vulnerable. There is a large interconnection to worker rights with racial, economic, environmental, [and even] language justice.” - A director at the National Council for Occupational Safety and Health (NATCOSH)

Material from Syllabus:

Topic: Work and Health Equity- Session 1- Intro to Occupational Safety and Health

Video: Those Who Don’t Tell (A worker health and equity documentary) https://www.youtube.com/watch?v=WH6hEtiBEfs&t=751s
Overview:

In my third observation of Samuel, a guest speaker came in relation to the course unit on worker health and equity. The speaker was a Latinx women from California and a coordinator for the National Council for Occupational Safety and Health (NATCOSH). After a Samuel gave the speaker a short introduction, she began her presentation.

Guest Speaker Presentation:

The guest speaker discussed these points in general:

- Their work (and interest in promoting it) as part of a movement for worker rights and justice
- Every day they receive hundreds of calls from workers dealing with job conditions that are so poor that they are putting themselves and families at risk. Most people who call are either people of color or immigrants
- NATCOSH provides leadership, development, education, agency opportunities for these workers
- Workers who are essential should be partners with owners and policy makers
- They are part of a growing movement of Councils/Centers for Occupational Safety and Health (COSH) groups, but they have an extended network that is called the protecting worker alliance (they are a tiny organization)
- COVID has garnered a lot of attention for COSH groups and worker rights and they have attempted to take advantage of that on multiple levels.
• Explained the COSH model: a coalition that hopes to reach a broader audience through multiple networks that are far reaching in different fields and arenas. They may include students, public health, and environmental health workers
• The speaker said “It is important to have diverse groups affiliated with COSH coalitions. There is an intersectionality with these groups. We build worker power by seeking alignment with other issues, and focus on BIPOC communities, the front-line workers and the most vulnerable...” There is a large interconnection to worker rights with racial, economic, environmental and even language justice.”
• Spoke about the importance of training the community. They train workers for action with a learner-centered, participatory approach, which can be interesting and stimulating for the workers. During these comments the speaker mentioned Paulo Freire and Myles Horton and the origins of this training work from popular education.

Post Presentation Discussion:

Samuel began the post presentation discussion asking a question of his own. He asked: “This course is about environmental justice and we have heard a number of cases affecting many communities of color, but not that much about the workplace. Why do you think there isn’t enough focus within EJ on the workplace?”

The presenter responded: “From my perspective, the lack of focus is related to the workers movement and the fact that the workplace hazards mainly impact the BIPIC community. In addition, the most popular issues are usually related to climate justice and are
more ‘environmental’ in the traditional sense. Plus, there may be other disconnects between EJ and the workers movement, including the large focus on wage, but not on safety and health.”

Question from Student 1: As people try to work for a community there had to be trust built. How do you all build trust with your communities (especially with immigrants who are undocumented)?

Answer from presenter: “It is a reality that many workers are undocumented. [NATCOSH] attempts to reach a consensus that legal status should not matter for worker safety. Trust [is when] you are able to connect with the community. COSH members often look like the communities. They are bilingual and try to authentically connect with communities and be there during the most challenging times. COSH attempts to be responsive the needs of workers unlike the company and the government and is very much rooted in the theory of organizing with the community.”

The speaker also mentioned that she has activist roots and comes from a family that was engaged with issues in the community and she was a union organizer earlier in her career.

Samuel added another question: How do you link science to activism?

Speaker response: “Building a community that provides equal work to everyone. A scientist has the responsibility to ensure that the work they are doing has equal access to everyone in this country, such as BIPOC communities. Climate justice... for many years people thought that was not of interest to communities of color, and communities of color have the most impact when it comes to climate justice, and so, for example climate change science should be orientated towards BIPOC communities.”

Samuel follows up: “How do you use science in the work that you do?”
Speaker response: “We try to use research to support the work we do whether it is quantitative or qualitative. [An example of this is that] nonprofits are able to exist with funding, so they need to make the case through research that this a problem, or a justification for this funding to make change. So, we are constantly trying to use data to support the work we do.”

Samuel: “You have to be able to do the research to show the relationship between exposure workers have on their health.”

**End of Class:**

- There was one more question by a student about the role of COSH to support the COVID vaccine.
- They responded by saying: “The main challenge is that every state is rolling it out differently and they are trying to set the standard and share some of the models to get the vaccine to the most vulnerable.”


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https://interdisciplinarystudies.org/docs/Conferences/2010_Documents_A_Call_to_Action.pdf


https://doi.org/10.1016/j.tate.2013.07.001


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