

The Pennsylvania State University
The Graduate School

**HOZHÓOGO NASHÁA “WALKING IN REGENERATIVE BEAUTY: A JOURNEY
FROM DINÉ WISDOM TO ETHICAL TRANSDISCIPLINARY RESEARCH”**

A Thesis in
Recreation, Park and Tourism Management

by
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ABSTRACT

“Walking in Regenerative Beauty at Penn State” explores my journey as a Diné Scholar traversing a new academic landscape at Penn State University. Over the last six years, from an undergraduate B.S. in Psychology to a master’s in Recreation Parks and Tourism Management (RPTM), my narrative demonstrates how childhood lessons from the concept of Hozhóogo Nasháa or “Walking in Beauty,” have my personal and academic conduct in higher education. My journey honors the transformation from learning to live in balance with nature through hunting and herding sheep to confronting and navigating the colonial contexts of educational and public institutions in Pennsylvania. My primary research surrounded the experiences of my graduate colleagues in the LandscapeU National Research Traineeship during a service-learning trip to the Navajo Nation as I honored my home paths while introducing them to our communal and culturally rich realities. Through reflexive semi-structured interviews and the Diné oral tradition, my thesis documents these encounters that simultaneously challenge the colonial norms inherent to our institution and demonstrate the importance of relational accountability in research.

My key findings revealed how the trip complemented the goals of the transdisciplinary learning and cultivated an environment for personal reflection and a critical understanding of the challenges of my community concerning the Food, Water, and Energy Systems Nexus (Stein & Jaspersen, 2019). These outcomes were compared to the experiences of trainees who did not attend the trip — advocating for the usefulness of

transdisciplinary approaches in tandem with non-traditional educational practices in higher education like service-learning.

This study contributes to the more extensive discussion on decolonizing academia by demonstrating the need for institutions, specifically Land-Grant institutions like Penn State, to engage more responsibly and reciprocally with sovereign Indigenous Nations. Particularly acknowledging those living Nations that were dispossessed and forcibly assimilated in the inauguration of such institutions. My thesis advocates for more respectful educational frameworks integrating Indigenous perspectives and methodologies, such as those allowing me to detail my Beauty Walk into the Department of Recreation, Parks and Tourism Management (RPTM). Moreover, on a personal level, this thesis calls for future educational initiatives that benefit our Indigenous youth and allow them to tell their stories as they address an ongoing history riddled with injustice.

This thesis seeks to reaffirm the importance of centering research in relational contexts and personal reflection. It demonstrates the lived usefulness of Indigenous knowledge systems and ways of knowing in contemporary academia and advocates for approaches that honor these traditions to make research more regenerative and mutually beneficial to the communities in which it engages.

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Chapter 1: The Dawn Walk, or Bik'ehgo da'iindanii, "That which gives Direction to Life"

Introduction

For the Diné, the Dawn or Bik'ehgo da'iindanii symbolizes foundations and focuses on character development, gratitude, and establishing a strong foundation through prayer and reflection, particularly as we align with generational wisdom and guide thoughts positively away from social ills. "Walking in Beauty with Transdisciplinary Research in the Environment and Society" attempts to create a narrative that navigates the theoretical and applied dimensions of the field of Recreation, Park and Tourism Management (RPTM) and graduate research through the methodological framing of Hozhóogo Nasháa, "In Beauty I Walk" throughout all parts of a day (Benally, 1992). The first walk, or Bik'ehgo da'iindanii, "the Dawn Walk" introduces you to me as the researcher and my first interactions with the history and foundations of the field of RPTM and the Transdisciplinary Research in the Environment and Society (TREES) dual-title at my undergraduate alma mater, the Pennsylvania State University. I describe how I was initially drawn to both fields' broad scope and interdisciplinary nature and their potential to create effective programs for Indigenous youth regarding culture and natural resource preservation. Throughout this thesis, I refer to my People using various terms: "Indigenous," which I've found commonly used in academia, and "Native," which I often use based on my anecdotal experience outside the reservation. However, it is imperative to clarify that this thesis does not aim to represent a pan-Indigenous framework.

Importantly, as Diné people, we identify ourselves as Diné or “the People,” as a perspective I represent using Diné Philosophy. This same consideration should be extended as a courtesy to all Indigenous groups to ensure their experiences and identities are contextualized and articulated as they sovereignly define themselves.

My walk begins at dawn with a renewed perspective and reverence that grounds me in gratitude as I enter the consciousness of a new day. This daily occurrence, matched with physical exercise (i.e., according to the Diné teaching of running to the East to meet the sun), draws on my faith and the lessons from my family as I evolve my understanding of the path, I will take on a given day. It is a time for reflection, when I offer prayers of gratitude and strength, mindful of where I have been, where I awaken, and the emerging opportunities where I plan to walk that day. This start has grounded my experiences in love and integrates my academic endeavors, community engagement, and work responsibilities when I awaken on Penn State’s Main Campus, University Park. This includes my academic discipline here in my master’s program, also referred to as ‘Recreation Parks and Tourism Science’ at institutions like Texas Tech and Northern Arizona University (NAU), which I chose due to the field’s expansive base to explore outdoor education, community development considerations, and other experiential initiatives. This emerging discipline, alongside programs like Penn State's Transdisciplinary Research in the Environment and Society dual-degree program (TREES — formally known as Human Dimensions of Natural Resources and the Environment), transcend traditional academic boundaries to offer a pragmatic and nuanced understanding of environmental challenges from diverse sectors (e.g., watershed quality in the Chesapeake Bay; Sekercioglu, Schneider, Fay & Licata, 2019). This

inclusive view represents a rare opportunity to incorporate non-traditional (i.e., non-western and decolonial) research methods and ways of knowing — the category to which my Diné culture and history are often categorized in the realm of “Research One” academia — represented by Indigenous Research methodologies, which prioritize Indigenous outlooks, beliefs and knowledge systems. The goals of which have mirrored the priorities I witnessed in the Navajo Nation, addressing language loss and preserving cultural lifeways to embrace our individual and tribal sovereignty (Hinton, 2019; Chilisa, 2019). Such goals simultaneously address the impacts of colonialism and historically incongruent power dynamics, many of which that have negatively influenced environmental policy and the dynamics surrounding Native peoples as mere political units (i.e., the designation of Native American reservations as “National Sacrificial Areas”; Hooks & Smith, 2004). Supplemental understandings from Spence (1999) have further revealed how some narratives inspired policymakers to relegate Native peoples to dwindling reservation lands and establish human-less wilderness areas (i.e., that eventually became National Parks). Indeed, similar dehumanizing logic surrounding Native Peoples as a ‘colonized other’ (Chilisa, 2019) continued to justify the marginalization of Native students from colonial education institutions, subjecting them to boarding schools, which systematically worked to erase their language and culture from academic curricula (Shear et al., 2015). Hence, my journey to address any environmental issue requires knowledge of such historical narratives and institutions coupled with active empowerment of myself and other Indigenous professionals to engage with all my communities effectively. This perspective aligns with the interactive Navajo teaching of Sa'ah Naaghái Bik'eh Hózhóón (SNBH), which establishes the

framework of conduct that defines my Walk as I complete each day's journey in reverence of the interrelations of past, present, and future. This worldview entails constant learning and is not confined to university classrooms but actively incorporates intergenerational teachings, allowing me to remember my origins with my surroundings no matter the setting.

Connecting to the Beauty Walk

The concept of SNBH, which is often shortened to the term Hózhó, is a concept that, if walked in properly, radiates healing and beauty in the past, present, and future or Hozhóogo Nasháa (Benally, 1992). This understanding is grounded in Diné origin stories and is declared as I introduce myself in the Diné language, which I have spoken in countless class presentations, and anywhere I am asked to introduce myself. Though I often talk to non-Diné audiences, I explain in English that my mother is Bilagaana (i.e., of Dutch, Irish, and German descent), I was born for Bitahnii (Folded Arms clan), my maternal grandfather was Beeshbich'aa'ii (German), and my paternal grandfather is Todik'ozhi (Bitter Water clan). Along with my community, Lók'aahnteel "Many Reeds" or Ganado Arizona, this essential introduction tells my family's story. This story speaks to the fact that these teachings were supplemented by my parents, who are both career-long educators. My mother, a special education teacher, met my father when she first came to the Navajo Nation in the 1990s, where she started her teaching career during a post-baccalaureate cross-cultural exchange program. She is originally from a small town in central Pennsylvania near my campus, and I have been privileged during my six years at Penn State to learn about her side of our family throughout my college education

despite living on the Navajo Nation my whole life. My father has served in many educational administrative roles, from principal to superintendent, in approximately six public reservation schools and now works as an education specialist for the Bureau of Indian Education. My father's side of the family is from Round Rock, Arizona, which has served as a sanctuary for our family for generations. This area has not only served as a home but has allowed us to pass on traditional knowledge and stories surrounding herding sheep, hunting, wellness through biodiversity, and our family's history of resilience. For example, the legacy of my Nali Hastiin (Paternal Grandfather) Staff Sergeant Edgar Benally, a WWII Veteran, community leader, father, and husband I was named after. Though he was not a Code Talker — the infamous Diné heroes who changed the tide of WWII — the brief stories of his heroism in foreign lands and at home opened the world to me. Similarly, other oral stories I learned focused on my family's use of their knowledge of the land to evade the U.S. and Mexican armies during the 1800's. These stories were ones that I indulged in and constantly asked my father to recall as we walked the land and took care of our sheep. Indeed, these life-defining lessons were my first experience with activities considered to be outdoor recreation and experiential education.

My thesis is intended to represent a practical application of how one researcher applied these principles to the research process. The way I walk is according to foundational Diné views of understanding education — which are not confined to any single institution, and instead view learning processes about the institution as we learn to adapt to new contexts (Denetdale, 2015). Diné Chief Manuelito noted this reflection as he traveled to Washington, DC, for the first time to negotiate the federal Treaty of 1868

between the Navajo People and the United States. My understanding of these negotiations was translated to popular songs and rhetoric that encouraged me as a Diné student to leave the Navajo Nation to pursue an education so I could return and improve my community. Though this is a widespread understanding on the Navajo Nation, this paper recognizes that such rhetoric does not ultimately represent the reflections of Chief Manuelito nor his struggle with U.S. educational institutions, particularly after two of his children died during and directly after their time at the Carlisle Indian school in Pennsylvania — an institution that changed approaches to Indian education forever in the U.S., Canada and around the world. It was also Chief Manuelito, whose initial reflections on Diné education (i.e., mainly from Denetdale, 2015) continue to reaffirm my educational path as a means to walking in Hozhóogo Nasháa. Though Denetdale, a direct descendant of Chief Manuelito and Juanita, says this narrative has lost much of its original meaning, many young Navajo students on the Navajo Nation are taught to “climb Manuelito’s ladder.” It was indeed this notion that motivated me to pursue a formal education far from my home, despite the equally popular deficit narratives we are reminded of — including how less than 16% of Native Americans and American Indians hold a bachelor’s degree (Postsecondary National Policy Institute, 2015).

As a student at Penn State, I believe it is essential to note the haunting legacy of Carlisle and how it changed paths to educating Native American education students. This legacy resonated deeply during my time in higher education, but is rarely discussed in a Penn State context, though our Dickinson Law School lies in that town. Moreover, it is also important to note that institutions like Carlisle and other boarding schools across the United States and Canada were not just places of assimilation but also final resting spots

for countless Native children. Recent excavations have unveiled a brutal history of deceased Native American children, including that at Carlyle, Pennsylvania, ten bodies have thus far been found (Sturla, 2021). Carlisle's motto, "Kill the Indian and save the man," crafted by Superintendent Moses Friedman, continues to serve as a grim reminder of the aims of early American education. Additionally, the success stories spun, such as that of Jim Thorpe, further masked the exploitative underpinnings of these places. Maraniss's (2022) autobiography of Thorpe, "Path Lit by Lightning," elaborated that the "world-famous Indian football team" of Carlyle not only dominated the football scene but set a troubling precedent for "taming the savage" in similar institutions nationwide and in Canada. This legacy contrasted with other injustices against the original inhabitants of Pennsylvania (e.g., the 1737 Walking Purchase; Jennings, 1970) and Diné-specific tragedies (e.g., the U.S. Army's Project Scorched Earth Campaign; Laljani, 2020) remains fresh in my mind as a Diné student. Also, this legacy has implications for our relegation to a fraction of our original homelands on the Navajo Nation – a privilege not extended to many other nations, including the original Peoples of Pennsylvania.

Navigating the consistent disregard for Indigenous histories was particularly challenging due to Penn State's failure to acknowledge how these injustices have significantly contributed to the marginalization of Indigenous Peoples in the state and students at the institution. Additionally, deeper dives into these studies reveal a dire institutional interior marked by a history of dispossession older than the university and rooted in events like the Morrill Act of 1862. Unbecomingly, it was relatively simple to trace similar legacies to the foundations of leisure studies in RPTM as well, which are intricately tied to recreational institutions such as the National Parks Service and the early

logic in which they were founded (e.g., in favor of ‘humanless pristine wilderness’ areas, which contributed to Native American reservations and the simultaneous removal of Indigenous Peoples; Spence, 1999). For example, the reflections of journalist and early American theorist Samuel Bowles on ceasing Indian treaty councils and relegating Native Peoples to reservations, “We know they are not our equals, and we know that our right to this soil as a race, capable to its superior improvement is above theirs. Therefore, let us act directly and openly on our fate. Let us say to the Indian, you are our ward, our child, the victim of our destiny, ours to displace, ours to protect. We want your hunting grounds to dig gold from, to raise grain on, and you must move on.”

With a brief introduction to such colonial dynamics and their ongoing implications in my undergraduate studies, throughout my master’s research and academic pursuits, I have worked to promote a more profound acknowledgment of historical consequences on campus. Predominantly addressing the critically low Indigenous student population (>1%) and how this phenomenon is worth considering relative to the forced absence of Indigenous peoples, assimilative and non-inclusive educational practices within the state, and a lack of internal university infrastructure to support Indigenous students and communities in the present. Additionally, through my research experiences within this project — notably encountering Tribal Advisory representatives at Purdue University and Northern Arizona University — I realize that more profound institutional policy changes (e.g., justification for a Tribal Liaison and external Tribal Advisory committee) are warranted to regard better the sovereign status of Tribal Nations in research and representation. Such conversations and advocacy have started in direct discussions with senior faculty in educational equity, the Penn State Faculty Senate, and

advisory sessions with the Penn State Provost as a multicultural chair. Most recently, these conversations occurred in collaboration with the Penn State Faculty Senate's Educational Equity and Campus Environment Committee — which developed an official list of recommendations (Snyder, 2023), which the Faculty Senate voted on and accepted in 2023.

Still, to create a more immediate support system for Indigenous students on campus, I was also part of an effort to inaugurate the Indigenous Peoples Student Association (IPSA) as an undergraduate in 2019. In tandem with the arrival of new Indigenous Faculty (i.e., two Diné professors) in 2019, an effort has remained the only direct support mechanism for Indigenous students on campus. Though our focus has centered on supporting Indigenous students, we also contributed to Penn State's official adoption of our organization's Acknowledgement of Land (Penn State, 2020), developed by students and faculty. Though we have understood the contentious realities of such documents (e.g., their performative nature on behalf of an institution; Giarratana, 2021), we have interpreted this action as a decisive, unprecedented step Penn State has taken to officially recognize its Indigenous history on behalf of all 25 campuses across Pennsylvania. This initiative has also supported our growing faculty and student base in navigating issues with the university, including recent enforcement of the Native American Graves Protection and Repatriation Act of 1990, surrounding Indigenous artifacts in the possession of the Penn State Department of Anthropology. Recently, the IPSA and individual students have been consulted in many emerging conversations surrounding such issues. However, I have found these conversations to be both emotionally taxing and often at the expense of my academic and occupational

responsibilities — a dynamic particularly worth noting for Indigenous students attending Penn State, who will inevitably have the additional financial demands stemming from their status as out-of-state students (assuming they come from communities outside of Pennsylvania). Indeed, many other schools in Penn State’s academic conference (the Big10), such as the University of Minnesota, have implemented tuition waivers and other official support measures for Indigenous students — in response to the Morris Industrial School closure and with stipulations that “Indian pupils be admitted free of charge for tuition and on terms of equality with white pupils” (University of Minnesota – Morris, n.d.). Though it is worth noting that states like Minnesota have larger Indigenous populations, Pennsylvania’s original inhabitants, such as the Seneca Cayuga Tribe of Oklahoma, no longer have access to their original homelands after being forcibly removed from Western Pennsylvania in the 1800s (a frustrating reality given that Indigenous students can experience this form of tokenization with no compensation). Additionally, I have often been asked to provide pan-Indigenous perspectives (e.g., those of the original Peoples of Penn State) on issues, in contrast to people seeking more specific tribal representation. I often must preface that my perspective is that of my experience as a Diné person, and not represented by all Diné People, let alone the 574 federally recognized tribes in the United States and Indigenous Peoples around the world.

Walking Greater Paths

My reflections on my early struggles have often caused me to ponder how many of my frustrations other Indigenous students have experienced. Anecdotally, these dynamics frequently have resonated the heaviest upon practicing the Diné tradition of

delivering my introduction. This gesture is one we are taught to proclaim proudly, which can become taxing with the typical responses in which I am told that people are not aware we (i.e., Native Peoples) are still alive, plus the barrage of assumptive questions I receive as people ask if I still live in tipis on the reservation, if Native peoples are predisposed to alcoholism, or how much my family receives monthly from casinos. While understandable, these conversations have often taken precedent above academic and career related topics, which better define my purpose at Penn State. Moreover, such narratives can almost be expected given the many “deficit narratives (Chilisa, 2019) surrounding the portrayal of Native Peoples, such as in the case of the many humanities classes I have completed, which have primarily highlighted Indigenous Peoples considering their social disparities without sociocultural contexts. A more significant trend observed by Tara Houska in her 2017 Ted talk “The Standing Rock Resistance and our Fight for Indigenous Rights” when she noted that 87% of American Textbooks portray Indigenous Peoples as existing before the year 1900 (Shear et al., 2015).

These dynamics have been complex and equally exhausting and rewarding, given the way I incorporate my experiences into my academic research. As I approach this thesis, I am actively considering how to truthfully highlight these experiences while creating future pathways for Indigenous students. Similarly, my time in graduate school and the formation of this thesis was also motivated by asking myself how I could successfully navigate a colonial institution while appropriately contributing to my home community. Additionally, I wondered if it was possible, with Penn State’s current infrastructure, to ethically engage with my community within a traditional graduate

timeline (e.g., a master's degree taking approximately two years) while creating, promoting, and demonstrating mutually beneficial relationships.

To begin answering these early questions, I underwent an exploratory journey that I have found best explained by Werito's (2014) *Diné Critical Consciousness*, a unique theoretical framework derived from Paulo Freire's (1973) youth empowerment theory that weaves together varied institutional, historical, cultural and temporal contexts (i.e., through the nuanced lens of SNBH). This journey takes a critical look at my positionality, my relationships, and learning about the institutions around me, from those home on the Navajo Nation (e.g., the Navajo Human Research Review Board) to those here at Penn State (e.g., my academic discipline, campus resources, etc.), while contemplating critical action steps that integrated all of the above. Indeed, while instituting written acknowledgments can be a helpful start, I have realized that actual sustained interactions and relationships are critical. This logic has motivated the steps in the present study to consider how the foundations of RPTM and Transdisciplinary research can connect to my home community. For example, my challenges to build a solid initial foundation explaining and maintaining existing relationships versus extending my efforts beyond a feasible and natural scope.

Conveniently, the field of RPTM is dynamic, despite its roots in colonial thought, for providing introductions to helpful programmatic frameworks that begin exploring research relationships and experiential learning. Initially, I explored the subfields of political and heritage tourism (Winter, 2007), which provide considerations of experiences that represent a Nation or community. Additionally, forms of agritourism like "woofing" (Ait-Yahia Ghidouche, Nechoud, & Ghidouche, 2021) provided models

for community service and humanitarian aid to communities. Still, many colonial frameworks and deficit narratives remained as I pondered the assumptions behind each model and power dynamics inherent in each relationship — mainly as communities saw little benefit outside of economic gain. Also, such initiatives in Indigenous communities run the risk of entertaining assumptions within the “white savior industrial complex” (Flaherty, 2016). Furthermore, there are implications of centering programs around Traditional Ecological Knowledge, which in, a tourism lens, risks promoting the stereotypical myth of the “Ecological Indian” (Smithers, 2016) — as opposed to adequately holding reverence for local knowledge and its roots in observations garnered over a millennium. The effects of this are familiar to me, given my background in studying popular Native American/American Indian stereotypes during my bachelor’s in psychology (Benally & Soto, 2019).

Walking in Resilience Today

I want to accurately portray my communities and fully honor our sovereignty, considering our complexities and challenges, particularly with the value of traditional knowledge bases. For example, Davidson-Hunt and O’Flaherty (2007) and Agrawal (1995) emphasize the importance of viewing Indigenous Knowledge as a dynamic process reflecting its adaptive and actively evolving nature. In line with my experiences and challenges, this perspective also contends with a broader understanding of which academics mistakenly view Indigenous Knowledge as static or rooted in the past. This conceptualization emphasizes the importance of seeing such knowledge bases as living processes, which require active approaches to collaboration between researchers and

Indigenous communities. This critical aspect, as Agrawal (1995) emphasizes, ensures Indigenous communities maintain their agency in interactions to preserve their identity and sovereignty (e.g., in decisions over environmental policy). This shift in ideals is not only something to incorporate into research but is also intended to inform approaches that foster mutual knowledge creation that is similar to the notion of the “co-creation of knowledge,” which is an outcome critical to the transdisciplinary learning goals of LandscapeU trainees (Mauser et al., 2013). Moreover, notions of ‘triple loop learning’ (Wolff, 2022) provide helpful considerations to building and maintaining relationships through reflection and feedback with communities as research is conducted in a transdisciplinary setting. This creates a new dynamic where the researcher does not extract or document Indigenous knowledge for commercial or one-directional gains, for example, but rather engages in a mutually beneficial relationship with the Indigenous communities with whom they work while sharing mutually decided-upon objectives. Such dynamics more accurately reflected the real-world dynamics I was privileged to witness in my tenure working for the Navajo Nation government from 2020-2022 (e.g., protocols in collaborative efforts with other government entities and institutions).

My initial questions also remained as I progressed through my graduate curriculum and was introduced to Transdisciplinary Research via the LandscapeU National Research Traineeship, which has emerged as the base for steering my study and outlook as a Diné researcher. Navigating the intricate path of research in Indigenous contexts has required seeking additional resources, most recently enrolling in an online Indigenous Research Methods course at Diné College during my final semester at Penn State (Spring 2024). Such steps helped me better grapple with honoring the Navajo

principle of “T’áá hwó’ ají t’éego” (“it’s up to you”), which emphasizes self-reliance and autonomy. Asserting this autonomy in research while paying homage to ethical considerations in my research has been challenging. The formation of this thesis, regrettably, does not directly involve the most critical voices, namely, my community members and family. This choice stems from my determination to ensure this research does not perpetuate extractive methodologies, maintains a reflexive research methodology, and does not rush the extensive but justifiable timeline for approval from the Navajo Human Research Review Board.

Compounding these challenges, I illuminate my experiences concerning institutional difficulties dealing with my Walk Home. For example, the expiration of the 24th Navajo Nation Council Resolution CJA-01-22 eliminated the option for “Chapters” to conduct official business via telephonic and video conferencing during the COVID-19 pandemic. Consequently, direct community participation in one’s home community, among the 110 governance institutions (Chapters) on the Navajo Nation, has become essential for research proposals to gain resolution endorsements. This has posed significant barriers for students like me, committed to ensuring our research aligns with the community’s needs while residing off the Navajo Nation. Consequently, the research questions and methodologies outlined in this thesis were largely molded by available information and constraints governed by Penn State’s Institutional Review Board (IRB).

Nevertheless, in my endeavor to uphold ethical standards, I have reached beyond just Penn State for guidance, as I have actively engaged with NAU’s Tribal Consultation Committee on my research. This engagement sought to ensure that my study included a measure of consultation and accountability with an institution with substantive

experience considering Indigenous ethical considerations to mitigate extractive practices. Initially, I had the ambition of interviewing students engaged in a parallel service-learning initiative at NAU. However, the constraints of securing a data agreement within my research timeline also posed insurmountable challenges. Regardless of my efforts seeking consultation with NAU, my multiple conversations with communities on the Navajo Nation and the Navajo Human Research Review Board, and the insights I gained through my Indigenous Research Methods course at Diné College, my initial aims associated with this research were constrained.

The Scope of My Research

Therefore, the scope of the current project is limited to the context of the experiences I shared with my colleagues in the LandscapeU National Research Traineeship at Penn State. More specifically, I helped plan and execute a trip to the Navajo Nation, according to my emerging research expertise (i.e., responsible community partnership and service-learning experiences) and the educational objectives of the NRT program. Initially envisioned as a supplemental experience, the idea of a trip emerged in the fall of 2022 from bi—weekly gatherings, during which programmatic funds accumulated during the COVID-19 pandemic. The trip has become a valuable model for exploring service-learning in a Diné community context. This study uses the trip and interviews with my graduate student colleagues to illustrate the outcomes of such service-learning experiences in promoting values typically absent in non-Indigenous contexts.

Building upon the motivations behind our trip and the context in which it happened, I found the most appropriate framework for our trip to be encapsulated by the term “service-learning.” This approach, as outlined by Astin and Sax (1998), emphasizes

the reciprocal nature of our engagement, where both my colleagues and the communities we visited gained valuable insights and experiences. More specifically, my colleagues engaged in meaningful services (see Appendix A) while deepening their understanding of life on the Navajo Nation. I observed many noteworthy aspects throughout the trip, which I helped design and plan. I decided to delve deeper into these observations by conducting semi-structured interviews with the participants. This experience gave me critical insights into future community partnerships and educational strategies.

Thesis Purpose

Amidst the many complexities associated with my positionality and the contexts I study; this thesis aims to help reinterpret and reshape educational narratives using the philosophy of Hozhóogo Nasháa. It explores the role of holistic learning approaches for future graduate students (i.e., Indigenous and non-Indigenous) conceptualized in service-learning on Indigenous lands. Drawing on guidance from existing best practices from RPTM and models of Indigenous research methods, several critical questions remain unanswered.

My research, conducted through semi-structured interviews with non-Indigenous participants, seeks to explore the following questions:

R1: How do service-learning objectives and ethical considerations on Indigenous lands like the Navajo Nation differ from non-Indigenous lands, and how can these differences shape a conceptual model that better reflects participants' needs and aspirations from my viewpoint?

R2: Aligning with Indigenous epistemologies and methodologies, how can we navigate the complexities of securing research approvals while leveraging insights from literature and firsthand experiences to ensure the voice of the writer (a Diné scholar hailing from the Navajo Nation) remains central in the research narrative; thus using quasi auto-ethnographic methodologies, documenting how and if complexities are navigated to help inform future scholars regarding how to address and advance this research?

Thesis Organization

The subsequent chapters aim to extend my journey as I attempt to answer these questions. As I walk through this thesis, I hope to increase my understanding of service-learning objectives and ethical paradigms between Indigenous, mainly Navajo, and contemporarily non-Indigenous lands. In navigating the complexities of securing the approval to conduct this research—I draw from my experiences to ensure Indigenous perspectives remain central, emphasizing the importance of maintaining Diné Critical Consciousness. This involves a thorough literature review that addresses challenges inherent to historical context, foundations of my field, and Indigenous sovereignty while also integrating my identity as a Diné, Christian, and student at a Research One institution known for its contentious history. Additionally, I consider my relationships and affiliations with various communities on the Navajo Nation and beyond. This exploration is intended to add academic considerations, share lessons I have learned with current and future Diné students, and walk effectively into the next chapter of life. Ultimately, I aim to forge a pathway for responsible, community-centric research that emphasizes the need for responsible collaboration and respect via service-learning experiences.

Chapter 2: The Afternoon Walk or Nihigaal “The Afternoon Walk or Nihigaal “Sustenance”

Literature Review

This walk, during Nihigaal or “Blue twilight,” represents the transition from preliminary curiosities in the morning to a deeper, more engaged explanation of the afternoon. This phase of the walk, characterized by self-reliance and communal responsibilities, encourages me to interact more intimately with the academic and actual landscapes surrounding me. Despite this initial trepidation, I felt as a minority in a vast academic institution, it is during this time that I must confront not only the challenging realities but also the emerging hopes within my field of study. The afternoon walk overall helps me to reflect on the virtues of patience, kindness, and practical learning even when faced with the harshness of academic and environmental challenges. As I delve deeper into the history of my field, I encounter a past marked by dispossession in the romanticization of “wilderness” landscapes devoid of human presence, a narrative that spans the 1800s and 1900s. This historical context, fraught with complexity, sets the stage for the questions and themes I began to develop in the earlier planning stages of my research walk, guiding me through a landscape bridge with diversity and opportunity for learning.

Introduction to Personalized Methodologies

This thesis contextualizes and employs a personalized research methodology that reflects both Diné and broader Indigenous Research Paradigms as highlighted by scholars such as Werito (2014), Denetdale (2015), Lee (2013, 2020), and Wilson (2008). This approach seeks to incorporate elements from my background as a researcher often overlooked and undervalued in colonial academic institutions and thus challenging popular historical colonial narratives while recognizing the cultural constructs within those narratives (Denetdale 2015). For example, in her book “Reclaiming Diné Histories,” Jennifer Denetdale describes her relationship to popular primary sources such as written accounts and photographs of her relatives, Chief Manuelito and Juanita, his wife, while combining oral accounts and interviews with her family members, to challenge colonial assumptions. Unlike colonial methodologies that prioritize written and photographic accounts of history, Indigenous frameworks often elevate oral traditions, storytelling, lived experiences, and interpretation as primary sources of knowledge. Specifically, Diné literature emphasizes the importance of integrating Diné sources of knowledge and teachings about natural cycles, such as the four directions, into our creation stories, which remind us to think, act, and reflect (Lee, 2013). These four directions align with further teachings surrounding their associated colors and each of the Navajo’s Four Sacred Mountains: Siskaajini or “White Shell Mountain,” denoting Blanca Peak (Colorado) in the East; Tsoodzil “Turquoise Mountain” denoting Mount Taylor (New Mexico) in the South; Dook’o’oosliid, “Yellow Abalone Shell Mountain,” denoting San Francisco Peak (Arizona) in the west; Dibé Nitsaa or “Black Sheep,” denoting Mount Hesperus in the North (Colorado). These elements are typically represented in a circular pattern in reference to each respective color, time of day, and mountain. Though the

Navajo Nation does not technically extend into the State of Colorado, these four peaks denote Dinétah or “homeland among the people” and were used to negotiate the Navajo Nation’s current 27,000 square mile territory during the treaty of 1868 (Denetdale, 2015).

Lee’s study incorporates accounts from 32 men and women, using conversational and talking circles methodologies, to contrast present and past understandings of gender roles in his book, “Diné Masculinities.” The present study incorporates these lessons through Herbert Benally’s (1992) reflections on Diné teachings surrounding the various times of the day, which I have adapted to understand the phases of my research journey. Additionally, it expresses the concept of Sa'ah Naaghái Bik'eh Hózhóón, “walking into old age,” as told by Denetdale (2015) and symbolizing the underlying dynamic symmetry of the Universe (Lee, 2013). I also use the philosophy walk to honor my earliest form of education, which involved learning to walk while hiking and hunting at my family’s sheep camp on the Navajo Nation — a place where I knew all the stories of plants, animals, and the landscape. This metaphor also reflects my initial unfamiliarity with the new environments of Penn State, where I had to adapt while drawing on early lessons to navigate effectively gradually.

Upon exploring the nature of personalizing methodologies in Indigenous Research, mainly through the lens of Denetdale (2015), I am beginning to understand the complex challenges and opportunities associated with conducting research following Indigenous research paradigms and the inherent intertwined respect and reciprocity. I came to learn many of these while taking an Indigenous Research Methods course (NAS 513) online under Diné College’s Native American Studies department. Though such research methods did not initially inform this research, I have found the methodologies,

logic, and considerations both natural and effective ways to craft the overall narrative of my research. This has meant addressing the many “insider and outsider” dynamics (Chilisa, 2019) and has called for an active decolonizing approach to interpreting my research that privileges Indigenous worldviews. This course also took place during the analysis phase of my research and greatly aided my interpretation of data and my understanding of self as an Indigenous scholar. This journey could be categorized as a process of relearning according to Linda Tuhiwa Smith (2004) in her Twenty-Five Indigenous Projects article, as much of my psychology background included false attempts at Indigenous research as discussed in “When Waters Rise and Rocks Speak” (Ami, 2019). My work now includes critiquing existing narratives that overlook colonial impacts (e.g., those in my field of Recreation, Park and Tourism Management) and honors my experience as a Diné man in the 21st century. Additionally, this engagement involves honoring the oral traditions and histories of my family and community, as seen in this literature review. Such approaches allow for deeper connections and have begun to foster deeper connections with my community. Also, I anticipate that using such methods will continue to contribute to sharing insights that facilitate our collective understanding of Diné beliefs, attitudes, and practices. The following sections of this review present this critical framework that I have incorporated into my understanding of my educational journey.

Critical Consciousness

In the spirit of Werito’s reflections in “Understanding Hozho to Achieve Critical Consciousness, his initial tenets of Diné Critical Consciousness (Diné CC)—knowledge

of self and knowledge of surrounding institutions— provide both the personal and larger historical frameworks that have informed my research narrative. Recognizing the institutions that shaped me as a researcher, as well as the sociocultural context wherein I situate my research, is crucial to interpreting the origins of my research topic and the way this research will be discussed in the future. Engaging with this framework requires that I develop an understanding during this time as I embrace who I am as a Diné man from the Navajo Nation. With this foundation, I interpret my education away from the reservation as learning to walk in new territories with the lessons from familial stories to overcome challenges—also while comparing my Diné perspectives with colonial frameworks. Until recently, this process has naturally occurred internally, but now it is vital to acknowledge positionality in understanding the genesis of my queries and my research agenda to remain truthful and accurate (Wilson, 2008). In his book, “Research is Ceremony,” Shawn Wilson uses this active voice and Opaskwayak Cree culture to argue that Indigenous Research should not only be about the gathering of information but also about building relationships and concluding the research process as a respectful, reciprocal ceremony. His book provides a critique of conventional colonial research practices and is a guide to implementing culturally sensitive methodologies that honor his cultural knowledge systems and realities as a Cree researcher. Similarly, I present my knowledge as relational and have engaged with this framework using my experiences better to illustrate my connections to this literature throughout this review.

As first articulated by Paulo Freire (1973), the idea of Critical Consciousness has been adopted by many Indigenous Scholars, arising as an empowerment theory of liberation (Watts, Diemer & Voit, 2011) and a transformative approach to the education

of ‘marginalized youth.’ This approach has been adapted to many cultural contexts, such as Diné CC, as discussed by Diné Scholars like Werito and Tiffany Lee. In my effort to guide my methodology towards decolonization and to harness this framework's potential for contributing to Diné identity, my focus surrounds the interplay of Werito’s (2014) reflections related to our shared overarching paradigm of Sa'ah Naaghái Bik'eh Hózhóón and Abraham Maslow’s (1965) self-actualization theory. Maslow’s self-actualization theory has often been used in foundational RPTM literature (e.g., the role of social support and self-determination; Coleman & Iso-Ahola, 1993). More generally, it identifies the role individuals, and their autonomy can play in promoting societal reform (i.e., in this case, toward decolonization)—aligning with Freire’s goals of liberation through education with the Diné philosophy.

The three essential components of Diné CC include 1) critical reflection, 2) political efficacy, and 3) critical action. Werito (2014) aligns the first element, critical reflection, with the Diné concept of Nitsaahakes “thinking” to elucidate the process in which Diné students come into an understanding of themselves through the oral tradition and their relationships with family and community. As mentioned in the Introduction, this starts fundamentally in our origin stories and how we are taught to introduce ourselves along with our relationships to family, community, and the new context of individuals to which we present these aspects. To illustrate his connection to this point, Werito notes some of the earliest lessons he learned as a child with older family members, such as the lesson behind T'áá hwó' ají t'éego or “do it yourself” resonated in his approach to problem-solving and self-determination into his adult life.

The second step of Diné CC includes intentional efforts to grow our individual political efficacy through understanding the world and systems around us as Diné (e.g., community government, Family dynamics, Tribal government, and National government). This step can involve various learning methods via curriculum, direct experience, or research. Werito notes how most public schools on the Navajo Nation require their students to take Navajo history and government courses beyond U.S. history, an experience in which I had participated. However, I have found that in the context of this research, the process of organizing thoughts within this literature review and even the interview process itself play roles in building this efficacy. Nevertheless, this process has also been lifelong; having parents as educators, I first understood the structure and goals of our education system(s) in the Navajo Nation. This process continued through reflection (i.e., as these elements can be cyclical) as I was able to contextualize my K-12 education in the context of Penn State University's educational goals and demands — even though I did not feel the most equipped for the academic rigor of college. Unfortunately, this perspective was further complicated as my personal research unveiled unsightly realities about the workings of Penn State as a Land Grant Institution (i.e., established under the Morrill Act of 1872; Stein, 2020) — an understanding that was not shared nor talked about on campus. Additionally, these realities were compounded by unfruitful efforts to find direct resources (e.g., other students, recruiting efforts, and scholarships) for Indigenous students within the university structure. Ultimately, my exploration of these resources or lack thereof helped indirectly build political efficacy as I was part of initiatives to establish support systems

like the Indigenous Peoples Student Association, but offered little to no buffers to help remedy my financial needs as an out-of-state student.

I was also privileged to further develop political efficacy in unique circumstances during the COVID-19 pandemic, where I found employment in my home community as a Public Information Officer for the 24th Navajo Nation Council. Nevertheless, given the mass uncertainty surrounding the COVID-19 virus, I engaged with this position my entire senior year of my undergraduate studies. An unprecedented event developed in response to moving Navajo Nation Council meetings to an online format, given the dire infection rate on the Navajo Nation, which at one point in 2020 held the highest rate of infection in the United States, taking the lives of approximately 2,268 Navajo citizens (Navajo Department of Health, February 2024; Wang, 2021). I witnessed how Navajo policy, our relationships with outside state and federal agencies, and our lack of infrastructure (e.g., water, healthcare, and electricity) bolstered this crisis. Additionally, my role — largely based on my demonstrated ability to write and conduct research — often required me to research and report on current issues based on their relevance to historical legislation and context. Ultimately, this initial 13-month experience created opportunities to become later an Executive Assistant to the Office of the President and Vice President — an experience which also exponentially increased my political efficacy in the realm of understanding the nation's priorities and decision-making process in an 8-month internship in 2022 directly before starting my master's program. These experiences shaped my future goals, particularly in my master's program and surrounding the present study, as I witnessed the impacts of many contexts relevant to the Navajo Nation's priorities in real-time. More specifically, there is potential for industries like tourism to

generate economic revenue and provide both employment and learning opportunities for our youth. It also garnered the importance of understanding the breadth of what it means to be Diné, a question I explored deeply as a biracial individual. Through these roles, I was also reaffirmed in the power of education to address our nation's challenges despite its complexities. Therefore, my political efficacy has continued to grow in the last semester of graduate school as I work with members of IPSA to advocate for direct support mechanisms for Indigenous students on campus. Most notably, we helped recognize Indigenous Peoples Day for the first time at Penn State during the fall of 2023 and collaborated with the recently formed Big10 Native Alliance to host a gathering of the Native American student groups from over 12 students within the Big10 academic conference. An experience marked by discussions surrounding the diversity of support efforts present at each institution and future advocacy efforts.

The final step of Diné CC includes using the prior two steps to take critical action based on a Diné person's understanding of ourselves and our positionality within the context of the more significant system. My engagement within this final element of Diné CC has taken on several forms. Werito and Freire note this step can take on many forms specific to the context in which the individual finds themselves. My Indigenous Research Methods class at Diné College provides a notable way of engaging in practical exercises to demonstrate this step effectively. Although it is not explicitly tied to Diné CC, students are expected to integrate our narratives, research interests actively, and sometimes actual community inquiries into both qualitative and quantitative research methods. This integration helps us conceptualize more holistic approaches to our actual research

projects but also allows us to practice the submission of these projects to the Diné College Institutional Research Review Board.

Whether knowingly or unknowingly, I can tie many of the actions that I have taken to the critical action step of Diné CC. Although it's intriguing to consider the current study and my thesis as a form of crucial action under Diné CC, I believe it's essential to recognize that the framework might not fully apply to me in this context despite following a Diné narrative of Chief Manuelito's ladder (Denetdale, 2015) to pursue education away from home for the benefit of my community. Early in my undergraduate career, while leading first-year students backpacking orientation groups and first engaging with RPTM, I realized my unfamiliarity with Pennsylvania's landscapes, plants, and animals was due to being away from my home on the Navajo Nation. Moreover, no one at the University seemed familiar with their stories, leading me to see now many of my actions under Hollie Kulago's (2019) Critical Settler Consciousness (CSC) framework — aligning my efforts to learn about and benefit my home community while advocating for healing for Pennsylvania's original 13 nations, to return home and share their stories through education. My efforts in this realm have included guiding IPSA's collaborations with members of those 13 nations, including the Haudenosaunee Confederacy, partnerships like planting a tree on campus with the Cayuga Share Farm and contributing to the development of a paw paw fruit-flavored ice cream with Penn State's Department of Geography and Food Sciences to benefit IPSA at Penn State's infamous Berkey Creamery.

Overall, my thesis aims to leverage my experiences to create opportunities for Indigenous students as I recognize that experiences within frameworks like Diné CC can

differ significantly and cyclically repeat throughout life. This is further supported by Kulago (2019), who noted that CSC shares objectives similar to those of other Critical Consciousness theories, such as challenging colonial normativity and enhancing Indigenous futures in education. Additionally, Denetdale (2015) notes that the importance of context and assumptions in learning is critical to sustained societal change and decolonization. This involves the creation of new narratives through critical examinations of existing data and requires an ongoing approach to personal methodologies that embrace the stories of individuals in familial and community contexts. This section of the literature review on critical consciousness underscores the ethical considerations necessary when engaging with sovereign entities like the Navajo Nation and the importance of ensuring that Indigenous communities benefit from research on their land. These reflections not only highlight the way I approach the study but also integrate my understanding of historical and present-day contexts in my conduct. The concept of critical consciousness has provided a strong foundation to understand the virtues of T'áá hwó' ají t'éego, adapted community responsibilities and practical learning, even as a settler scholar, calling for a deeper interaction with both academic and real-world landscapes. Despite my initial trepidations as a minority in a predominantly white institution, this time challenges me to confront the realities and future hopes in my field and beyond.

Leisure, Self-Determination, and Sovereign Power in RPTM

The foundations of the recorded study of leisure go far beyond a mere pastime or relaxation, but in Ancient Greece, it was identified as the highest form of human activity

according to Aristotle (“Nicomachean Ethics”). This ancient perspective has provided an interesting foundation for the field of RPTM, which continues to link leisure with scholarly pursuits. The evolution of leisure, particularly in the U.S., has seen this view transform from an outlook to institutionalize frameworks that prioritize natural spaces (e.g., The U.S. Forest Service and the National Park System). These institutions, although sources of research funding and current best-management practices have often been entangled historically with the dispossession of Indigenous Peoples. The integration of Spence’s “Dispossessing the Wilderness: Indian Removal and the Making of National Parks” (1999) into my understanding of outdoor recreation and management highlights many of the complexities of my relationship to my field. Spence’s book sheds light on the displacement of Native Americans for the creation of national parks in favor of the concept of ‘pristine wilderness,’ popularized by figures like Theodore Roosevelt and questioned by Spence, overlooked the deep-rooted presence of Native Americans in these lands, leading to their forced removal and marginalization. The historical approach to what was identified as the “native problem,” alternating between forced removal and assimilation, resulted in the immense loss of Native American lives in the pursuit of establishing pristine wilderness areas. This distressing legacy persists through the oversight of Native Americans under the Bureau of Indian Affairs (under the Department of Interior), the very entity that played a role in their historical displacement. While not all the field of RPTM deals with National Parks, they continue to contribute heavily to much of the literature that defines our field. Additionally, in my experience, much of the narratives I have explored deal with understanding and predicting the complex norms associated with recreational and visitor behavior (e.g., Roggenbuck, 1991; Shelby &

Vaske, 1991; Coleman and Iso-Ahola, 1993; Walker, 2020). Which almost exclusively ignores the perspectives of Indigenous Peoples and their voices in shaping such policy.

Nevertheless, many of the aspects that drew me to the field of RPTM included its expansive and dynamic research base, which I have witnessed hold substantial potential for environmental preservation. Additionally, my dual degree in TREES posed the opportunity to integrate Indigenous perspectives in contemporary land management practices. For example, those efforts by climate scientists like Kyle Whyte (2018) actively advocate for incorporating Indigenous perspectives in decisions concerning ancestral lands. Commendable research that aligns with tribal priorities continues to be performed in favor of the environment, such as the establishment of national dark sky areas (Meier, 2014) and the mitigation of sound pollution and biodiversity preservation (Kolawole & Iyiola, 2023). Still, a gap remains in the frequent disregard of Indigenous narratives in these issues, which calls attention to the deeper legacy of dispossession, as noted by Spence. By centering these Indigenous narratives and actively addressing largely overlooked historical dynamics, such as in the context of this thesis, I believe the leisure and recreation fields have immense potential for guiding U.S. institutions (e.g., the National Parks Service) toward being more inclusive of critical Indigenous perspectives. Social psychologists Coleman and Iso-Ahola (1993) extend such narratives of empowerment by unpacking the intricacies surrounding leisure, linking them to elements within the field of social psychology, and shedding light on what drives individuals to seek leisure experiences. Their outlay of self-determination is a key to compelling leisure experiences (i.e., and thus accompanying institutions), which creates

room for Indigenous narratives to be included as the future of leisure institutions comes into play.

All this considered, reframing the historical landscape of leisure institutions could be best practiced within university settings in the field of RPTM. Additionally, through more responsible research collaborations, though riddled with complications (Davidson-Hunt and O’Flaherty, 2007), with communities affected by institutions such as the National Parks system. Not to mention Indigenous models of parks and recreation, such as Diné Tribal Parks, which allow Navajo residents to live within their borders --- a reality once envisioned for National Parks such as Yellowstone, Glacier, and Yosemite, which over-developed policies to remove the Indigenous populations after their establishments (Spence, 1999). Still, changes to these historic policies require legal justifications rooted in research, such as that of my research advisor’s lab collaborations with the National Parks Service in Grand Canyon National Park (which borders the Navajo Nation) — whether through providing official recommendations based on current park programs or consultations with Indigenous Peoples whose livelihoods have been affected by the institution of parks. Still, the latter requires appropriate relationships with Indigenous communities along with the effective navigation of Institutional Review Boards from one’s affiliated institution as well as the host community. Such considerations are covered under supplemental Indigenous Research modules of the Collaborative Institutional Training Initiative (CITI) developed by researchers at the University of Arizona (Jetter et al., 2015). Their module and supplemental materials cover a broad range of considerations and protocols for engaging in research collaborations with Indigenous communities. For example, the protocol of gaining

research permissions within the tribal government structure, which ranges from consultations with tribal councils to multiple letters of approval to additional Research review board engagement — such as the Navajo Nation Research Review Board in a Diné context.

Moreover, Ellis & Earley (2006) say, in an Anishinabe context, that Indigenous research methods should be “culturally sensitive and challenge traditional IRB processes as part of this cultural sensitivity” (p. 11). These considerations were shared based on their observations on the ways qualitative research (i.e., particularly those of traditional storytelling methods) tend not to be supported as review board members, though varying in background, sometimes have not conducted research on their own and tend to stay within a “biomedical mode” (p. 3).

Such protections are increasingly necessary given the historical treatment of Indigenous communities in the United States. For example, a 2004 diabetes research study conducted by Arizona State University illegally utilized blood samples beyond the study’s scope (Drabiak-Syed, 2010). Such repeated dynamics throughout history have not only inflamed already aggravating ties between academic institutions and Indigenous Nations but often inform policy and other societal changes without proper consultation (e.g., geoengineering discourse; Whyte, 2018). This tension is further highlighted by the longstanding and challenging relationship between Indigenous nations and U.S. Federal Programs, marked by inequitable engagements. For instance, the ongoing legacy of Glen Canyon National Recreation Area’s contentious 50-year co-management agreement with the Navajo Nation (The 24th Navajo Nation Council, 2020), which has placed the Lechee Chapter community at an economic disadvantage in terms of capitalizing on tourism in

the area. Such power inequities and unfulfilled commitments obstruct Indigenous peoples from practicing genuine sovereignty in a modern context. Indeed, another disappointing realization I witnessed as I dove deeper into the historical and contemporary contexts of my field. Particularly in relation to my time with the Navajo Nation Office of the President and Vice President, where I learned that tourism is not only one of the largest industries for economic revenue to the Navajo Nation but has also been an increasing priority with the recent revenue losses from losing capital from the Uranium industry in 2005 and the coal industry within the last 15 years (Ackerman, Jackson & Fields, 2014). Nevertheless, my time in academia has shown me the potential for education to remediate such issues with the proper infrastructure in place, for example, work from the University of Arizona's Indigenous Resiliency Center. Nevertheless, I've realized that Penn State still has a long way to go in acknowledging its indigenous history (Snyder, 2023), let alone implementing university resources (e.g., instituting an Indigenous Liaison and or an external advisory committee) to better support Indigenous students and collaborations with Indigenous communities.

Service-Learning in Higher Education

To begin conceptualizing methods of introducing my Penn State community to the contexts of my research interests, I have taken advantage of my field of RPTM's academic flexibility to turn to its subfields of outdoor education for solutions. Ultimately, the study and conceptual framework of service-learning emerged as a strong concept that embodies an approach to real-world learning experiences combined with practical strategies to foster community engagement. This term, following the dynamic definitions

of (Astin & Sax, 1995; Davidson-Hunt & O’Flaherty, 2007), though sharing similar concepts to that of voluntourism (Wearing & McGehee, 2013), place-based learning and two-way learning (Varcoe, 2011) has seen significant shifts as it moves away from conventional classroom settings, and has adapted to global educational settings. The goals are notably to promote learning styles to “support people in responding to their own needs, developing a capacity to generate their own research projects, creating supportive relationships with other actors through the building of dynamic processes for the coproduction of locally relevant knowledge” (Davidson-Hunt & O’Flaherty, 2007). Furthermore, Astin and Sax (1995) identified such benefits to college-aged individuals when they complete their degrees in tandem. Although these terms may vary in time, location, and context, service-learning has often successfully combined academic learning objectives with community service projects to provide a pragmatic, progressive learning experience while meeting societal needs (Astin & Sax, 1998). More specifically, their study on students from over 42 institutions emphasized the transformative power of service-learning to enhance life skills, improve academic achievement, and increase a sense of civic responsibility across the student participants. It highlights the needs such programs can fulfill for students while promoting university commitments to community service.

Yet, to provide a more encompassing perspective and to ensure such programs are mutually beneficial, Davidson-Hunt & O’Flaherty (2007) acknowledge the challenges of building long-term relationships of trust and commitment to community-based initiatives within their program. More specifically, the role of everyone to establish strong relationships with individual communities. They note that there are no lists of procedures

and protocols that can be checked, and ongoing methodological refinement is necessary to design programs in relation to the needs and context of the participants, students, and host communities. Such notions pay homage to the work performed by previous institutions and individual researchers yet call for a critical examination of my own contexts in conceptualizing future programs. Similarly, incorporating Indigenous research methodologies can only be effective if all proper relationships are considered — a sentiment embodied by SNBH, T'áá hwó' ají t'éego, and Diné CC. These context-specific notions welcome personalizing methodologies such as the one employed throughout this thesis, which often transcends traditional societal and academic structures and integrates multidimensional views of my context from emotional, environmental, and even spiritual viewpoints (Benally, 1992). My approach, in this regard, seeks to immerse these concepts, resonating with transdisciplinary perspectives within my academic discipline and complementary dual degree. More seen explicitly within the context of our service-learning trip to the Navajo Nation under the LandscapeU program in March 2023, which I've interpreted as a service-learning experience according to the definitions provided by Austin & Sax (1995) and Davidson-Hunt & O'Flaherty's (2007). Furthermore, the LandscapeU program, within which this thesis was developed, incorporates the concept of 'Triple Loop Learning' (Wolff, 2022). This framework is helpful in guiding the engagement process with stakeholders, offering a direct opportunity for students to question and transform their fields by reflecting on values and beliefs, transforming their worldviews, and informing new paradigms. In the context of this study, this approach enables the prioritization and incorporation of Indigenous perspectives in forming new paradigms. Although the COVID-19 pandemic has severely limited in-person interactions

in prior years, our trip could serve as an intriguing case study. Thus, the principles of triple loop learning, along with earlier reflections on critical consciousness, can be used to interpret the experience of scholars and evaluate learning outcomes during the trip.

In a Diné-specific context, service-learning programs have served as practical introductory experiences for non-Indigenous student teachers in preparing for teaching in Navajo Nation schools (Stachowski and Frey, 2005). Mainly, as the participants were able to integrate with various cultural and non-academic contexts, this experience could also serve to interpret our trip in the context of an introductory relationship to Diné community members and systems when paired with considerations from Indigenous methodologies. Through this study, I hope to open avenues for more holistic engagements and considerations for researchers to serve the needs and priorities of communities better. Consequently, the overarching goal of studying this trip is not just a bridging of methodologies but an Indigenous-led confluence of colonial and Indigenous pedagogies, opening the door for a more integrated, culturally respectful, and impactful service-learning experience.

Concluding thoughts

In the interdisciplinary world of RPTM, as evidenced by institutions such as Penn State, Texas A&M, Clemson and NAU, there is a growing realization about the importance of service-learning and effective, mutually beneficial community partnerships in research. This emphasis is further compounded by programs such as Penn State's LandscapeU National Research Traineeship and TREES, which push the boundaries of conventional approaches to learning and problem-solving, actively integrating more

excellent narratives of environmental justice and regard for community curricular goals. As this shift in education takes shape, it encourages a blend of old and new studies and contexts to intertwine, encouraging educational policy reform and facilitating new collaborations that allow for groups like Indigenous Peoples to participate as equals in their own affairs. Such endeavors align with the inherent sovereignty found within philosophies such as Hozhóogo Nasháa, which help link the past, present, and future contexts into one's conduct. My academic journey at Penn State has thus far revealed a widely unknown history intricately tied to events such as the Morrill Act of 1862 and the legacy of the Carlisle Industrial School, which shed light on the complexities of dispossession predating the institution. These historical dynamics inevitably affect the discourse of Indigenous students on campus, whether it be in discipline-specific considerations (e.g., the foundations of leisure studies) or the absence of Indigenous populations at the institution and, more broadly, in the State of Pennsylvania. In this thesis, I attempt to shed light on these troubling implications of homeland dispossession as I draw parallels to affairs surrounding my homelands on the Navajo Nation — highlighting experiences navigating Penn State and Navajo institutions as I interpret my experiences with my colleagues during our service-learning trip to the Navajo Nation. As this thesis progresses, my intent is to highlight these complexities of institutional, historical, and cultural dimensions while theorizing on the impact such service-learning models of education align with best practices in the field of RPTM. Given the nature of the disregard for Indigenous histories at Penn State and its struggles with understanding Indigenous worldviews, it is crucial to question how these insights have enhanced student

learning both in the immediate and the future, according to program-specific learning goals.

Central to this exploration is Werito's (2014) and Kulago's (2019) emphasis on the tenant of reflection in the circular learning process of Hozhóogo Nasháa. Consequently, almost a year after our service-learning trip to the Navajo Nation (April 2024, as this thesis is being finalized), my research focuses on critical questions surrounding the way the trip contributed to the needs and learning of my non-Indigenous peers, aiming primarily to help me better contextualize the experience in my own reflections and to inform future similar initiatives at Penn State. Also, I aim to evaluate the ways our engagements with Indigenous communities promoted genuine respect and collaboration, which I would strive to replicate in future trips and initiatives. To continue to acknowledge the roles yet limit the scope of my research to that of my background, I draw heavily from the insights and style of Wilson's (2008) reflections on relational accountability within the context of his research. This format allows for a more personal understanding of the relational nature of my paradigm of Hozhóogo Nasháa through anecdotes that will enable me to answer and engage all my relations throughout the paper. Wilson uses the visual representation of his ontology with a web; I use the metaphor of walking through each of my relationships with human and non-human entities. Although I did not grow up observing our ceremonial ways of knowing, I see the essence of looking back to continue creating history, even if it is not perfect, which essentially informs the origins of this present project. As I move into the following methods chapter, I will tap into the wealth of literature on place-based education, service-learning, and Werito's framework of Diné education. This multifaceted approach aims to

amplify the relevance of my research, aligning past traumas with current challenges and future aspirations as I walk while ensuring that our pursuit of understanding resonates with fresh attentiveness to true collaboration with Indigenous Peoples.

Methods

Study Context

In the rapidly evolving discourse surrounding Pennsylvania's Indigenous, current student experiences and the more considerable ongoing challenges educational institutions face in fostering meaningful engagement with Indigenous communities, the Pennsylvania State University offers an opportunity to reimagine educational frameworks. This study, inspired by Werito's (2014) insights into educational empowerment for Indigenous students, seeks to bridge theoretical paradigms with practical application, demonstrating how learning outcomes can bolster the mutual respect, cultural sensitivity, and collaboration inherent to Indigenous research methodologies. This research, conducted approximately a year after a Spring break service-learning trip to the Navajo Nation in March 2023 (see below and Appendix for in-depth details regarding the trip), aims to understand and describe the experiences and associated outcomes of non-Indigenous graduate students who attended the trip. Its focus is twofold in the sense that it first attempts to highlight the needs, aspirations, and reflections of non-Indigenous program facilitators and participants, and second seeks to ensure that engagement with Indigenous communities is characterized by measurable aspects of mutual respect, cultural sensitivity, and genuine collaboration.

LandscapeU National Research Traineeship

The context of this study is rooted in the NRT program, which offers graduate students the opportunity to pursue a dual title in TREES at Penn State University. Funded by the National Science Foundation, this NRT program combines academic rigor with real-world applications to equip students for the multifaceted challenges and opportunities they will encounter in their professional careers. Though participants in this study varied in their program progression, most engaged with the NRT curriculum, including a combination of TREES courses and classes outside their academic disciplines. The culminating course is a Colloquium, which is a project-based class led by core NRT/TREES faculty, targeting regenerative solutions for challenges within the Food, Water, and Energy Systems (FEWS), which the Navajo Nation serves as an optimal example demonstrating these livelihood complexities. Students also varied in their progression surrounding the internship and external discipline lab rotation requirements, designed to expand trainee development. Moreover, the program creates opportunities for professional development surrounding science communication workshops and research presentations. The TREES 590 Colloquium introduces students to the degree's scope through a review of literature on transdisciplinary theory and regenerative examples and promotes in-depth discussions for trainees to engage with one another and the material. This course helps students conceptualize a project that integrates these learnings and understands the broader impacts of transdisciplinary approaches to solving environmental challenges. Following the colloquium, the TREES 547 Practicum provides real-world research experiences where students participate in existing projects managed by their instructors, who often serve as Principal Investigators

(PIs) or are closely linked to the projects at hand by their relationships with existing stakeholders or research topics. In this practicum, students get the opportunity to apply the skills from their discipline to work in teams of 8-12 as they assist stakeholders and create a research publication describing their experiences and interventions.

LandscapeU National Research Service-Learning Trip to Navajo Nation

The trip to the Navajo Nation in March 2023 was organized in collaboration with faculty and staff from the LandscapeU program over six months. The idea for the trip emerged during bi-weekly ‘cafes,’ where scholars in the program gathered for professional growth, planning sessions, and research presentations. Recognizing the convergence of my research interests (i.e., interrelated environmental challenges in my community, such as uranium contamination, extended drought conditions, and service-learning), I proposed a trip to provide learning experiences in a Diné community context. Initial comments thrived as the possibility of the trip aligned with the program’s focus on stakeholder engagement and the broader FEWS nexus. The planning process gained further momentum after the 2022 NRT Annual gathering at Virginia Tech University, where our Penn State team networked with representatives from the Indigenous Resiliency Center at the University of Arizona. These interactions emerged as critical for refining the trip objectives and logistical efforts in collaboration with their staff. From there, the trip’s dates were formalized to coincide with Penn State’s spring break, March 4-11, 2023.

Using my personal and professional networks, the itinerary developed to include meetings and experiences with members of the 25th Navajo Nation Council, Diné

College, the Navajo Tribal Parks, and non-profits such as NavajoYES, as well as visits to my high school and interactions with my family members surrounding our traditional practice of herding sheep. A mass email was sent to all LandscapeU students and faculty to gauge interest. Once we had approximately 13 participants, planning began to include travel logistics, meal arrangements, and the formation of committees to organize different aspects of the trip. We also arranged cultural training sessions with Indigenous community members who had managed trips similar to those of other communities in the past. Ultimately, the trip's agenda underwent numerous adjustments to ensure the trip's goals aligned with the LandscapeU educational goals and overall respect for the Navajo community. These efforts remained semi-structured yet adaptive to a schedule that allowed for reflective times and rest (See Appendix A for more details about the service-learning trip).

Research Questions

Building upon these foundations, the study's methodological approach, particularly in Research Question 1 (RQ1) regarding the perceived learning outcomes associated with the NRT program, seeks to highlight whether a conceptual model can capture such outcomes. Furthermore, it explores the specific learning outcomes related to a potential future NRT-sponsored service-learning program for the Navajo Nation, looking for unique or related conceptual framework(s) that illuminate the themes identified by participants. This exploration also examines how this trip and subsequent research have shaped my evolution as a scholar (see RQ2 below) — acknowledging the positionality and evolution of the researcher in the trip's genesis.

Given the complexities associated with RQ1 (How do service-learning objectives and ethical considerations on Indigenous lands like the Navajo Nation differ from non-Indigenous lands, and how can these differences shape a conceptual model that better reflects participants' needs and aspirations from my viewpoint?), I have dissected this question further into the following sub-questions, explored through methodological approaches described below:

- What are the perceived learning outcomes associated with the NRT program?
- How do these perceptions align or misalign with established NRT objectives?
- Is there a conceptual model that reflects these perceived outcomes?
- How do they differ from non-participant NRT students?
- Is there a different conceptual model that reflects these resulting themes from service-learning program participants?

Regarding RQ2, the sections below describe the successes and challenges associated with this research. Expressly, they represent the methodological process for addressing this complex process related to this research question.

Study Design

To answer RQ1 and the subset of questions above, I used semi-structured interviews as an inductive qualitative approach (Saldana, 2009; Seidman, 2013) to highlight the experience of LandscapeU trainees. Seidman (2013) notes that “at the heart of interviewing research is an interest in other individuals’ stories because they are worthy.” (p.9) This places emphasis on the intrinsic value of participant’s stories, not just as data points, but rather essential narratives that cover insights, emotions, and

complexities often lost within colonial frameworks. As a fellow Indigenous scholar, Shawanda (2020) notes how such exploratory approaches applying Grounded Theory can serve as tools to “reverse-engineer” dominant frameworks to allow for the recognition of Indigenous perspectives and holistic interpretations.

The semi-structured interview also allowed for a dynamic format to the interviews, similar to that of Kovach’s (2013) Conversational Method, which allowed me to navigate each interview while maintaining relational accountability (Wilson, 2008) to each participant. This was an essential element to the study design given that reciprocity is integral to Indigenous methodologies and the overarching goal of giving back to one’s community (i.e., in this case, the LandscapeU community and those this research will affect – potentially participants and Navajo Nation residents; Kovach, 2013).

Additionally, this approach also embodies one of the main goals of transdisciplinary learning through triple loop feedback, which intends to involve trainees in their research and align with the process of co-creating knowledge, a core tenant of the LandscapeU traineeship.

Semi-Structured Interview Questions

The choice of questions included a strategy to understand participant experiences based on elements of service-learning literature, the goals of the NRT program, and both my original and retroactive observations of the goals involved with trip planning. The questions were categorized based on their origin and purpose (see Appendix B for a semi-structured interview guide):

- *NRT Tenant Questions* (5 Questions): Selected to align with the objectives of the LandscapeU program funding the trip. These questions aimed to

explore the development of relationships with the Navajo Nation and other key community partners more broadly.

- *Personal Observations and Curiosity Questions* (10 Questions): These were developed based on my observations of interactions and conversations during the trip – aiming to delve into the broader categories of experiences and to extend curiosities into the role of trainees in observing cultural values, understanding Indigenous value systems and the impact of community service experiences. Questions within this theme were also used according to Werito's (2014) tenets of Diné CC.
- *Literature-Informed Questions* (3 Questions): Designed to bridge observed benefits from existing research on service-learning programs with university students with the outcomes of our trip. These questions sought to assess if the academic, communal, and cultural benefits identified in the literature were potentially reflected in the trip's experiences.
- *Non-Trip Participant Questions*: Focused on contrasting the experiences of trip participants with non-participants to identify if the experiences fulfilled similar needs and benefits observed during the trip. These questions were thematically identical to those that the trip participants received but also sought to identify if my observed trip goals were fulfilled by any other experiences or mechanisms within the LandscapeU Traineeship (e.g., classes, conferences, or other trips within the program).

Institutional Review Board at Penn State and the Navajo Nation

In addressing RQ2, the constraints of an approximately two-year master's program timeline significantly influenced the project's direction. Largely considering how the Navajo Nation Human Research Review Board's (NNHRRB) requirements for community benefit and longitudinal involvement require reflexive research methodologies in project formation. Additionally, the logistical challenges of being far from home and the extensive review process required multiple modifications leading to confining the study to my NRT colleagues at Penn State.

Direct consultations with the NNHRRB and Indigenous mentors in higher education, along with the practicalities of securing travel approvals to obtain a supportive resolution from my local Chapter community, highlighted the difficulties of conducting ethical research with Navajo community members. Ultimately, advice from a Diné staff member at Purdue University's Native American Cultural Center and my advisor helped me prioritize the importance of completing my degree, which influenced this methodological shift to tell my story. This shift was further guided by the Navajo notion of T'áá hwó' ají t'éego or "it's up to you," which provided both clarity and peace in telling the story of these challenges in the hopes of guiding future Indigenous scholars. Moreover, the ethical constraints of prior study designs (i.e., that attempted to include Navajo community members and students from other universities) were identified in consultation with Northern Arizona University's Tribal Consultation Committee. The consultation revealed limitations within Penn State's infrastructure for handling Indigenous research sensitivities. These insights led to a refocused approach specific to non-Indigenous graduate students at Penn State, as permissions to conduct interviews

within the Navajo Nation and cross-institutional data agreements proved to be infeasible due to various regulatory and legal barriers.

Data Collection and Sample

The data collection process was designed to incorporate the principles of Indigenous methodologies from “Research is Ceremony” by Wilson (2008), reflecting a deep respect for relational accountability and the cultural values inherent to my Navajo Ethnophilosophy. A total of 12 semi-structured interviews were conducted, engaging participants from the LandscapeU community to which I also belong. The participants consisted of 12 LandscapeU trainees representing seven academic disciplines. Half of the participants attended the service-learning trip to the Navajo Nation in March of 2023; five did not, and one had participated in a similar but short-term community-based trip in the fall of 2022.

The relational dynamic between the participants and my unique position was informed by Wilson (2008), who highlighted the importance of relational accountability in research practices. The pre-existing relationships with the participants, whether they were newly met or well-acquainted colleagues, cultivated a unique level of trust and reciprocity within each interview. A mutual understanding of my research perspective was further deepened by this trust, especially regarding colonialism, its impacts on Indigenous Peoples, and my desire to improve research practices. The familiarity between the participants and me facilitated a conversational approach to the interviews, where dialogue naturally evolved beyond the semi-structured questions, per Wilson’s (2008) reflections.

All interviews were conducted via the Zoom electronic meeting platform, which accommodated participant preferences regarding the time and place of the interviews. The conversations were automatically recorded and transcribed with the assistance of Otter AI, with subsequent corrections made by the researcher to ensure data accuracy and integrity. Additionally, though participants were not initially aware of the beginning of the interviews, the gifting protocol inherent to Indigenous research (Wilson, 2008) and Diné Values was observed as a means of acknowledging the valuable insights and teachings shared by the participants. More specifically, participants were provided with small crafts after the study was complete but were not informed of this gesture in advance. Interviews lasted between 42 and 115 minutes. Throughout the data collection process, confidentiality was understood and maintained, and subsequently, all participants were given the option to engage in a member check to validate their contributions.

Data Analysis

The data analysis process of the study emphasized the study's exploratory approach as the researcher's interpretations and narratives were incorporated into the interview data. Following the transcription of the 12 interviews through the Otter AI platform and subsequent corrections for accuracy that I incorporated, the initial analysis phase involved extracting key quotes from individual participants. The key quotes were then organized into several emerging themes similar to that of Saldana's (2012) emotion and In Vivo coding strategies, which allowed verbatim themes (e.g., confidence) to be used in the analysis alongside my interpretations. This process not only facilitated an initial structured analysis but allowed for the integration of the researcher's perspective,

aligning with Wilson's (2008) emphasis on the inclusion of the researcher's story within the broader research narrative.

To ensure the validity and relevance of the identified themes, two faculty intercoders (one committee member and one external faculty new to the research) reviewed and analyzed the initial themes on several selected interviews — trip-participants and non-participants. The intercoder faculty expanded the initial themes, enhancing the depth and breadth of analysis, which occurred through iterative discussions following their individual coding.

Member Check

The refined themes were presented during a 90-minute member check conducted via a hybrid Zoom/in-person session with five members, including three non-participants and 2 participants. First, I invited all my interviewees, who were contacted individually, and then to my faculty mentor and thesis committee. Of those who were contacted, eight responded to the email, and five ultimately participated. This session allowed participants to affirm the identified themes, with none opposing the themes presented. Those who agreed to participate were given transcripts of the key quotes from their interviews and offered an opportunity to refine or expand them as needed.

To facilitate the member check, I presented a PowerPoint presentation with the overarching research questions, key points from my literature review, my Navajo ethnophilosophy of "Walking in Beauty with Transdisciplinary Research," and new findings that arose from my involvement with a Diné College Indigenous Research Methods class. I also presented the resulting themes that emerged from my intercoding meeting and the personal analysis of my interviews. Participants were then invited to

share their reactions, confirmation, or disagreement with the themes and options of expanding findings (described further within the Results chapter).

Results

This walk during the evening, or Aha'ana oo 'tint or the "Time for the gathering of Family," marks a period of deep engagement with communal and familial ties that are crucial yet often overlooked in traditional colonial research methodologies. This phase emphasizes how important everyone is along with their emotions, respectful ways of engaging, reciprocal responsibilities, and nurturing relationships that compel us to value others in the way we have been valued. This portion of my research focuses on engaging with my TREES community through semi-structured interviews conducted with graduate peers — some of whom joined me on an immersive learning trip to my home on the Navajo Nation and others who did not attend the program. This walk is not only about discussing my community dynamics but also actively demonstrating its complexities. The engagement during this phase aimed to pinpoint areas for improvement in my research relationships with each participant in the spirit of establishing more ethical considerations for research in our program in the future. Recognizing my position as a settler in the lands of Pennsylvania while attending school, these interactions also reaffirmed my commitment to directing my research toward home. These interviews served as a crucial method for fostering deeper connections with my colleagues, enhancing our collective understanding of our program through their perceptions, needs, and desires when interacting with communities outside of Penn State. This process adhered to the critical

action stage of Diné Critical Consciousness and relational accountability, promoting a co-creative environment where narratives and our field are enhanced. Through this, the evening walk captures what it has meant to engage with both academic and communal parties, striving for more ethical research practices and better resources for Indigenous students moving forward.

Findings derived from the semi-structured interviews suggested that the key aspects of the initial themes, including the perceived benefits of our service-learning trip and alignment with the LandscapeU learning, were consistently evident in all interviews. Interviewees highlighted that the personal interactions with diverse students and faculty were a rich source of learning and called for greater cultural awareness in recruiting for the program. There was also an agreement on the importance of intellectual curiosity, which stemmed from the diverse curriculum and students associated with the program. Discussions also revolved around the respect for local knowledge and the respectful roles trainees should undertake when working with communities. Notably, the enhanced depth of articulating transdisciplinary learning goals and outcomes evident in trip participants compared to their counterparts who did not attend. This difference was particularly highlighted through nightly self-reflection sessions during the trip, where trainees talked about their personal research, home communities, and culture. Overall, participants and non-participants both shared valuable insights that highlighted the need for a transformative nature of such experiences, particularly in terms of providing researchers with a contextually rich understanding of the context in which we study. Building on these findings, the subsequent sections will delve deeper into the specific sub-questions

outlined in RQ1, further examining how each contributes to the overall effectiveness and perception of the service-learning trip.

Sub question 1: What are the perceived learning outcomes associated with the NRT program?

In exploring Sub-question #1 under RQ1, this introduction summarizes the key themes and learning experiences meant to encompass the general strengths and benefits of the LandscapeU traineeship for both participants and non-participants (See Table 4.1). These data findings include reflections from both trip participants (i.e., coded via NRT-P#ABCDEF) and non-trip participants (i.e., coded by NRT-NP#ABCDEF), who were both asked about their experience with the tenants of LandscapeU (i.e., interdisciplinary proficiency, ethical conduct, communication skills, design thinking and systems thinking). Though all interviewees were asked about these learning outcomes (essentially questions 1-5 in the interview guide, see appendix), participants of the Navajo Nation trip were asked about these tenants in relation specifically to the Navajo Nation trip, and non-participants were asked about general experiences. This organization is meant to facilitate the themes that were presented and to begin to introduce the overall experience that one can expect from the LandscapeU program and its curriculum. Additionally, to identify the differences in which a trip like that to the Navajo Nation can make in the experience of LandscapeU trainees.

Their feedback indicated participants were generally familiar with most of the tenants from prior experiences (e.g., community engagement in their own research) and pointed to organic community and peer learning as strengths as opposed to structured

learning agendas or events. For example, exposure to diverse research methodologies introduced by peers and collaborative environments, particularly the TREES 590 Colloquium. However, participants also noted the challenges of practically applying their skills to create tangible community interventions, which were often attributed to the constraints of the semester-long project timelines and their depth of community engagement (i.e., building strong relationships). Still, most participants suggested that their time in LandscapeU significantly contributed to both their academic motivation and performance in terms of career preparation and future project implementation. Table 4.1 denotes the four major themes that emerged from the interviews with participants and non-participants, followed by a breakdown of these themes. Additionally, the following themes are organized according to their salience, with General Themes 1 (Benefits of Applied Practice) and 2 (Finding Benefits in Diversity) being the most frequently discussed.

Table 4.1: Thematic results from all Interviewees

Perceived Outcomes	Defined	Examples from Data
General Theme 1: Benefits of Applied Practice	This thematic category reflects how all trainees expressed great benefits from direct interactions with scholars and faculty across different disciplines through structured program activities like projects and workshops.	<p><i>“There’s formal exposure to other disciplines where, like, you know, we tend the cafes where we work with someone from a different discipline. But a lot of times I learned the most, like in our 574-project working with people from other disciplines” -NRT-P#A</i></p> <p><i>“It was like LandscapeU provided the playground. And I happen to match up well with my teammates, and we had a really fantastic time together, learning from each other and teaching each other in an applied setting.” -NRT-NP#B</i></p> <p><i>“Actually, my definition of outdoor recreation has changed due to exposure to you, and also your</i></p>

		<p>advisor. And just learning, I guess the definition, the difference between seeing a park as recreation versus seeing and tourism as recreation, like, there's just so many." -NRT-P#B</p>
<p>General Theme 2: Finding Benefits in Diversity</p>	<p>This theme highlights the ways students value the integration of diverse perspectives in their academic program, which enhances their learning and research approaches. The following quotes demonstrate how diversity both broadens their worldviews and deepens their abilities to understand the complex issues they study.</p>	<p><i>"I think that my cultural identity has largely been warped by reality, and I just simply just haven't been exposed to a lot of other viewpoints. And I've had to force myself through, whether it be my interests or my research interests to get exposed to those viewpoints." - NRT-NP#A</i></p> <p><i>"We met with our stakeholders five or six times to have these check-in points. But this wasn't something that was taught to us or even encouraged." -NRT-NP#B</i></p> <p><i>"So I think that of course, that affected LandscapeU, right, because we had a lot of that diversity and landscape, you. So, I think combining that with the material was really amazing, because I got to learn not only alongside my fellow students, but from them. And hearing how they were implementing what we're learning and LandscapeU, from their research and their perspectives, actually informs my perspective." -NRT-P#B</i></p> <p><i>"Your point of view is not the only point of view. So it's really important to kind of gather other thoughts, other train of thoughts, other perspectives, how different cultures, how different individuals have different disciplines approach a problem. More diverse faculty a top-down approach in academia seems to be the way to do it. I think programming and having a focus on it in our coursework would be a great place to start." -NRT-NP#F</i></p>
<p>General Theme 3: Transdisciplinary approaches aid academic success</p>	<p>This thematic category speaks to the individual ways LandscapeU trainees have derived significant overall benefits in their learning through the equipping of practical skills along with broader diverse disciplinary perspectives.</p>	<p><i>"You know, learning where I can include stakeholders in the process or how I can bring in other disciplines into that design, I think, was what really expanded for me under LandscapeU. And that's been really, anecdotally really helpful in my current work." -NRT-P#B</i></p> <p><i>"I would say from a practical standpoint, I learned skills from other disciplines than I'm used to that I think will be valuable in my own research now." - NRT-NP#B</i></p> <p><i>"But I feel like I know a little bit more about what they're learning. So that when I, when we're talking about ideas, I know this is where I'm coming from, I</i></p>

		<p><i>have a vague idea of where they're coming from. And I can feel a little more confident, a little bit more open to their perspectives, and saying, okay, like, I know, you know, this, like, I trust that you know this." -NRT-NP#E</i></p> <p><i>One of the things that attracted me to LandscapeU was that it was a program that was specifically for students who already had an interest in it. in terms of thinking about transdisciplinarity and other disciplines, I think this also kind of answers the other question: I think I've always been interested in integrating different disciplines even before I joined LandscapeU." -NRT-P#F</i></p>
<p>General Theme 4: Benefits in Mutual Learning Dynamics</p>	<p>This category highlights the impact of reciprocal educational experiences in the LandscapeU program, where students, educators, and community members can learn from each other.</p>	<p><i>"There's learning can happen on both sides, right. And I think academia does a poor job of learning from students in general. Academia is all about teaching students. And I think that that's actually, quite often, to its detriment; I think that there's a huge opportunity to be learning from students as well as teaching. I think that that's a place where Indigenous students could really have a large role. Not only is their knowledge valid, but they also have generational knowledge, which is unusual, I think, in other cultures and other contexts. And being able to communicate that, I think, would be very beneficial to academia and to other people, other cultures, other planning environments." -NRT-P#B</i></p> <p><i>"And I remember interviewing people and then saying, like, well, aren't you the expert and me being like, No way, like, I'm learning from you right now. So I think that would be an important role as the learner." -NRT-NP#B</i></p>

General Theme 1: Benefits of Applied Practice

Most of the interviews suggested that LandscapeU participants found a wide array of benefits from their exposure to various opportunities to learn from their TREES 574 Practicum class, diverse curriculum, and supplemental experiences (e.g., conferences, get-togethers, and opportunities to present research). For example, NRT-NP#B noted the invaluable learning that occurred while working with a diverse team in their Practicum course, which acted as the “playground” or platform for learning skills from other

disciplines in a project-based setting. For this individual, they noted how this experience gave them a deeper understanding of their own material relative to the project. There were a few instances where students directly attributed their benefits less to LandscapeU's goals and more to their prior experiences and direct exposure to individual projects within the TREES 574 practicum. Many people seemed to have a solid understanding of their personal experiences (e.g., based on the specific project they helped on) in relation to the experiences of their peers. These benefits were noted by trip participants referencing the trip to the Navajo Nation and by the non-participants. Overall, this theme demonstrated the strength of the program in including educational experiences that extend beyond the curriculum and offer flexible, practical engagements to enhance real-world applications of research and team dynamics.

General Theme 2: Finding Benefits in Diversity

Most participants in the LandscapeU program highlighted significant benefits of diversity, particularly that of peers and faculty during their time with the program. Participants noted the immense value they have found in personal and professional relationships, ranging from peer interactions to connections with faculty advisors and even direct engagements with me as a researcher. This cultural and academic diversity was attributed to both personal and professional development along with an overall broadening of people's outlooks in their own research. For example, participant NRT-NP#A pointed to how they felt their cultural identity had been "warped by reality" due to limited exposure to other viewpoints. This insight, along with NRT-NP#F's advocacy for inclusion of diversity in academia, demonstrates a clear need to pursue and engage with

diverse perspectives, particularly in ways that account for each student's research aims, personal experience, and global diversity.

General Theme 3: Transdisciplinary Approaches Aid Academic Success

Participants consistently noted a common theme of experiencing notable increases in overall academic motivation by way of their ability to integrate multiple disciplines into their home discipline and the practical skills (e.g., research methodologies and software programs) they acquired. Though many students noted how this educational approach increased the academic rigor via more classes and a shorter academic timeline, their motivation increased and helped them feel better equipped to pursue future research, professional work environments, and grant applications. For example, NRT-NP#B highlighted their newfound outlook on incorporating key partners (i.e., stakeholders) and other disciplines into their project designs — a skill they had already begun to apply in their current post-graduate work. Similarly, NRT-NP#B found that learning practical skills from other disciplines helped contribute to their own research and “academic toolkit.” These sentiments were both shared by and the very reason NRT-P#F was initially attracted to the LandscapeU program. Overall, these reflections highlighted the value of transdisciplinary approaches in bolstering academic success while providing real-world skills to inform trainee's professional outlooks.

General Theme 4: Benefits in Mutual Learning Dynamics

The theme of “Benefits in Mutual Learning Dynamics,” in the context of the LandscapeU program, encompassed the extensive community engagement dynamics highlighted by both participants and non-participants. More specifically, it is essential to have reciprocal educational experiences where trainees, faculty, and community members

can all learn from one another. For example, in Table 4.1, NRT-P#B highlights this approach through their critique of conventional academic approaches, noting how little emphasis there is on learning from their students, including in the LandscapeU program. They advocate for changes in academia where faculty teach and embrace learning roles, particularly in reference to non-traditional knowledge bases such as those represented by Indigenous students. They argue that this approach would both enrich academic perspectives and enhance the acceptance of diverse cultures. Although participants of the Navajo Nation trip had more significant ties to their reflections on the trip, non-participants frequently highlighted ways this theme applied from other mechanisms in the program (e.g., personal research experiences and instances specific to their respective TREES 574 projects). Only one non-participant referred to the course as a potential service to communities. Still, this theme overall emphasizes the program's success in creating spaces for students to be both teachers and learners, which broadens the impact of education.

Sub-question 2: Is there a conceptual model that reflects these outcomes?

In considering the following conceptual model (*Figure 4.1*) to represent the perceived benefits and learning outcomes described by my sample of LandscapeU trainees, it was essential to center the way time plays a linear role in their relationship with the research context and involved parties. This model visualizes how I have conceptualized the way relationships influenced by the four general themes play into this linear context and, further, how this has been beneficial to trainees according to their experiences within LandscapeU. As noted above, this model also attempts to represent the contextual factor of time that relationships take to develop outside of structured learning

agendas and timelines. The factor of time was considered due to the way trainee relationships (i.e., with each other, their instructors, and the research itself) played significant roles in how each experienced the program and applied the lessons learned. Therefore, the following model also attempts to illustrate respondents' relationship to their project's Principal Investigator (PI), who often serves a dual role as a TREES 574 practicum instructor (and serves as a committee member on this thesis). This dual role can sometimes blur the boundaries between educator and PI, prompting initial expectations and student roles to be less precise. As students continue to engage with the project, their specific roles begin to emerge primarily through organic discussion — a sometimes tricky dynamic to manage in terms of relationship development and contextual understanding with the demands of a shortened timeline. This dynamic is particularly challenging for new students to their academic programs, who may enter these intensive projects while struggling to adapt expert knowledge quickly while trying to build contextual knowledge about the project's site (i.e., broader historical and cultural implications). Overall, this model attempts to acknowledge the mix of relational contexts to which trainees enter their applied practice in the TREES 574 practicum. It aims to provide a framework that both captures this initial context, but the spaces within this experience that could benefit from further time and relationship building considerations. It should be noted that elements in the model did not account for elements such as the external disciplinary lab rotation nor the external disciplinary internship requirement as both were not referenced during the interviews.



Figure 4.1: Introduction to Trainee Research Contexts

Sub question 3: What are the perceived learning outcomes associated with an NRT-sponsored service-learning program for the Navajo Nation?

Table 4.2 demonstrates thematic insights from participants' experiences during their trip to the Navajo Nation. The following themes are organized according to their salience, with Trip Themes 1 (Personal Reflection) and 2 (Reciprocity) being the most frequently discussed. Nevertheless, it seemed that Theme 1 often served as a catalyst for Theme 3 (Cultural Humility), with participants considering their own positionality and gaining a deeper understanding of Diné communities. Similarly, Trip Theme 2 also seemed to connect to Trip Theme 4 (Enhanced confidence) as participants' new understandings prompted the fortified desire to contribute to Diné communities, other Indigenous communities, and their home communities. Therefore, themes 1 and 3 were combined within the thematic analysis following the Table 4.2 to better illustrate the dynamic interplay of all of the themes within our service-learning experience. Overall,

these themes illustrate the complexities of incorporating student’s personal and professional growth through guided service-learning experiences.

Table 4.2: Thematic results of the Navajo Nation trip participants

Code	Defined	Examples from the Data
Trip Theme 1: Personal Reflection	This theme captures participants’ introspective examinations of their cultural identities and the influence of their experiences, leading to a deeper connection with their background and a more fortified understanding of their research within broader cultural contexts.	<p> <i>“After the trip, I also thought a lot about it. It kind of made me want to go back to my roots more. And keep learning more about that history and connecting to that part of my culture more. It made me think like, what, what am I researching? Why am I researching it? Like, I was helping my community. I was, like, I feel like I want to give back to my community. But I don’t know how actually, like being in the US. So going back to doing research in my home community, for me, was like a way to feel that I was giving back to my community that allowed me to come here and study.”</i> -NRT-P#E </p> <p> <i>“Going to the Navajo Nation made me really think about my cultural identity. On Navajo Nation like every time I’m in like a majority native space, cultures like front and center I feel like on have a whole nation; it’s like people say their clans right away or they just start speaking Navajo or it’s very much like out and on show like undisputed but for white people it’s like not a thing that we acknowledge in our spaces.”</i> - NRT-P#A </p> <p> <i>“People accept me and accept me the way I am. They did not want me to change. They accepted me with my restrictions on feeding habits. That is because of my culture. And they respected what I value more or what I value less than that means from my culture. Thank you for reminding me of these things because we work for plants and communities, you know, in a wider group; I remember I got a chance to listen from different perspectives, like completely different perspectives. And now, I can also include the needs and challenges faced by these communities in my research.”</i> -NRT-P#C </p>

		<p><i>"My cultural identity, I think, I empathize with a lot of the problems there. Some of them made me angry, like the social injustice that I was seeing there."</i> -NRT-P#D</p> <p><i>"Everything was new for me... Everything I learned on that trip was everything I know. So definitely, there are a lot of ethical dimensions from people from the government, people from Navajo Nation, probably people from here in the eastern United States, which is also connected with the water system."</i> -NRT-P#D</p>
<p>Trip Theme 2: Reciprocity</p>	<p>This theme describes participant's mutual engagement and desire to contribute during their visit as they enhanced their understanding and appreciation for the Navajo Nation and its complexities.</p>	<p><i>"But yeah, just like a broader trip context of being on your lands and your family's land and seeing how that was, you know, an interaction with the land could be recreation, and hiking around helping. Putting work and effort into interacting with the land is just, I think, really cool. To me, that was just completely different."</i> -NRT-P#B</p> <p><i>"I think it's been really uplifting in the sense that sometimes you can get very lost in the details of your different assignments and papers and things like that. But it's actually helped me have more of a boldness and fighting for students, but even like a garnered appreciation."</i> -NRT-P#B</p> <p><i>And so that well I guess what I'm trying to get at is that the communication that I've learned to landscape you in the Navajo Nation trip is not just me communicating with other people or telling them my ideas, but it's also being able to receive and being able to learn from the people."</i> -NRT-P#F</p> <p><i>I really enjoyed the mountains and the piece, and then the cool air touching me. And some extra small sets of eyes. That was perfect for me. And also, I'm a quiet person. So I love that I love being there. I'm not that outgoing. And, also, I love the areas like when you see I love animals, because I grew up with them. I grew up with them. It's like peace therapy."</i> -NRT-P#C</p>

		<p><i>"Don't know if I pick out any one experience, I think the whole experience overall was helpful towards building my understanding of indigenous North Americans."</i></p> <p><i>-NRT-P#F</i></p>
Trip Theme 3: Cultural Humility	<p>This theme describes how Participants' who went on the trip expressed respect and the impact of understanding another culture, and how it might apply to broader research and academic contexts.</p>	<p><i>"I didn't realize how integrated across age groups Navajos communities are, like everywhere we went we saw people of all ages and like a lot of old people I didn't realize how many old people and a lot of young people are living on the Navajo Nation."</i></p> <p><i>-NRT-P#A</i></p> <p><i>"I didn't have any knowledge about the Navajo, like I knew about the Navajo Nation, I did not know about their culture, for many of the problems that they're facing. Like, being the largest, or one of the largest nations... the amount of issues that they have to face and the back and forth with the government... kind of affected me a lot."</i></p> <p><i>-NRT-P#E</i></p> <p><i>"So I was able to learn, like, a lot about this community and this culture and their history from the people themselves. I think that made it really unique from, like, just reading a particular book or learning about it in a class."</i></p> <p><i>-NRT-P#F</i></p>
Trip Theme 4: Enhanced Confidence	<p>This theme describes the way participants' felt more confident in themselves, their research and cultural expression after the trip.</p>	<p><i>"It's made me more motivated to pursue things that I'm really interested in and passionate about because now I feel like I have a solid rationale for what I'm doing like it's really important. I knew it was important, but like I really felt naive about it, and then after Navajo Nation and then all the other stuff came out in Navajo Nation, I feel less naive and more confident in my decisions. My rationale is not to become a famous academic, my rationale is to make a contribution in whatever issues I care about, not to publish a paper. "</i></p> <p><i>- NRT-P#A</i></p> <p><i>"And I never had the feeling of being a minority before coming here. So I always used to have in my mind, like, what do people think about me? What do these people do and how do these people perceive me? And then I was like, limited on speaking, I was limited, being limited and outgoing and setting the thoughts,</i></p>

		<i>these kinds of things, but now I don't have that idea. Like, I don't care. It's okay. That's my culture.</i> <i>-NRT-P#C</i>
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Trip Theme 1, “Personal Reflection” and Trip Theme 3 “Cultural Humility”

The theme of ‘Personal Reflection’ emerged most poignantly in the reflection of all Navajo Nation trip participants, which seemed to be connected to similar reflections surrounding Trip Theme 3, ‘Cultural Humility,’ as students reflected on ethical dimensions of research across government, community, and educational spaces. More specifically, participants were asked in daily reflections and my interview to evaluate their cultural backgrounds in relation to their research and the Navajo Nation community. Though participants did attend the trip to conduct research, this reflection seemed to translate to describe their research aspirations and motivations with more significant community considerations. For example, NRT-P#A described how seeing Diné culture “front and center” everywhere they went on the Navajo Nation highlighted how being a minority in such settings motivated a re-evaluation of their own identity and current research focus with the Indigenous Peoples. Similarly, participants like NRT-P#C expressed how the trip inspired a newfound appreciation for cultural diversity and prompted consideration for the unique needs and challenges of other communities they were actively working with. Both of these were coded instances of ‘personal reflection’ and ‘cultural humility’ as they represented shifts in the inclusion of Indigenous perspectives in research contexts. In some cases, participant’s reflections on this theme prompted major shifts in their personal and professional journeys after the trip. For example, NRT-P#E spoke of a complete change of their local research site in

Pennsylvania so they could begin studying and contributing to their home community – more specifically in ways that included their family and personal cultural dynamics. This decision was one of the most prominent expressions of the impact of the trip and the theme of personal reflection it prompted on embracing cultural humility in learning. Overall, both themes were reflected in differing ways for almost every Navajo Nation trip participant as they reflected on their lived experiences of approaching community settings with respect, openness, and readiness to learn from community members during the trip (i.e., cultural humility).

Trip Theme 2 “Reciprocity” and Trip Theme 4 “Enhanced Confidence”

During the interviews, Trip themes 2, ‘Reciprocity’ and 4, ‘Enhanced Confidence’ were closely related and also complimented themes 1 and 3 under the circular framework of CSC (i.e., adapted from reflective considerations from Diné CC; Werito, 2014; Benally, 1992). Many participants expressed appreciation for the knowledge that they encountered both during the interviews and during the trip as they were encouraged to observe the gift-giving protocol in a preface meeting with Indigenous community members to bring gifts from home to share with community members. Similarly, many participants noted how experiences interacting with high school students and helping with a project on my family’s land were fruitful additions to the trip that made them feel as though they were “giving back.” Participants, such as NRT-P#B, were struck by the culmination of experiences with community members (i.e., including my family members), which prompted them to include such dynamics in their considerations beyond academic papers boldly. Many participants similarly reported experiencing deeper respect and a growing understanding of the Navajo Nation’s communal dynamics, which they attributed to

influencing their confidence in ethically engaging with research and academic contexts. Participant NRT-P#C even mentioned how experiencing the solace that accompanied Diné lifeways on my family's sheepcamp was a form of "peace therapy" and later described how this helped them find reassurance in expressing their cultural lifeways in academia despite external views. Such expressions suggest that experiencing this reciprocal engagement in action contributed to their understanding of the Navajo Nation and Indigenous Peoples and increased their confidence in articulating their challenges. This transformation highlights how the trip's focus on reciprocity and direct engagement with community members was felt in their reflections and seemed to lead participants to feel more confident and motivated in their research endeavors; ultimately, this contributed to their rationale for pursuing work that promotes their personal and professional values.

Sub-question 4: Member check results and contrast between the general LandscapeU experience and Navajo Nation participants

Before addressing the new conceptual model, it is important to consider the following differences between experiences reported by non-trip participants and participants. Purely based on trip themes, it was evident that LandscapeU uniquely contributes to trainee development through structured educational themes and many opportunities (e.g., classes, external lab rotations, and external internships) for students to gain applied research experience. Themes such as General Themes 1 ("Benefits of Applied Practice") and 4 ("Benefits in Mutual Learning dynamics") from Sub-question 1 highlight the general benefits trainees can expect to experience from LandscapeU's

diverse curriculum, practicum class, and other supplemental educational opportunities.

This exposure, or “playground,” as NRT-NP#B phrased it, is crucial to enhancing trainees’ personal and professional growth, as mentioned by participants, who valued the learning inherent to the program’s diversity in the discipline and cultural background.

The biggest differences observed between general LandscapeU students and the trip participants was the depth of learning that the students garnered by those immersed in the culturally rich context of the Navajo Nation. This unique environment seemed to enhance their understanding, as many students were surprised by the rich cultural landscape and expressed amazement at experiencing such a salient culture within the United States. In contrast, the four trip-specific themes embodied the unique personal impacts of the trip for participants, the greater depth of understanding and enthusiasm they achieved in engaging with the LandscapeU tenants, and general themes of benefits/needs of their traineeship experience. For example, the insights of participants NRT-P#A and NRT-P#E, according to Trip Theme 1 ‘personal reflection’ suggested they experienced significant growth in their understanding of ethics and the way they present to community members as scholars within cultural dynamics, mainly through direct community engagement inherent to the trip. NRT-P#A mentioned this environment was one of the few times they experienced being a minority in a predominantly Indigenous space and the greater reflections this dynamic prompted. Although non-participants like NRT-NP#C reported similar reflective opportunities during the TREES 574 practicum and a two-day trip to visit a community they worked with, they described how these experiences were not required despite their utility.

Overall, the trip participants demonstrated a greater depth of learning and articulation during their interviews. This was evident in the length of their interviews, as trip participants tended to have longer sessions and provided more examples that gave context to the LandscapeU tenets. In this way, the trip not only broadened participants' academic outlooks (see General Theme 2) but also introduced other realities of the research process. Additionally, it created a more personal connection to the learned materials within LandscapeU as participants practiced cultural humility. Participants noted their appreciation for these cultural considerations, which were prefaced in a pre-trip briefing meeting with Indigenous community members and guided throughout the trip via open dialogue with community leaders, representatives from other universities and myself. These contrasts, in addition to the expressed feelings of reciprocity experienced by trip participants, demonstrate how such service-learning experiences can enhance knowledge gained in classroom settings.

While LandscapeU's general themes stress the value of transdisciplinary approaches and the benefits of expanding diversity in academic and personal perspectives, the trip-specific themes demonstrate a direct application and deeper valuing of these lessons in participants' lives and research practices. This distinction reveals that although LandscapeU's curriculum provides a positive academic direction, experiences like the trip to the Navajo Nation can serve as important platforms to apply such lessons meaningfully, mainly when community members guide and inform such trips.

Stemming from feedback and the initial graphic representation (*Figure 4.1*) that was developed during the member check, the following model titled "Setting the Tone: Service-Learning Interventions to Promote Better Relationships" captures the benefits of

our service-learning trip to the Navajo Nation and where they could fit within the LandscapeU program's existing approach to community research engagement. It is important to note that member check participants (two trip participants and three non-participants) all supported both the General Themes and Trip Themes while voicing specific support for more immersive experiences/opportunities within the program, greater transparency about community member expectations at the start of projects, and a re-conceptualization of the TREES 574 class to emphasize community needs directly.

Therefore, this new conceptual model contains elements of *Figure 4.1* overlaid with a circular diagram representing the themes and elements present in our service-learning trip – along with photos taken at each time of the day during the actual trip. Incorporated within the model are the ways the themes from the trip emerged according to the circular Diné CC paradigm (Werito, 2014), which I've adapted according to Hozhóogo Nasháa and CSC. It is important to note that *Figure 4.1* is not presented upside down but rather meant to be rotated physically to represent this Walk through space and time while observing the considerations inherent to each section of the circle. From there, the model introduces the places within the existing linear research context, denoted by figures “1,” “2,” and “3,” where service-learning interventions could be used to promote learning, more specifically, where they can be introduced to help trainees better understand the context, relationship dynamics and their place within the research to encourage deeper engagement.

Figure “1” places service-learning trips at the beginning of the principal investigator's prospective engagement with potential stakeholders, like the context of our trip to the Navajo Nation, where there were previously no active research collaborations.

This approach could be used in a way that helps them formulate their own projects and strategies for implementing LandscapeU frameworks with their colleagues as they situate themselves within the community context in which they intend to conduct their research. The second figure “2” denotes a model that introduces service-learning trips as part of the TREES 590 Colloquium, which presents an opportunity for class cohorts to plan and engage with potential research sites for their 574 Practicum class (i.e., typically taken the following semester according to existing research relationships). This approach could better meet trainees’ advocacy for an extended research timeline, allowing for more time to evaluate their choice of project engagement (i.e., typically two choices) via exposure to the community and stakeholders with which they decide their skills best fit. Moreover, this approach would introduce them to existing principal investigator research dynamics and allow researchers to engage in open dialogue with key community partners to better understand their need for the research.

Lastly, figure “2” proposes a scenario where supplementary service-learning trips could take place at the beginning of the TREES 574 practicum to introduce research teams to their respective sites formally. This approach would provide research site exposure, encourage community engagement, and be guided by deeper reflection. This portion of the model could specifically benefit from the categories of the places we visited during our trip to the Navajo Nation (see Appendix) to understand better the research context and the relational dynamics within the community where they will be situated during their semester-long Practicum experience.

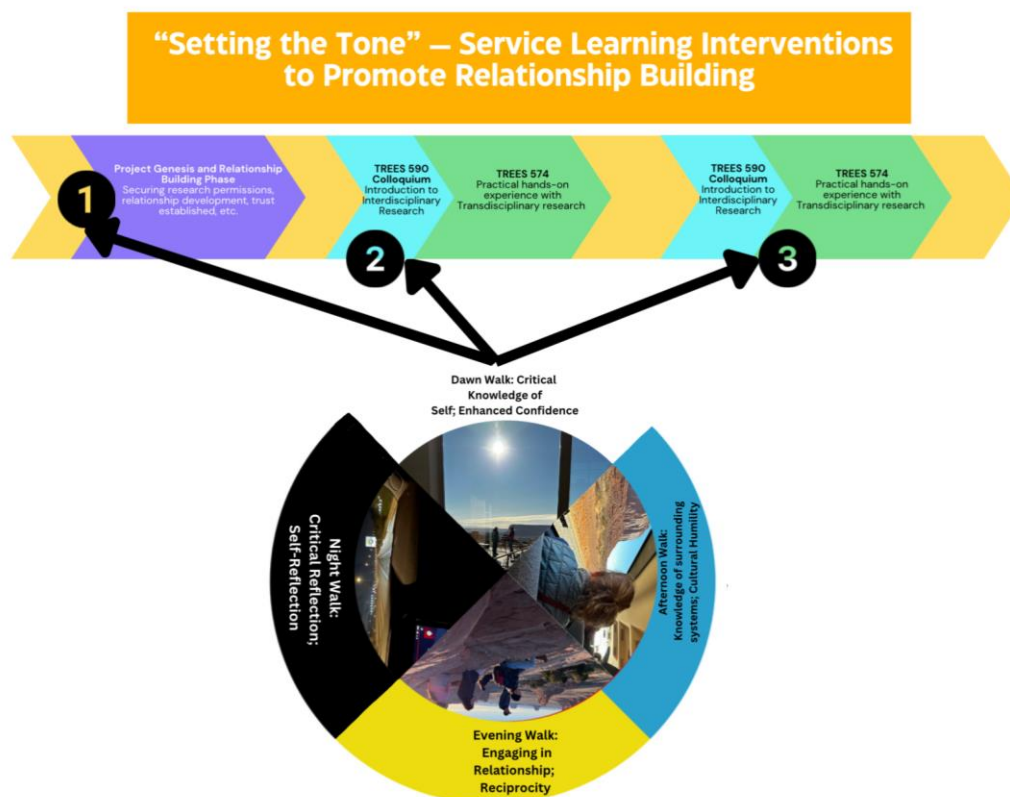


Figure 4.2: Introduction to Service-Learning Interventions into LandscapeU Context.

In conclusion, the combined influence of the general LandscapeU trainee experience and the themes that emerged from the service-learning trip to the Navajo Nation, this model highlights the role(s) service-learning experiences can play in deepening personal and professional growth. These experiences complement the LandscapeU program's foundational tenets, applying these lessons in research and preparing trainees to work in culturally rich and complex environments. By combining the lessons learned from our trip through direct community experiences and practices promoting cultural humility into the LandscapeU curriculum, this model attempts to enhance the program's impact while prioritizing community/stakeholders in the process.

Research Question 2: Aligning with Indigenous epistemologies and methodologies, how can we navigate the complexities of securing research approvals, while leveraging insights from literature and firsthand experiences, to ensure the voice of the writer (a Diné scholar hailing from the Navajo Nation) remains central in the research narrative; thus using quasi auto-ethnographic methodologies, documenting how and if complexities are navigated to help inform future scholars regarding how to address and advance this research?

To begin addressing this question, a participant (NRT-P#C) asked me the following question at the end of their interview when I asked if there was anything they would like to add. They asked, “How has asking these questions impacted your view of the trip? What would you hope people had gotten out of it? What would you hope future people get out of it, and if that's changed at all?” To which I answered:

“It's been wonderful, and I think just uplifting in this time of finishing the degree. I think it's been really uplifting in the sense that, sometimes you can get very lost in the details of your different assignments and papers and things like that. But it's actually helped me have more of a boldness and fight for students, but even like a garnered appreciation of how you all experienced my favorite place in the world. Like, answering your questions taught me a lot about myself, and like how I present to the world from my origins.”

Beyond the warm sentiments and initial reflections behind this interaction, I have developed a deeper understanding of my colleagues and our shared experience in the LandscapeU program. This was assisted both through the interviews, where the

interviews flowed in conversation given my familiarity with the participants, and in reflecting on my experiences in relation to the program goals — which this thesis has forced me to not only research further but organize cohesively according to my story. This has been a vital aspect of the research that has helped me reflect and better interpret the narrative of my graduate education in many spheres. Something constructive given my condensed two-year Master's timeline and constraints of colonial research goals and frameworks, to which interviewees often referred. Particularly for me in transitioning into a new field of study, which created the challenge of assimilating into my new field while being responsible for being an expert representative in the practicum. The numerous extracurricular activities in which I participated exacerbated such constraints—for instance, traveling back and forth to explore future research collaborations on the Navajo Nation, completing duties under my part-time position as a residence-life coordinator at the University Park campus, and attending a plethora of meetings to represent and advocate for Indigenous students on campus in my capacity as Vice President of IPSA. Much of this has been hard to fully understand and appreciate with a full graduate class schedule and the additional opportunities I have taken over academic breaks. For instance, my experiences leading NAU students on 3-day service-learning trips on my family's land every semester. These experiences also significantly informed my curiosities surrounding service-learning initiatives for college students in a Diné context and allowed me to remain engaged with my community.

I also participated in a five-week summer research internship in Australia to live and conduct studies with the Martu People of Western Australia. Such advocacy significantly aided in the ways I was able to explain my research's relevance to advocacy

on campus, which opened the doors to many guest-lecture opportunities in Anthropology, RPTM, Geography, and Ecology fields, along with presentations under residence life, the Paul Robeson Cultural Center and external educational programs (e.g., presentations to high school students, college-gap year programs, and other universities like NAU).

I have also found that this form of self-advocacy has significantly contributed to communicating with family members back home. Particularly, this has been related to a collaborative grant initiative involving three professors from the trip and external collaborators from Diné College and Boston University. Our transdisciplinary grant proposal to the National Science Foundation's Dynamics of Integrated Socio-Environmental Systems was recently awarded and will allow me to facilitate Indigenous research projects (i.e., in the areas of anthropology, archeology, and ecology) on my family's land surrounding our traditional shepherding practice. This initiative, initially born out of shared reflections during the service-learning trip studied in this thesis, has gained traction and will allow me to live on my family's homelands while bringing in student groups to facilitate service-learning. Therefore, studying this service-learning trip on the very lands where I hope to run future programs has been both natural and a form of critical action toward a tangible project. Amidst the formation and execution of the grant proposal were many research meetings where I had to convey my vision to a multidisciplinary audience, undergo the extensive Navajo Nation Research Review Board process, and promote the project to community members back home. As mentioned in the introduction, I was also able to enroll in a Diné College Indigenous Research Methods class to further integrate into my community and better inform the narrative that the present thesis has taken on. Each experience has fallen into various parts of Diné CC,

which I have continued to actively use to organize my learning around myself and my family's knowledge, the institutions of the Navajo Nation research process, while ensuring both actively contribute to the grant initiative and the thesis.

All of these have also significantly contributed to the positionality of the Navajo Nation as I have combined my experiences growing up there, along with more recent experiences working directly with Navajo Nation leadership — in relation to the many perspectives of the Navajo Nation in an intertribal lens, national priority lens, and more recently a global lens with my experiences interacting with Indigenous Peoples in and out of the country (e.g., Martu People). More specifically, these experiences have not always come directly through traveling, but more so through the many guest speakers and visiting professors to Penn State from other Indigenous groups across the world, which I often have gotten the chance to interact with as the Vice President of IPSA. Experiences that were further boosted by my TREES external disciplinary lab rotation within the Global Youth Storytelling Lab group under the geography department. Nevertheless, though these experiences have been helpful in informing my academic outlook, they have been even more sentimental as I have made many friends from around the world and have gotten to laugh, cry, and dream with them as we coordinate in stronger collaborative advocacy. All the while making the time and space to support the next generation of Indigenous scholars, whom I hope will run faster and farther as they embrace their identity. I further reflect on my personal evolution in response to RQ2 through Discussion within the next Chapter.

Chapter 5: The Night Walk or Haa'ayiih, Sihasin doo Holdilzin "Rest, Contentment and Respect for Creation"

Discussion

Introduction

As my time at Penn State University comes to a close, I reflect on the transformative six years that have defined both my academic journey and have helped me find new communities within my academic discipline and the LandscapeU traineeship. During this time of transition and reflection, I draw on Diné teachings from Herbert Benally (1992) and my own experiences as an Indigenous scholar to mark the end of a chapter and the beginning of a new continuous cycle defined by the teaching of Hozhóogo Nasháa. My time at Penn State, particularly during my time as an undergraduate, began the formation of my research interests, where I took every opportunity to focus on issues related to my home on the Navajo Nation, which I have now had the privilege of elaborating on during my graduate studies. This process aligns well with Werito's (2014) critical consciousness theory as I have used those early reflections and newfound contextual understandings within my program to now reflect on my critical action step — organizing and interpreting a service-learning trip to the Navajo Nation through this master's thesis. This immersive experience highlighted the limitations of many colonial research assumptions while capturing the full impact of such experiences in direct reference to the trip and experiential learning approaches more

broadly (Astin & Sax, 1999; Davidson-Hunt and O’Flaherty, 2007). Though this thesis attempts to contextualize the impactful experiences of our visit, it is essential to consider how concepts within my field, such as the study of ‘awe’ in educational abroad experiences (Thomas, 2020), remind us that the impacts of an experience sometimes cannot be expressed or appreciated by mere words.

Therefore, my interpretations of participant’s responses lean heavily on the contextual realities surrounding the trip and the sites we visited, including the understanding that the trip represented engagement with an Indigenous community in association with Penn State’s legacy of profiting off the dispossession of Indigenous Peoples as a Land Grant institution. Moreover, the haunting legacy of the Carlisle Industrial School shaped approaches to educating Indigenous Peoples in ways that intentionally excluded their culture and language from academic settings. These realities couple with Chilisa’s (2019) assertion that ‘research,’ mainly conducted in colonial contexts, is a curse word for many Indigenous communities due to their legacy of extractive research on Indigenous communities. Understanding these notions, it was vital for me as an Indigenous scholar to evaluate my positionality according to Werito (2014) and concentrate the research scope on that of my LandscapeU community to understand our research practices better and conceptualize appropriate action. Therefore, it was decided to understand my program’s research objectives through my colleagues in the LandscapeU program to evaluate their needs and aspirations as researchers in reference to my research’s focus on service-learning programs on the Navajo Nation.

Moreover, our engagement was and is intended to be continuous, not only from my standpoint as an Indigenous scholar intending to return home but also through the ongoing professional relationships and future research avenues that formed during the trip. For instance, the camaraderie cultivated during the trip extended further opportunities for me to undergo a research experience with the Martu People in Western Australia with the Anthropology faculty (also serving on this thesis committee). This experience helped me gain expertise in documenting traditional ecological knowledge with the Martu and enhanced my global understanding surrounding our shared realities (e.g., challenges with invasive uranium mining and sovereignty). Additionally, many participants mentioned how their informal ‘car conversations’ led to similar opportunities and insights leading to personal and professional growth. Such experiences were important to document as they signified this additional growth through merely ‘walking together’ in informal settings. The following sections provide further insights into how each research question was addressed in my findings.

Research Question 1:

This thesis seeks to determine how service-learning objectives and ethical considerations differ in Indigenous lands, like the Navajo Nation, compared to non-Indigenous lands. In addressing this, I first turned to research sub-question 1 to assess how learning objectives in the LandscapeU program were conceptualized by all trainees, including trip participants. I identified that all learning outcomes were present, including triple loop learning facets and tended to be supplemented by prior research experience and were better explained in relevance to trainee needs through the general themes of ‘Benefits of Applied Practice,’ ‘Finding benefits in Diversity,’ ‘Transdisciplinary

Approaches Aid Academic Success’ and ‘Benefits in Mutual Learning dynamics.’ These themes provided a baseline for understanding general expectations within the traineeship, which then allowed me to conceptualize a model that organized the themes both temporally and relationally. Particularly with reference to key experiences such as the TREES 574 practicum experience, where trainees noted experiencing the most personal and professional growth through the hands-on application. From this foundational understanding, the themes emerging from the trip to the Navajo Nation provided both a contrasting and complimentary experience for trip participants. They noted many instances and benefits falling under the themes of ‘Personal Reflection,’ ‘Reciprocity,’ ‘Cultural Humility,’ and ‘Enhanced Confidence’ associated with their reflections on the trip experience. Notably, the themes of “Reciprocity” and “Personal Reflection” were most salient, demonstrating how nightly guided reflection sessions, the protocols of gift-giving with community members, and the service aspects of the trip (i.e., speaking with high school students and manually tearing down an old corral at my uncle’s sheep camp) significantly contributed to their personal growth. While it was evident that trainees appreciated such opportunities from the General Theme of Benefits of Mutual learning dynamics, the trip themes of cultural humility and personal reflections seemed to spark a deeper understanding and appreciation of previously unconsidered cultural complexities. This, in turn, led to reinforced confidence, as seen through trip participants’ major shifts in research focuses and more culturally aligned research endeavors.

Such instances of informed action might suggest that the trip aided in contributing to the participant’s CSC (Kulago, 2019), which encourages non-Indigenous participants living on lands colonized by their ancestors to recognize and understand their ongoing

complicity in the colonization and oppression of Indigenous Peoples. More specifically, through a process of self-reflection on their positionality (i.e., the Trip theme of Self-reflection), followed by deeper reflections on the systems surrounding them (i.e., the trip theme of cultural humility), followed by taking critical action informed by both (i.e., trip themes of reciprocity and enhanced confidence in themselves, their research).

Participants reported lasting changes inspired directly by their experience in the Navajo Nation, such as relocating research sites and stronger incorporations of Indigenous perspectives into academic pursuits. Though the semi-structured interview questions I used were more informed by my own reflections on Diné CC, similar reflections seemed to promote CSC for trip participants.

This depth, primarily attributed to exposure to a culturally rich environment, ultimately highlighted the need to update the conceptual model for general LandscapeU trainee experiences to incorporate service-learning experiences as a complementary component of the academic framework. This model was refined during the member check, as participants agreed that service-learning experiences were both beneficial and strong approaches to enhancing trainee learning within the LandscapeU program. Particularly in tandem with triple loop learning as students are able to reflect on their research experiences to better implement future practices within the program and in their careers. Moreover, many non-participants had mentioned the trip, such as NRT-NP#A, who commented on the themes and quotes of participants of the trip during the member check, saying, “I don’t think that someone will respond with this level of enthusiasm without having a meaningful experience.” During the member check, it was also revealed that most trainees reported not feeling like they had contributed any community service

during their time with the LandscapeU program, which prompted the question of whether they view the TREES 574 practicum experience as a form of community service.

Participants of the member check agreed that they did not currently see this experience as a form of community service, but reconceptualizing it as such could shift their approach to ethical community research engagement and better fulfill their needs from General Theme 3, “Benefits in Mutual Learning Dynamics.’ Indeed, NRT-NP#C had noted they had a unique follow-up experience during their practicum experience but expressed that this was more of an organic pursuit than an expectation associated with research within the LandscapeU traineeship.

Therefore, the question remained: how can transdisciplinary approaches to research shift to promote better relationships? During the member check, we agreed that not only service-learning experiences in community contexts could help, but also prolonged time to foster and emphasize community relationships. The trip to the Navajo Nation provided a robust model that suggests that a week of intensive learning could provide strong considerations, but how could future trips be shaped to mimic the effects of the trip and challenge traditional assumptions in colonial research contexts? The interventions proposed in my new model of research suggest that the presence of service-learning models could aid in three different areas: through future exploratory service-learning trips to potential research community contexts, incorporating service-learning trips into the TREES 574 practicum experience and or creating introductory service-learning trips for students in the TREES 590 colloquium where they can explore research opportunities for the next semester. Still, the question remains: How should these service-

learning experiences be structured to mimic the themes from the trip to the Navajo Nation and foster CSC for participants?

This question was better answered during the process of data collection and analysis; I was able to take an Indigenous Research Methods course online through Diné College, where I learned more about the ethical considerations of approaching research with Indigenous communities. I learned about approaches to research, including the conversational method (Kovach, 2015), talking circles, and stronger protocols of gift-giving and researching with people/subjects vs. on them (Wilson, 2008). I also learned about the 6 Rs of research with Indigenous Peoples (Tsosie et al., 2022), which include reciprocity as an essential component to ensuring mutual benefits along with the themes of respect, responsibility, relationality, relevance, and representation. From the onset, informing future learning experiences by these themes and the themes aligning with CSC during the trip could align to create a stronger platform for ethical engagement with both Indigenous and non-Indigenous communities within the Landscape program. Though I could not incorporate these insights (i.e., including those from my Indigenous Research Methods Course) into my updated conceptual model, they have provided strong considerations for interpreting my research to be beneficial for both the LandscapeU traineeship and broader research contexts at Land Grant institutions.

Research Question 2:

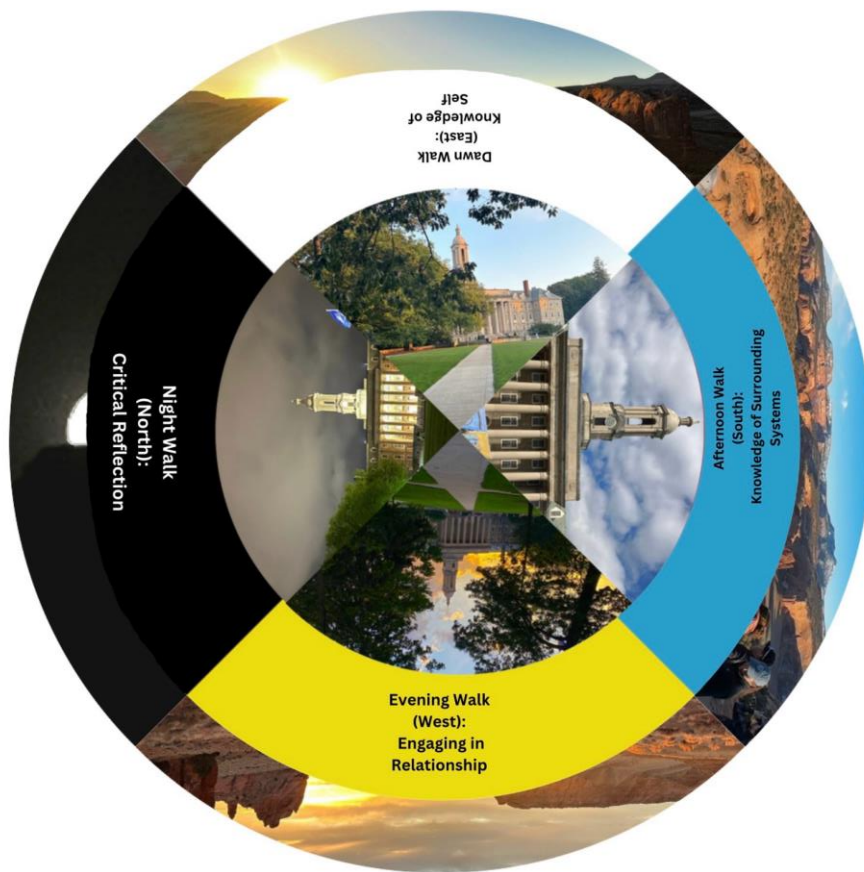
Navigating the complexities of securing research approvals while aligning with Indigenous, specifically that derived from the Navajo philosophy of Hozhóogo Nasháa, has required an approach to contextualizing my experiences and their relevance to the context around me through a personalized methodology (i.e., incorporating the Diné oral

tradition of storytelling vs. a quasi-autoethnography). This was also achieved by taking advantage of the flexibility inherent to qualitative approaches (Lavallée, 2009) while simultaneously challenging such positivist frameworks by embracing personal bias and acknowledging all my relationships in my narrative (Wilson, 2008). Thereby, my proposed conceptual model for stronger research practices called for more time and relational consideration to be prioritized in research institutions and spaces – elements inherent to the Diné beauty walk. This notion of walking in beauty is an encompassing consideration facilitated by various types of reflection throughout the day – a philosophy that has not only been integral to my personal walk as an Indigenous scholar but also in addressing the challenges that come with research, such as obtaining necessary approvals. Though difficult to experience, these challenges represent an imbalance in Hozhóogo Nasháa, which can only be healed by maintaining the walkthrough of love, relationship, and reflection.

My earlier conceptual model attempted to introduce these complexities by calling for the necessary time to build meaningful relationships and the deeper relational considerations required to maintain these bonds, which are vital for ethical research practices. By which, service-learning models can provide strong mechanisms to involve students better in engaging with both curriculum and research, while striving toward triple loop learning as such experiences are prioritized. These elements are crucial to address within Indigenous research contexts (Wilson, 2008) while navigating the complex paths to achieving an education in a colonial institution. Early in my research walk at Penn State, I faced significant challenges in contextualizing my experiences and research interests as an Indigenous student. Though this was a difficult task, the healing

walk led me back to the foundational reflections of my family and Diné figures of resilience like Chief Manuelito. By relying on my faith, my identity, and these stories, I garnered a sense of validation that colonial institutions could not provide. These reflections led me to the frameworks of Diné CC and the methodologies I incorporated to combine all my experiences into this thesis, which serves not just as an accomplishment but a step to reclaiming my narrative within new contexts. Thereby, this discussion concludes with a final conceptual model (*Figure 5.1*) that visually symbolizes my academic and personal journey.

Figure 5.1: Model of my Journey



This model features images of Penn State's Old main building taken at various times of the day and year, illustrating the ongoing cycle of my learning experiences,

surrounded by the foundational lessons I learned while walking my homelands in the Navajo Nation. Each image was chosen to represent different aspects of my journey along with the directions, colors, and views of my home, which is ultimately surrounded by our four sacred mountains on Diné'tah. Thereby connecting my past, present, and future per of Hozhóogo Nasháa as I walk through life. This all-encompassing circle includes not only all of the challenges and hardships of the past but also my core, built on hope, love, and faith that guides me in the beauty walk in whatever context. Arranged in a circular pattern, the figure must be physically rotated to properly view each section, symbolizing life's cyclical nature and learning through space and time. This model, in reference to *Figure 4.1*, pays tribute once again to the non-linear concept of time within my walk that promotes accountability as I encounter all my relations (Wilson, 2008).

It is my hope that this model also exemplifies the notion T'ahdii kóó honiidló, "We are still here." Particularly in a place like State College, which my mentor Jorn Junod asserts is a space where the world comes to you. I also hope this image represents the dynamic journey that other scholars can look to for guidance and inspiration, knowing what is possible in the colonial world of academia for a mere 'rez kid.' Particularly how it was inspired by overcoming adversity and represents the opportunity to alter academic discourse and practice. In this, I acknowledge Coburn's (2015) reflections on this work as "brave scholarship" in that I have followed in the footsteps of many other Indigenous students as we lay bare our personal histories in the hopes of informing the next generation and fully articulating our sovereign position about greater national and global contexts. Nevertheless, I have found this process to be personally rewarding and a

blessing as I lay down my life and embrace what my Uncle John calls “a new brave” as I follow in the footsteps of Chief Manuelito and my parents as life-long educators.

Conclusion

As I look forward to the remainder of my walk beyond Penn State, the lessons and relationships I have formed will continue to influence my approach to transdisciplinary research and ethical collaboration. I’ve concluded that research and educational models like LandscapeU benefit when grounded in relational accountability (i.e., per Wilson, 2008) and the time it needs to unpack our research contexts. These notions resonate with me as I prepare to ensure that my future research and efforts are grounded in my foundational relationships with my family, communities, and nation, while my story here bears witness to the challenges of this journey. Blending classroom learning with non-traditional approaches like service-learning has equipped me with skills and experiences that have reinforced my commitment to Hozhóogo Nasháa, promising personal growth and meaningful contributions to all of my relations. Additionally, these non-traditional learning methods are crucial gateways for decolonizing institutions that have historically exploited Indigenous peoples. Still, the heart of my research lies in advocacy for change and empowering Indigenous youth (Werito, 2014; Freire, 1973) to embrace their identities and knowledge and to tell their stories. Notably, as they embrace, they realize the inherent value of our lifeways while finding creative ways to utilize Indigenous epistemologies and methodologies to take responsible actions that benefit their communities. Despite existing in spaces not engineered for these perspectives and

homing in on the strength in our stories passed down from our ancestors, we live realities worthy of their sacrifices and beyond their wildest dreams.

Nevertheless, during the process of writing this thesis, I have been reminded that research conducted by an Indigenous person does not equate to Indigenous research and that the heart of such research lies not in the methods or mere words but in the incorporation of personal, cultural and community values guiding the interpretation. Moreover, I assert that Indigenous scholars are not relegated to using these frameworks beyond their utility to their personal aims, but rather, I hope my research insists that our communities benefit when individuals grow and succeed in learning. Therefore, though my methodology was helpful in my context, I acknowledge it may not translate to other contexts or institutions. Still, I hope my example, mistakes, and triumphs can be used to educate any scholar in enhancing, respecting, and integrating Indigenous knowledge into institutions in efforts to decolonize them.

Although the outcomes of my interviews and personal reflections advocate for diversity and inclusion of other knowledge frameworks, I caution against how such messages could be actualized by tokenizing individuals for their culture. Instead, I'm proposing a more intensive focus on making space in institutions for alternative ways of knowing in colonial academic settings, should scholars embrace them. For instance, it includes challenges to colonial assumptions and ways they influence relationships with humans, non-human entities (i.e., research fields), and community engagement more broadly.

As I close, I realize the future of my contributions to the Penn State community, including those surrounding the Indigenous Peoples student association, remains

uncertain after I leave the university. While the Penn State Acknowledgement of Land should endure as a permanent symbol of healing for future generations, my path home is bittersweet as I take these valuable memories and apply the gained knowledge and resilience to my home community and Navajo youth. While Penn State's history of dispossession has scattered many of our relatives, I remain hopeful for their potential as I realize it is in these spaces we, as Indigenous Peoples, can find the strength to overcome while building community and investing in future generations like we are taught. The insights from my interviews have reinforced this hope, and I believe that we will continue to thrive and heal the world around us wherever we exist.

On a final note, I recognize that complex and sometimes painful narratives, which bare personal histories and challenge colonial assumptions, could falsely represent notions of victimry (i.e., verses survivance; Higgins, 2016), which I hope I've refuted well given my research's efforts promote the success and resilience of living Indigenous Peoples. Particularly our youth, whom I will always believe in and fight for to ensure they receive the support and justice they deserve in their endeavors. Indeed, I think each of our youth – our most valuable assets as Indigenous Peoples – holds the dreams and strength to continue preserving our lifeways and healing the world through their innovation as they embrace their full identities, one step in beauty at a time.

Limitations and Future Research

My research in this thesis represents a paradox as the mutual beneficence detailed in RQ1 and General Theme 3, 'Benefits in Mutual Learning Dynamics' is only implied due to the limitations of acquiring appropriate community perspectives; more

specifically, Diné community perspectives in the context of our trip to the Navajo Nation. Although my family and former high school teachers anecdotally noted their appreciation for the service aspects of our trip (i.e., speaking to high school students and reorganizing the materials of an old corral on our family land), it remains uncertain if the trainees' presence on the Navajo Nation was beneficial beyond my personal viewpoint. Not interviewing community members directly means that it remains unclear if the research focused on community needs and perspectives beyond the perspectives of my interview participants. This limitation came largely in response to the constraints associated with conceptualizing and implementing a master's level research project within two years while pursuing a dual degree in TREES. These challenges were compounded by the complexities of securing research permissions with the Navajo Nation Research Review Board. This initial challenge in engaging Diné community members was further complicated by the Navajo Nation Council's Resolution CJA-01-22, which removed the option for teleconferencing (i.e., a temporary option available due to social distancing protocols during the COVID-19 pandemic). Indeed, without the participation of Diné community members, it would have been more beneficial to incorporate interviews with the Penn State faculty and staff on the trip. Nevertheless, three of the seven are on my thesis committee, which would have complicated potential biases beyond those I have acknowledged in the relational nature of the closeness with my student peers.

Building on these immediate limitations, my research timeline – specifically in relevance to data analysis – was constrained as many of the insights and interpretations of the research were informed by an Indigenous Research Methods course I completed online in Diné College's Native American Studies department. This course introduced me

to Margaret Kovach's (2015) Conversational Method, which would have ideally been used to conduct three separate interviews with my participants. While my methodology was reflexive enough to incorporate some of her insights on qualitative research (e.g., gift-giving protocol), the insights could have better informed the questions – organizing them more intentionally according to participant's relationships with my research topic (i.e., service-learning), my question, and research agenda. Similarly, using frameworks like Tsosie et al.'s (2022) 6 R's of Research in Indigenous communities could enhance the structure and ethical considerations by evaluating the LandscapeU curriculum and our trip according to these tenets. Still, these principles could guide a future project using the data collected to re-code interview responses to better assess the trip's effectiveness. Additionally, this coding strategy could be completed with a more intentional focus on aspects of Critical Settler Consciousness from the start instead of an afterthought.

Walking forward, it is my hope that the lessons learned from this thesis can be applied to programs for Diné scholars, particularly those raised outside of the Navajo Nation, to help reconnect them to their homelands. Within the LandscapeU program, future trips to communities like the Navajo Nation were encouraged as participants reflected on its transformational potential during the member check. Additionally, further opportunities could be explored to design trips specifically around frameworks presented in this thesis such as loop learning and CSC to facilitate trainee's engagement with their communities. Explicitly, service-learning trips were noted as strong mechanisms that should be implemented to boost curriculum. Such programs could also benefit from frameworks surrounding Indigenous Heritage Tourism (Ruhanen & Witford, 2021). Future research outputs such as this thesis could also benefit more from the intentional

decolonization of language used in the research process. Trip participants witnessed this directly as they shifted their language from “stakeholder” to “key participant” after an interaction at the Northern Arizona University Native American Cultural Center. Nevertheless, the language surrounding reciprocity in this paper could have also benefited from this in changing notions of “giving back” to “planting forward” (Chilisa, 2019) better to reflect the ongoing contributions to responsible community research.

Overall, this thesis sets the foundation for a possible future dissertation or could be integrated into our Dynamics of Integrated Socio-Environmental Systems National Science Foundation grant application in the interest of applying these themes and lessons learned in real-world applications. Nevertheless, they may also live solely in this thesis for generations to come. They represent a step forward in Hozhóogo Nasháa and a more respectful research outlook that honors Indigenous ways of knowing.

Appendix A

Email to LandscapeU Trainees

Email Subject: Invitation to Participate in a Study on Our 2023 Trip to the Navajo Nation

Dear LandscapeU students,

I hope this email finds you well and thriving! I am currently undertaking a research study for my master's thesis that seeks to delve into our 2023 Spring Break trip's experiences, effects, and insights.

Study Objective: The core objective of this study is to understand and evaluate the impact of our 2023 trip on your perceptions of Native peoples and how it has possibly influenced your professional outlook. Your individual insights will be invaluable in evaluating specific experiences, places, and dynamics you encountered during the trip. The overarching goal is to enhance such experiences for future student groups, including Navajo students, as we seek to shape the narrative surrounding the Navajo Nation.

Thesis Theme: At the heart of this research is a guiding question: "How can service-learning programs to the Navajo Nation, facilitated by colleges and universities, ensure the ethical involvement of largely non-indigenous participants in a manner that mutually fulfills the aspirations of indigenous student communities, meets the objectives of the service-learning programs, and respects the values and knowledge transfer prerequisites of the host communities?"

Your Role and Contribution: Your insights and experiences are integral to this study. As a participant, you will be asked to provide detailed responses that target specific experiences during the trip, reflecting on:

- Your perceptions and understanding of the Navajo Nation and its people before, during, and after the trip.
- Specific interactions or moments that significantly impacted your perspective.
- Your thoughts on how the trip could be improved to ensure an ethical, meaningful, and reciprocal relationship between non-indigenous participants and the Navajo community.
- Suggestions on how colleges and universities can create more inclusive and respectful service-learning programs that uphold the dignity, values, and aspirations of indigenous communities like the Navajo Nation.

Your feedback will be instrumental in crafting recommendations for future programs, ensuring they are both impactful and respectful.

Confidentiality: Please be assured that all responses will be kept confidential, with findings reported in an aggregated manner to protect individual identities. Your participation is entirely voluntary, and you can withdraw at any point should you decide to.

I genuinely believe that your involvement will play a pivotal role in this research, helping shape future service-learning programs and fostering a deeper, more respectful understanding of indigenous cultures and communities.

Kindly respond to this email if you're willing to participate, and I will provide further details on the next steps. Thank you for considering this opportunity to contribute to meaningful research.

Warm regards,

Tim Benally

Navajo Nation Trip Itinerary and Learning Outcomes Guide

The 2023 spring break trip to the Navajo Nation was an immersive experience that was carefully orchestrated to provide a deep dive into the multi-dimensional aspects of the Navajo community. Undertaken by a group comprising seven students and six staff/faculty members associated with the LandscapeU National Research Traineeship, the journey was not only educative but also highly introspective, fostering a mutual exchange of ideas, insights, and experiences.

Saturday, March 4th

Goal: Commence the journey, setting the tone and ensuring smooth logistics.

Activities: Departure from Philadelphia, Pennsylvania, to Phoenix, Arizona.

Notes: The day was majorly a travel day, ensuring that participants were settled and ready for the week ahead.

Sunday, March 5th

Goal: Acclimatization to Arizona, an introduction to Arizona's natural landscapes, and a demonstration of the five-hour drive necessary for many Navajo people, like the researcher, to obtain resources.

Activities: Drive to Flagstaff followed by a hike outside of Phoenix at Badger Springs and a visit to the Northern Arizona University Native American Cultural Center.

Institutional Significance: Engaging with staff from a comparable institution to Penn State (i.e., in Land Grant Status) that has an extensive number of resources dedicated to supporting Indigenous students, including A Native American Cultural Center, discounted tuition, an office of the Vice President for Native American Initiatives, a Tribal Advisory Committee on Research and admissions infrastructure to recruit Native American students to the institution.

Monday, March 6th

Goal: Tour sites on the Western portion of the Navajo Nation.

Activities: Travel to Monument Valley, visit the iconic landmarks, and meet with the local 25th Navajo Nation Council Delegate who oversees the area.

Institutional Significance: Engaging with a member of the 25th Navajo Nation Council, who provided insights into the nation's political dynamics and decision-making processes, critical for understanding the region's challenges and aspirations. Additionally, I learned more about the Navajo Nation's energy policy from representatives from the Kayenta Solar Farm and took a tour around the infamous Monument Valley Tribal Park.

Tuesday, March 7th

Goal: Delve into Indigenous Resilience and energy systems from another comparable program (i.e., another National Research Traineeship program) in the University of Arizona's (UA) Indigenous Resiliency Center.

Activities: The group first visited the Indigenous Resilience Center Groups. This was followed by a session at the Dilkon Chapter House where members of UA's traineeship from the University of Arizona conducted Solar Nanofiltration training. The trip concluded with a visit to the Hopi reservation, located within the Navajo Nation. Here, students gained insights into intertribal dynamics and traditional farming methods, courtesy of another UA affiliate and Hopi citizen.

Institutional Significance: Dilkon Chapter House is an institution within the Navajo Nation dedicated to community outreach and training, especially regarding sustainable solutions for challenges such as water scarcity. Furthermore, the University of Arizona's respectful engagements with local tribal members and community-based institutions serve as an exemplary model for responsible partnership.

Wednesday, March 8th

Goal: Explore other educational and traditional knowledge systems and pathways.

Activities: Visited Diné College and met with a professor from the Chemistry Department to understand the institution's commitment to safeguarding and promoting Navajo traditions and wisdom. Subsequently, travel to the researcher's former high school. Here, a seminar was organized with high school students, pre-chosen based on their college aspirations. During this seminar, the researcher explained the trip's objectives, and both high school students and researchers had the chance to exchange questions.

Institutional Significance: Diné College embodies the Navajo Nation's academic and intellectual facets, playing a pivotal role in safeguarding and perpetuating the Navajo language, culture, and traditions. Furthermore, by highlighting collaborations with the Diné College land grant office, which assists local farmers, including the researcher's family, trainees were provided insight into a vital empowerment source for Navajo students. This visit also allowed trainees to juxtapose the mission statements of a major research institution with that of a community-centric establishment within the first-ever Tribal College/University (TCU).

Thursday, March 9th

Goal: Personal connection and cultural immersion.

Activities: Participants visited the researcher's family grazing and homesite near Round Rock, Arizona. Here, they experienced the researcher's lifestyle related to sheep herding.

Institutional Significance: The researcher's family camp represented the personal and familial layers of Navajo society, shedding light on the severe challenges presented by neighboring uranium mines, the Navajo Nation's drought conditions, and the fundamental economic implications of sheepherding.

Friday, March 10th

Goal: Understand governance, media, and broader institutional structures.

Activities: Visit Window Rock, engage with officials at the Navajo Nation office, and explore the Navajo Arts and Crafts Enterprise.

Institutional Significance: These visits offered a closer look at the Navajo Nation's governance structures (e.g., the Navajo Nation Office of the Speaker and Budget and Finance Committee), media representation, and the nuances of its relationship with the outside world through art.

In conclusion, this trip was not just a tour but an intense academic and cultural expedition that peeled back the layers of the Navajo Nation. Through interactions with various institutions – from educational to political, personal to community. The group was able to be exposed to a comprehensive understanding of the intricacies of the Navajo community. This journey significantly informed and enriched the thesis, shedding light on the complex interplay of food, water, and energy systems within the Navajo Nation and the potential role of transdisciplinary research institutions like Penn State's LandscapeU in addressing these challenges.

Appendix B

Official Interview Script for Participants

Welcome to the study, Bridging cultures and disciplines: the transformative impact of LandscapeU graduate Trainees' Service-learning on Indigenous Research and University Inclusivity.

Introduction: This consent form is being provided to ask for your permission to be recorded during the appraisal of your experiences, specifically on-site experiences, during your time with LandscapeU National Research Traineeship. Please listen carefully and feel free to ask any questions before providing verbal consent to the study and to record the interview.

Purpose: The purpose of the recording is to accurately capture your responses to ensure that all your insights and perspectives are correctly represented. Your recorded responses will be used to improve the experience for university students participating in the LandscapeU National Research Traineeship.

Procedures: During the appraisal, your voice will be recorded. No personal or identifying information will be used in the analysis of these recordings. The recordings will be transcribed, and the transcriptions will be used for analysis. The recordings will be stored in a secure, password-protected device and will be deleted after transcription and analysis.

Voluntary Participation: Participation is voluntary. You may choose not to be recorded, and you have the right to stop the recording at any time during the interview and after. If you decide to quit at any time, there will be no penalty, and your decision will be respected.

Confidentiality: Your confidentiality will be maintained throughout the interview, data analysis, and publication process. Your name or other identifying information will not be disclosed in any reports or publications based on these recordings. Any personal information that could identify you will also be omitted or anonymized in the transcription and analysis.

Consent (verbal):

1. Do you understand the previously read information? Yes/No
2. Do you have any questions before we begin? Yes/no
3. Do you consent to being voluntarily recorded during the interview? Yes/No

I will stop sharing my screen and let's begin the interview!

Question Category	Question #	Trip Participant Questions	Non-Trip Participant Questions
LandscapeU Questions	1	<p>Interdisciplinary Proficiency: How has participating in the LandscapeU program enhanced your ability to integrate different disciplines to address complex issues?</p> <p>Could you provide a situation during the trip to the Navajo Nation where you learned to better integrate other disciplines in your own work?</p>	<p>Interdisciplinary Proficiency: How has participating in the LandscapeU program enhanced your ability to integrate different disciplines to address complex issues?</p> <p>Could you provide a situation during your time in LandscapeU where you learned to better integrate other disciplines in your own work?</p>
	2	<p>In what ways has the program's focus on design thinking and innovation influenced your approach to problem-solving?</p> <p>Could you describe a situation during the trip to the Navajo Nation where you applied these principles?</p>	<p>In what ways has the program's focus on design thinking and innovation influenced your approach to problem-solving?</p> <p>Can you describe a situation during your experience in LandscapeU where you applied these principles?</p>
	3	<p>In what way has the LandscapeU program enhanced your communication skills in conveying ideas and understanding those from other backgrounds/disciplines, etc.)?</p> <p>Was there a time your communication skills specifically improved your communication skills during the trip?</p>	<p>Has the LandscapeU program enhanced your communication skills in conveying ideas and understanding those from other backgrounds/disciplines, etc.)?</p> <p>Were there any specific experiences (e.g., workshops or interactions) you've had that have specifically improved your communication skills?</p>
	4	<p>How do you apply systems thinking to understand and address problems in your research in a broader context?</p> <p>Would you say the trip to the</p>	<p>How do you apply systems thinking to understand and address problems in your own research?</p> <p>Would you say your participation in the LandscapeU</p>

		Navajo Nation played any part in this, and if so, how?	program played any part in this, and if so, how?
	5	How has the LandscapeU program shaped your understanding and approach to the ethical dimensions of your work and decisions in your research? Can you provide any experiences from the trip that had an impact on your own research's approach to ethical implications?	How has the LandscapeU program shaped your understanding and approach to your work and decisions in your research? Can you provide any examples of experiences that have had an impact on your own research's approach to ethical implications?
Researcher Questions	6	How do you perceive the role of cultural identity (yours or others) in your educational journey, and how did the trip highlight this for you?	How do you perceive the role of cultural identity (yours or others) in your educational journey?
	7	In what ways did the immersive experience influence your understanding of Navajo communities?	In what ways has your participation in the LandscapeU Traineeship influenced your understanding of the community?
	8	What challenges (if any) do you see in the current educational system for Indigenous students, and what opportunities might be created to improve their experience and retention rates?	Not asked
	9	How has your definition on outdoor recreation changed from your initial understanding and what impact does it have on their perspective of Indigenous lifestyles?	How would you define outdoor recreation?
	10	How do you view the importance of partnerships between academic institutions and Indigenous communities and what are their thoughts on	How do you view the importance of partnerships between academic institutions and the communities in which they conduct research? What

		how these partnerships can be formed and best maintained? What advice would you give in terms of creating and maintaining such partnerships?	advice would you give in terms of forming and maintaining such partnerships?
Literature-informed questions	11	Would you say you have been engaged with any of your communities because of completing the trip to the Navajo Nation?	How has your involvement with the LandscapeU program affected your engagement within your community or communities?
	12	Has the trip affected your academic performance in any way?	How has your involvement with the LandscapeU program affected your academic performance?
	13	How did the trip help you understand and interact with people from different races/cultures, and how has that impacted your everyday life?	How has your involvement in the LandscapeU program helped you in understanding or interacting with people from different races/cultures? How has that impacted your everyday life?
Just Because Questions (extra)	14	How do you think future experiences could better represent and respect the traditions and values of the Navajo Nation, or what one experience would you keep?	What is one way the LandscapeU program could better promote cultural values within the program?
	15	What experience had the most significant impact on your understanding of Indigenous Peoples?	Were there any experiences you had during your time with LandscapeU that grew your understanding of Indigenous Peoples?
	16	What do you think is the appropriate role for researchers/visitors to take when visiting the Navajo Nation?	What do you think is the most appropriate role for trainees to take on when working within communities different from their own?

17	What were your thoughts about the service aspect of the trip (i.e., working at the sheepcamp and talking to high school students)?	Were there any instances that you participated in community service as part of your time in LandscapeU?
18	What are some positive experiences that you hope future Trainees should experience when they visit the Navajo Nation in the future?	What are some positive experiences you've gotten from the LandscapeU program that other trainees should have?
19	Are there any questions that we have missed or should have asked?	Are there any questions that we missed or should have asked?

Thank you for willingness to participate, your insights are invaluable in understanding and enhancing the experience for future trips for future students within the LandscapeU program.

Bibliography

- Aristotle. (1984). *The Nicomachean Ethics*. (W. D. Ross, Trans.). In J. Barnes (Ed.), *The Complete Works of Aristotle* (Vol. 2). Princeton University Press. (Original work published c. 350 B.C.E.)
- Ait-Yahia Ghidouche, K., Nechoud, L., & Ghidouche, F. (2021). Achieving sustainable development goals through agritourism in Algeria. *Worldwide Hospitality and Tourism Themes*, 13(1), 63-80.
- Astin, A. W., & Sax, L. J. (1998). How undergraduates are affected by service participation. *Service Participation*, 39(3), 251.
- Benally, H. J. (1992). Spiritual knowledge for a secular society: traditional Navajo spirituality offers lessons for the nation. *Tribal College*, 3(4), 19.
- Benally, T. E., & Soto, A J., (2019). Empathy engagement with Native Americans in the context of social disparities and historical trauma. *The Penn State McNair Journal*, 15. Need page numbers
- Chilisa, B. (2019). *Indigenous research methodologies*. Sage publications.
- Coburn, E. (2015). A review of Indigenous statistics: A quantitative research methodology. *Decolonization: Indigeneity, Education & Society*, 4(2). Need page numbers
- Coleman, D., & Iso-Ahola, S. (1993). Leisure and health: The role of social support and self-determination. *Journal of Leisure Research*, 25(2), 111-128.
- Davidson-Hunt, I. J., & Michael O'Flaherty, R. (2007). Researchers, indigenous peoples, and place-based learning communities. *Society and Natural Resources*, 20(4), 291-305.
- Drabiak-Syed, K. (2010). Lessons from Havasupai tribe v. Arizona state university board of regents: recognizing group, cultural, and dignity harms as legitimate risks warranting integration into research practice. *Journal of Health & Biomedical Law*, 6-175.
- Flaherty, J. (2016). *No more heroes: Grassroots challenges to the savior mentality*. Ak Press.
- Denetdale, J. N. (2015). *Reclaiming Diné History: The Legacies of Navajo Chief Manuelito and Juanita*. University of Arizona Press.
- Freire, P. (1973). *Education for critical consciousness*. Continuum.
- Giarratana, M. (2021). Land acknowledgment practices: Functions, efficacy, controversy, and Union College.
- Higgins, D. M. (2016). Survivance in indigenous science fictions: Vizenor, Silko, Glancy, and the rejection of imperial victimry. *Extrapolation.*, 57(1/2), 51.pages needed
- Hinton, L. (2019). Language revitalization. *Annual Review of Linguistics*, 5, 161-179.
- Hooks, G., & Smith, D. A. (2004). *Indigenous archaeologies: Decolonizing theory and practice*. Routledge.
- Jennings, F. (1970). The Scandalous Indian Policy of William Penn's Sons: Deeds and Documents of the Walking Purchase. *Pennsylvania History: A Journal of Mid-Atlantic Studies*, 37(1), 19-39.
- Kolawole, A. S., & Iyiola, A. O. (2023). Environmental pollution: threats, impact on biodiversity, and protection strategies. In *Sustainable Utilization and Conservation of Africa's Biological Resources and Environment* (pp. 377-409). Springer Nature Singapore.
- Indian Self-Determination and Education Assistance Act of 1975, Pub. L. No. 93-638, 88 Stat. 2203.
- Jacob, G., & R. Schreyer. (1981). Conflict in outdoor recreation - a theoretical perspective. *Journal of Leisure Research* 12(4), 368-380.
- Laljani, R. (2020). The Navajo Long Walk: A Cultural History of Genocide. *Janus: The Undergraduate History Journal*. 19-22.

- Lavallée, L. F. (2009). Practical application of an Indigenous research framework and two qualitative Indigenous research methods: Sharing circles and Anishnaabe symbol-based reflection. *International Journal of Qualitative Methods*, 8(1), 21-40.
- Maraniss, D. (2022). *Path lit by lightning: The life of Jim Thorpe*. Simon & Schuster.
- Mauser, W., Klepper, G., Rice, M., Schmalzbauer, B. S., Hackmann, H., Leemans, R., & Moore, H. (2013). Transdisciplinary global change research: the co-creation of knowledge for sustainability. *Current Opinion in Environmental Sustainability*, 5(3-4), 420-431.
- Meier, J. (2014). Designating dark sky areas: Actors and interests. In *Urban lighting, light pollution and society* (pp. 189-208). Routledge.
- NDOH (Navajo Department of Health). 2024. "Dikoo Ntsaaigii-19 (Covid-19). Last updated February 29, 2024. <https://www.ndoh.navajo-nsn.gov/COVID-19>.
- Postsecondary National Policy Institute. (2015). Factsheet: Native American students. <https://pnpi.org/factsheets/native-american-students/#:~:text=According%20to%20the%20Census'%20American,a%20bachelor's%20degree%20or%20higher>.
- Putnam, J. L. (2014). NAGPRA and the Penn Museum: Reconciling science and the sacred. *Concept*, 37. Page numbers?
- Roggenbuck, J. W., Williams, D. R., Bange, S. P., & Dean, D. J. (1991). River float trip encounter norms: Questioning the use of the social norms concept. *Journal of Leisure Research*, 23(2), 133-153.
- Reyhner, J., & Eder, J. (2017). *American Indian education: A history*. University of Oklahoma Press.
- Ruhanen, L., & Whitford, M. (2021). Cultural heritage and Indigenous tourism. In *Indigenous Heritage* (pp. 1-13). Routledge.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.
- Sekercioglu, C. H., Schneider, E. C., Fay, J. P., & Licata, J. A. (2019). The ecological footprint of the Chesapeake Bay Watershed. *PLoS ONE*, 14(2), e0211393.
- Shelby, B., & Vaske, J. J. (1991). Using normative data to develop evaluative standards for resource management: A comment on three recent papers. *Journal of Leisure Research*, 23(2), 173-187.
- Snyder, S. (2023). Penn State should account for the land it took from Indigenous Peoples. *Philadelphia Inquirer*. <https://www.inquirer.com/news/pennsylvania-state-university-indigenous-students-faculty-20230425.html>
- Shear, S. B., Knowles, R. T., Soden, G. J., & Castro, A. J. (2015). Manifesting destiny: Re/presentations of indigenous peoples in K-12 US history standards. *Theory & Research in Social Education*, 43(1), 68-101.
- Smith, G. A., & Sobel, D. (2014). Place-and community-based education in schools. Routledge.
- Smithers, B. V. (2015). Traditional ecological knowledge. In *Encyclopedia of Anthropology* (pp. 1-5). Springer US.
- Smith, L. T. (2004). Twenty-five indigenous projects. *Critical strategies for social research*, 75-90.
- Stein, C., & Jaspersen, L. J. (2019). A relational framework for investigating nexus governance. *The Geographical Journal*, 185(4), 377-390.
- Sturla, Anna. (2021). Remains of Native American children to be exhumed at site of former boarding school. *CNN*. <https://www.cnn.com/2021/06/23/us/carlisle-indian-industrial-school-remains-exhumed/index.html>
- The 24th Navajo Nation Council, Office of the Speaker. (2020, September 9). Navajo Nation requests US Government extend 50-year Quadrilateral Agreement for one year to allow

- for consultation with local communities. *Navajo Nation Council*.
https://www.navajonationcouncil.org/wp-content/uploads/2020/09/Navajo_Nation_requests_US_Government_extend_50_year_Quadilateral_Agreement_for_one_year_to_allow_for_consultation_with_local_communities_PR.pdf
- Thomas, K. L., & Kerstetter, D. L. (2020). The awe in awesome in education abroad. *Frontiers: The Interdisciplinary Journal of Study Abroad*, 32(2), 94-119.
- Tsosie, R. L., Grant, A. D., Harrington, J., Wu, K., Thomas, A., Chase, S., ... & Plenty Sweetgrass-She Kills, R. (2022). The six Rs of Indigenous research. *Tribal College Journal of American Indian Higher Education*, 33(4). Page numbers
- University of Minnesota Board of Regents. (2008). *Board of Regents Policy: Mission Statement*. *University of Minnesota Policy Statements*. Published.
https://regents.umn.edu/sites/regents.umn.edu/files/2019-09/policy_mission_statement.pdf
- Varcoe, C., Brown, H., Calam, B., Buchanan, M., & Newman, V. (2011). Capacity building is a two-way street: Learning from doing research within Aboriginal communities. *Feminist community research: Case studies and methodologies*, 210-231.
- Whyte, K. P. (2018). Indigeneity in geoengineering discourses: Some considerations. *Ethics, Policy & Environment*, 21(3), 289-307.
- Wang, H. (2021). Why the Navajo Nation was hit so hard by coronavirus: Understanding the disproportionate impact of the COVID-19 pandemic. *Applied Geography*, 134, 102526.
- Wearing, S., & McGehee, N. G. (2013). Volunteer tourism: A review. *Tourism Management*, 38, 120-130.
- Winter, T. (2007). *Post-conflict heritage, postcolonial tourism: Tourism, politics and development at Angkor*. Routledge.
- Wolff, L. A. (2022). Transdisciplinary learning. In *Encyclopedia of Sustainable Management* (pp. 1-9). Cham: Springer International Publishing.