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CREATING ENVIRONMENTAL EDUCATION PROGRAMMING AND
ACCESS TO DIVERSE STUDENTS

by

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A capstone project submitted in partial fulfillment of the requirements for the degree of Master of Arts in Education: Natural Science and Environmental Education.

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CHAPTER ONE

INTRODUCTION

Introduction

If you have ever walked into a nature center, state park, regional park, you may have noticed the majority of people in those places are white, able-bodied middle class people. Jarvis states, “The future of protected natural spaces is dependent on the growing diverse population; national parks will not continue to thrive and garner public support if underserved youth remain without meaningful experiences in nature” (Montero et al., 2018, p. 6). Environmental Education according to Monroe and Krasny (2016) in *Across the Spectrum* is the pedagogy that “increases environmental literacy and engages people in environmentally responsible actions” (p. 10). Racially diverse students could benefit from the outdoors, nature, and environmental education. Environmental educators need to create programming to draw different people in. What is holding diverse people back from visiting parks and taking environmental programs? The outdoors is for everyone and can be a great addition to anyone’s life. Exposing the outdoors to diverse students can help build resilience to hardships and struggles in their daily lives, broaden career options, increase problem solving, spark curiosity, and improve mental well-being. These aspects can help contribute to society, add perspective to the environmental education world, improve participants’ lives, and make critical personal and political influences on humans’ impact on the natural world. This capstone project addresses the research question, *How can environmental educators create programming and access for more diverse students?*

From my research and study of diverse students' experiences with the natural world, I create a toolkit for environmental educators using EcoJustice Education, Critical Race Theory, and Culturally Sustaining pedagogies, as well as, best practices of Environmental Education and the offshoot of Urban Environmental Education to engage diverse students and help them to create a lasting connection with the natural world. These tools have been created to be easily infused and implemented into any environmental education programming. The tools created to answer the research question will include; activities for students to discuss experiences and feelings about the natural world, examples of ways to integrate rap and spoken word into EE curriculum, a list and biographies of diverse scientists, conservationists, naturalists, biologists, etc. to include in EE curricula, case studies of Eco injustice to include and infuse into curricula for discussion, analyzation and further exploration, methods of evaluation and reflection for students and educators, urban nature and science activities to use in students' neighborhoods or schools, documentation of diverse peoples' land histories in the midwest United States, and opportunities for multilingual infusion in curricula.

Personal Reflection

My experiences and upbringing have brought me to the question I research. I grew up with many opportunities to explore outside. In the 1980s and 90s, my formative years, computers, cell phones and tablets were not present, my brothers and I had to fill our time with other options like reading, drawing, playing with our toys or going outside. If I could not find something to do inside, I was sent outside to play. We played in the backyard, gathered neighbor friends to play a game, or rode our bikes. In the summer our

family went camping on a regular basis that consisted of visiting nature centers, hiking, enjoying spending time outside, and swimming in the lake. In the winter our family would go sledding and cross country skiing. These opportunities showed us that the outdoors were an endless resource for recreation, a place to learn about how the natural world works, a respite from the stresses of life, and a setting for adventure.

Growing up in eastern Wisconsin, there was not much racial diversity. As a white, middle class, heteronormative female, I, especially, did not see many people that looked different from me as I explored the outdoor world. I went to a small private college in Iowa that also did not have much racial diversity. As I pursued a career in elementary education, I worked as a substitute teacher, group leader for a before and after school program in Saint Paul, Minnesota schools. Now I teach as an Academic Coach for a before or after school program at a school in Saint Paul and an organization in Minneapolis, as well as, and as an outdoor recreation educator with a west metro park district. I see much more diversity in my more urban experiences. As an outdoor educator, I see some diversity when school groups come for programs at the beginning or the end of the school year but I do not see much diversity in the programs that need registration like camps and weekend programs. The attitudes I observe from racially diverse groups about the outdoors and nature are mixed but many are hesitant to the dirtiness and the unpredictable nature of the outdoors. I wonder how these hesitations can be built into planning and programming.

The curiosity of the spectrum of comfortability in the outdoors and cultural differences in relations with the outdoors brings me to the present day, where I see many

organizations working on making a diverse presence in nature like Outdoor Afro, www.outdoorafro.com, and Diversify Outdoors, www.diversifyoutdoors.com, but how do parks and nature-oriented organizations create inclusivity in their programming and environment. As I come to the end of my graduate journey, I reflect about environmental education and issues present in contemporary education. I wonder if all people are receiving the same opportunities and education, especially in environmental education, to make the best decisions for their lives and society. Everyone can benefit from spending time outdoors and learning from the environment (Cermak, 2012; Kossack & Bogner, 2012; Montero et al., 2018; Roberts, 2018). How do environmental educators bridge the gap from students feeling uncomfortable outdoors to students engaging with the outdoors?

Professional Development

To hear different perspectives and start cultural research I read articles, books, and websites written by racially diverse people about Black, Hispanic and Native American histories with the land, as well as, find environmental educators that look and come from similar backgrounds as the students. This information will provide me culturally relevant information to include in the curriculum. These past histories will show students a representation of themselves in the natural world. This connection and validation can give the students motivation and purposeful meaning to learning more about the environment. Educational opportunities must be grounded in students' lived experiences, build on their systems of meaning-making, and provide students with the skills and confidence to advocate for themselves-indeed, to sustain themselves and their

communities (Paris & Samy Alim, 2017). By speaking to racially diverse people I can start to understand and allow opportunities for students to share their histories to contribute to the larger story of human connection to the land. This will help me to gain cultural competence and create culturally sustaining pedagogies within my tools. The goal of cultural competence is to ensure that students remain firmly grounded in their culture of origin (and learn it well) while acquiring knowledge and skill in at least one additional culture (Paris & Samy Alim, 2017). Understanding students' lives and backgrounds will help to give applicable connections in the curriculum. I can add ways that students can interact with nature in the communities that they live in, that will in turn help them to develop a stronger relationship with nature.

To complete this capstone project, I researched and analyzed what different parks do currently to draw diverse people to their programming. I researched the current and past state of participation by diverse students and the factors that may keep some diverse students away from environmental programming. Both the National Park Service and area park districts have acknowledged the concern that they could be serving a larger variety of people. They are taking action to attract and reach the diverse people that live in our nation. Their practices and what they have learned are valuable information.

To begin exploring this topic, I will outline Ecojustice Education and how people can explore their own narratives with the natural world. EcoJustice Education is based on the recognition that "to be human is to live engaged in a vast and complex system of life, and human well being depends on learning how to protect it" (Martusewicz et al., 2011). Systems are present in almost everything. Understanding that we all are part of a complex

system can be comforting and hold us accountable to taking care of each other and the planet we live on. This approach to education includes all voices and creates a greater picture with more solutions. When more diverse minds are thinking about one problem more ideas can be generated. With many different experiences and backgrounds contributing to the problem solving the more creative responses will be contributed.

As the Earth's health continues to deteriorate, climate change heats up the Earth's surface, and human population continues to grow, those that are disenfranchised become more disenfranchised. I want to empower and educate diverse students and help them to stand up against climate change using social justice and ecological education, ecojustice, to teach our interconnectedness. To do this, educators must understand how all students connect with the world and realize how best to let students speak their narrative.

Summary

Providing environmental education programs to diverse students is important to me because I believe the environment's health depends on it and currently diverse representation is lacking. Providing environmental education to diverse students is dependent on educators' understanding: of students' histories with the land, how greater societal systems affect diverse students' engagement with the outdoors, what and how environmental education has been taught and what of those teachings have been effective in attracting diverse students to environmental programming.

The rest of this capstone will include literature resources to support and inform the question of providing environmental education to diverse students, the methods used to gain varied insight of current practices and best practices of teaching diverse students,

and the results and application of the research conducted. In Chapter 2, literature pertaining to best practices of teaching diverse students, histories of diverse peoples' land use, and current practical strategies being used will be analyzed and reviewed. I will particularly look into specific case studies that have used EcoJustice Education and Culturally Sustaining Pedagogy to teach diverse students. Chapter 3 describes the toolkit I created for my capstone project, to infuse into EE curricula to create programming and access for racially diverse students . Chapter 4 will reflect on the research that I have done, the process of creating my project and how my project can be used.

CHAPTER TWO

LITERATURE REVIEW

Introduction

In the United States, racially diverse students participating in Environmental Education (EE) programs is grossly underrepresented compared to the racial demographics of the nation. Researchers and educators have been concerned with and have taken the time to learn how to create access to Environmental Education (EE) for diverse students (Arreguin-Anderson & Kennedy, 2013; Cermak, 2012; Martusewicz et al., 2011; Miller, 2018). Environmental Education has historically served white, upper middle class, and older males (Braus, 2016). That demographic is a small percentage of the world's population.

This literature review explores the research that answers the questions, *How can environmental educators create programming and access for diverse students?* The literature supports the project of a race awareness toolkit for EE programming. This toolkit is composed of different tools that address the themes of racial diversity, past EE practices, current EE practices, student land histories and pedagogies to improve inclusion in EE. The tools created can be infused into EE curricula to create EE programming that addresses the needs and personal interests of all students.

The literature review summarizes previous research themes in diversity, past EE practices, current EE practices, student land histories and pedagogies to improve inclusion in EE. Understanding and analyzing diversity, past EE practices, current EE

practices and student land histories informs educators on the pedagogies that will be most effective to engage and retain diverse student participation.

Racial Diversity

Diversity can mean many different things but in respect to the research question- white, upper middle-class, heteronormative people dominate educators and students in the environmental education realm (Mills, 2017; Montero et al., 2018). The United States human population is not a monoculture. There are many different kinds of people that live in the United States and EE should represent all of them. Biodiversity is so important because with a piece of wildlife missing (a plant or animal or insect) other forms of wildlife can suffer due to complex systems that rely on interconnectedness and interdependence (Tester, 1995). A biologically diverse ecosystem is a healthy ecosystem. Diverse groups of people bring a variety of perspectives and innovation to create a healthier, smoothly functioning society that works for everyone (Russ, 2015). Racial diversity provides different voices, opinions and solutions to environmental crises. When all voices are heard, better solutions can be created to fit the needs of everyone. Historically, the voices and concerns of Black, Latinx and Native Americans have not been consulted and decisions were made that resulted in unhealthy living conditions for many of these communities (Martusewicz et al., 2011). Many people in these communities live their lives in intersectionality as a result of social injustices, systemic racism, colonialism and gender inequality that would also put many of these communities in a lower socioeconomic status (Maina-Okori et al., 2018). Environmental educators need to be aware of the chronic hardships that these communities face so as to create

programming that does not persist or and creates a respite from these everyday inequities. Using this knowledge, environmental educators can create programming that includes everyone's voice and create conversations to evolve EE (Davis & Schaeffer, 2019; Djonko-Moore et al, 2018; Kossack & Bogner, 2012; Martusewicz et al, 2011; Miller, 2018; Paris & Samy Alim, 2017). When diverse students know that their voices will be heard and their narratives are part of the collective in EE they will feel welcome at EE programs. Incorporating opportunities for discussion and reflection in EE curricula allows students to voice their opinions, feelings, and perspectives creating connections to the natural world and the EE curricula. Including diverse historical narratives within EE will resonate with all EE students of how the environment and nature have impacted all people, not just a small sect of people represented by the demographics of the United States . Past EE practices have not taken diverse students' experiences into consideration.

Past Environmental Education Practices

Studying past environmental education practices gives light to growth in the industry and can explain why racially diverse students may not be attracted to these EE programs. Researching past practices and curriculum can reveal inherent racism and effects of social constructs. Discovering racism and effects of social constructs from past pedagogy and curriculum within EE programs can inform current environmental educators for future teaching and curriculum creation. In turn, research can also reveal practices that have been removed from current practices that may be beneficial to diverse students that could be added back into teaching and curriculum.

Environmental Education has been developed over many centuries with the influences of Jean Jacques Rousseau, Sir Patrick Geddes and John Dewey's ideas of hands-on learning of science concepts (as cited in Monroe & Krasny, 2016, p. 10) and from great adventurers and observers of the land like Aldo Leopold, Theodore Roosevelt, John Muir, and Sigurd Olson. What do all these people have in common? They are white men. The founding fathers of EE are not representative of all the people that learn from EE and live on the land. These white men also held racist beliefs and practiced systemic racism in their personal and professional lives (Purdy, 2015).

Environmental education may have started in Geneva in the late 1800's, but the United States were the first to establish EE policies. In 1975 the Belgrade Charter created global EE goals (Monroe & Krasny, 2016). One of the goals that the Belgrade Charter established in 1976 that pertains to diversity is "to foster clear awareness of and concern about economic, social, political and ecological interdependence in urban and rural areas" (UNESCO-UNEP, 1976, p. 15). This acknowledgment of all people and the effects of constructs on how they interact with the environment has been present for over 40 years, yet racial diversity in EE programs is still minimal today. Arreguin-Anderson and Kennedy (2013) pointed out that in 2004 the North American Association of Environmental Education (NAAEE) informed environmental educators to include:

- "The cultural perspectives, needs, and interests of the target audience (the precise segments of the population or community with which you will work) have been identified, understood, accommodated, and addressed in program development and activities

- An assessment of target audience understandings and skills has been conducted, including consideration of such issues as literacy levels, languages spoken, etc; and
- Appropriate educational methodologies are identified for the specific characteristics (age, experience, cultural background, and education background) of the target audience.”(p. 2)

Both global and national EE professionals see the need to have everyone and everything they bring to education be part of EE.

Roberts (2018) mentions that environmental education has been built off of romanticism and one time experiences going in the wilderness. This romanticism and expeditions can represent themselves as inaccessible to those that live in urban areas. These experiences in the wilderness do not have lasting connections to students' everyday lives, as if what was learned can only be applied to being in the wilderness. To learn about nature and the environment, it does not need to be in untouched wild places but can be studied wherever plants and animals live (Martusewicz et al., 2011; Russ, 2015). Studying the environment through hands-on, experiential learning can occur in one's backyard, neighborhood, city park. Lessons about ecosystems, water, air and life can take place anywhere (Braus, 2016; Russ, 2015).

When it comes to students who are not English language speakers, education has had oppressive language policies that have prevented students' success (Arreguin-Anderson & Kennedy, 2013). Language proficiency should not be a determining factor in knowledge acquisition. When teaching diverse students with

varying levels of English proficiency adaptations and accommodations (i.e. interpreters, pictures, labels in different languages) should be made so that all students can understand the content being taught.

Past EE practices are representative of a male, white perspective (Monroe & Krasny, 2016; Purdy, 2015). Society has changed, as should EE. Past EE practices show environmental educators that representation of who can learn about, teach, and work in the environment needs to reflect all people who interact with the land. Students will not engage in EE if they do not feel that they are valued or have a place in nature. By representing all races in pictures, signage, curriculum, and staffing, students will feel connected to EE. Past EE practices demonstrate a lack of understanding of students' language, socioeconomic status, and prior experiences. These observations give the environmental educator explicit areas, as diverse representation in land history, pictures of environmentalists, scientists, and conservationists and diverse cultural and socio feelings towards the outdoors, to consider when making adaptations for students to their curriculum and plans. Current EE practices have improved and are informative to future EE.

Current Environmental Education Practices

Current environmental education practices are the pedagogies, location and marketing that are used in the past five years and today to teach the public about the natural world, systems and the connections of the human world with the natural world. Analyzing these current practices with the combination of systemic societal injustices can give understanding to why diverse students are not attending environmental education

programs. Studying current practices will reveal current demographics that are being served and what is being programmed and planned to attract a diverse student body.

Today environmental educators are implementing many different strategies when planning EE programs to racially diversify the student audience. Currently, racial diversity in EE programs is a topic of concern and is a topic prominent in professional development, research and in curriculum development (Arreguin-Anderson & Kennedy, 2013; Davis & Schaeffer, 2019; Kazina & Swayze, 2009; Miller, 2018; Montero et al., 2018; Roberts, 2018; Staples et al., 2019). Environmental educators are making an effort to reach a broader, more diverse audience by; connecting programming to state education science standards and benchmarks, doing outreach programs in schools, providing field trip experiences, providing programming in neighborhood parks, and creating curriculum that reflects and connects to students' lives. Educators are creatively implementing the aforementioned strategies while also maintaining programming that contains the pedagogical foundations of EE that includes place-based, inquiry-based, experiential, science-based and holistic education. Davis and Schaeffer (2019) created a curriculum in their state of Michigan, shortly after the Flint, Michigan water crisis, that studied water quality and addressed racial ecological injustices. Arreguin-Anderson and Kennedy (2013) developed a teacher training for an environmental education curriculum that incorporated Latinx culture for a school that contained the majority Latinx students. Cermak (2012) integrated rap and hip hop into EE lessons to promote learning in a racially diverse classroom. Montero et al. (2018) evaluated the experience of youth who are underserved and diverse in an EE school program set in a National Park and created

opportunities for access to natural areas for those youth. Researchers and educators are analyzing and reviewing how culture, socioeconomic impacts, interdisciplinary and academic connections to nature and environmental crises impact can create valuable connections to science, the outdoors, and inquiry.

These efforts to understand and reach a more diverse student base takes a great deal of time and effort to build a stronger foundation for the future of EE. Due to time and financial constraints creating a whole new curriculum to reach a more diverse audience may not be feasible. However, with prior planning and inquiry educators can learn more about their students and implement those understandings into the lessons by using tools and activities to create engagement, connection and a feeling that the environment is accessible to them. The toolkit created for this project has explicit tools that can easily infused and implemented into EE curricula like; lyrics to eco-related hip hop music that can be used to connect culture to environmental content, Eco injustice case studies to learn about the scientific systems have been affected but also the racial injustices that have occurred, multilingual science/nature terms for students whose first language may not be English, and science/nature ideas that can be explored in an urban environment to remove the obstacle of transportation and physical access to EE.

Students' Land Histories

Students' land histories can be studied from several levels; students' own experiences, their families' past experiences and experiences of ancestors or other people that may look like them to the land and the outdoors. All levels are important to think about when planning EE curricula. Students have their own past experiences in the

natural world that affect and inform their decisions to spend more time outdoors or to seek more information about the outdoors (Paulus, 2016, p. 119). Family members have built their own memories and experiences with the land and those feelings are often expressed and modeled to their children. Historically speaking, understanding how all people have used the land can create connections to current students and understanding as to students' fears or dislike of the outdoors. With learning students' past histories with the land, one can discover barriers that students have faced in learning, accessing and being in the outdoors. Paulus (2016) indicated that according to transformative learning theory, understanding a student's prior experiences can help an educator to create lessons that can help a student transform (p. 120).

Historically, diverse communities have had strong connections with the land. Many of those communities have faced colonialism, which is centered off of the discourse of ethnocentrism, and were forced to assimilate to the colonial culture and ways. In colonialism, the governing body has an anthropocentric view and many of the people they are colonizing have been living an inter-dependent life with the land (Martusewicz et al., 2011). The culture that these diverse communities had that closely connected them to the land was forcibly erased by the colonial government so they could maintain power over them. This was especially prominent with the U.S. government; putting Indigenous youth in boarding schools in the late 19th and 20th centuries and forcing Indigenous people off the land to reservations in the 19th century, bringing Africans to the U.S. to be slaves in the mid-17th century and work for them and putting the Japanese Americans in internment camps away from many Japanese Americans' farm

lands in the mid-20th century. The trauma and racism that colonialism caused has rippled through generations creating fear and disconnection to the land for many people and systemic racism continues to be pervasive throughout the U.S. through discrimination (Mills, 2017). A profession (Environmental Education) that has been dominated for many years by white people can understandably present distrust from racially diverse people who have been deceived and exploited by white people for many years (Buhay, 2017).

Being aware and educated of students' regional, historic and generational land histories is beneficial to educators planning and implementation of lessons. Educators can create dialogue around land histories, discrimination and societal structures to become aware of multiple perspectives on an issue and evoke problem solving. Land histories are also a representation of the effects of policy creation. Pedagogies like EcoJustice Education and Culturally Sustaining Pedagogies make students' prior experiences a priority and teaching tool about discrimination, power structures, and meeting human's basic needs. By creating EE opportunities for discussion about students' experiences outside, students can feel heard, educators can improve their planning and these discussions can create empathy and a more holistic picture of how people interact and think about the outdoors. Learning about the histories of diverse people with the land represents all the students that attend EE programming and creates a more complete picture that provides a stable foundation for problem solving.

Pedagogy

Pedagogy is the method and practice of teaching. There are many different kinds of pedagogies. When planning curriculum it is important to consider the kind of

pedagogy that will be used to achieve a desired outcome. In this case the outcome is to create an environmental education curriculum that will best suit diverse groups of students. Students should feel comfortable with the curriculum and it should be relatable so that they will be motivated to continue learning. In my research I am studying the best and current practices of environmental education; critical ecological literacy, culturally sustaining pedagogies in conjunction with culturally relevant pedagogy, Critical Race Theory (CRT) and EcoJustice education. The hope is to incorporate elements from each pedagogy to create an inspiring, relatable, connection-filled curriculum for all students.

Environmental Education

The best practices in EE are place-based, experiential, ‘microadventure’, opportunities for play (Kossack & Bogner, 2012; Roberts, 2018), experiences in nature at an early age, using all the senses, inquiry-based (Montero et al., 2018), addressing root causes of the problem (Kumler, 2010), using the knowledge and resources of indigenous elders (Kazina & Swayze, 2009), art-based (Staples et al., 2019), and holistic approach. EE has been rooted in place-based education since its inception. This educational philosophy immerses the student’s senses within the content, giving students the opportunity to see, smell, hear, and touch what they are learning. Place-based education lends itself easily to experiential, play, and inquiry-based education, providing a unique setting and structure that allows to be hands-on, using gross motor skills extemporaneous examples to spark curiosity and inquiry. Through the aforementioned educational approaches in EE students learn how to be scientists, think critically, develop problem solving skills, create positive experiences in nature, build confidence, learn about systems

and gain an appreciation for the natural world. EE also teaches across disciplines to create meaning making and connections for the students, often using history and art to further understand a scientific concept.

Urban EE takes the foundational elements of EE and places it in an urban setting. When teaching EE in an urban setting the educator must consider the heavy human impacts on the land and creatively find the natural systems present in the urban environment. Educators will need to refer to students' history with the land especially if being outdoors is unsafe in their neighborhood and plan how to address that fear and also use place-based, experiential, hands-on education. Urban EE for urban residents alleviates transportation barriers and increases relevance, power and meaning for the student (Russ, 2015). More diverse students will live in an urban setting due to population density, access to public transportation, greater access to housing, and greater access to amenities. Urban EE offers an unique opportunity to use some of the pedagogies listed below to engage diverse students in EE.

Critical RaceTheory

Arreguin-Anderson and Kennedy (2013) used Critical Race Theory (CRT) “as a lens highlight[ing]:(1) The potential negative outcomes of neglecting to engage in a critical examination of race within place-based programs, and (2) Opportunities for new inroads into critical conversations about race in EE” (p. 846). Latino Critical (LatCrit) Theory branches from CRT and analyzes Latino racial issues and culture that are absent from the “dominant narratives and discourse” (p.3). They used CRT and LatCrit as a lens to create a teacher training for a popular EE curriculum. Arreguin-Anderson and

Kennedy (2013) thought about the Latino community and how they could train the teachers to incorporate the students' culture and language into the curriculum, using the assets of their culture to gain educational success. The provided the training in Spanish and in different activities asked groups to think of traditional Latino rhymes and songs that would be familiar to students that the educators could change the words to learn EE content. CRT/LatCrit insist that it is educators' responsibility to use students' cultures and languages in curriculum and reassure students of these positive attributes. The main points of analysis in CRT are: "(1) counter storytelling; (2) the permanence of racism; (3) whiteness as property; (4) interest convergence, and (5) critique of liberalism (which include the sub-tenets of color blindness, neutrality of the law, incremental change, and meritocracy)" (Miller, 2018, p. 484). Miller (2018) was adamant that race must be critically examined in EE to align with its goals of equity, diversity and inclusion and to uncover harmful discourse (p. 845). Environmental Educators must have some process to analyze current EE curriculum and teaching and also a framework to develop EE curriculum that creates space for everyone's narratives and room for discussion about race.

Culturally Sustaining Pedagogies

The goal of Culturally Sustaining Pedagogies (CSP) according to Paris and Samy Alim (2017) is to "seek to perpetuate and foster---to sustain---linguistic, literate, and cultural pluralism as part of schooling for positive social transformation" (p. 1).

Culturally Relevant Pedagogy (CRP) is a method of teaching in an authentic way that incorporates your students' cultures (Paris & Samy Alim, 2017). To practice both CSP

and CRP, it is crucial for educators to learn and immerse themselves into the cultures of their students to create learning experiences that will create engagement and meaning in the students' lives (Paris & Samy Alim, 2017, p. 146). Due to the time length and setting of many EE programs being a couple hours or a day in length and set outdoors utilizing CSP or CRP in a truly meaningful way may be difficult. Educators would need to do more intense prior planning to learn about their students' cultures and provide culturally relevant teaching in their programs. Students' prior experiences and understandings are especially of consideration when practicing CRP and "connecting those experiences to broader social contexts" (Montero et al., 2018, p. 19). Aspects to consider in a culture and include in CSP is how a culture communicates, shows respect, expresses feelings, fosters hope and shows gratitude. Students will not feel welcome and seen if they do not see people that look and sound like them in positions of leadership, represented in curriculum, land history acknowledged and an awareness of how their culture has been discriminated against.

CSP and CRP remind educators to be mindful of their own backgrounds and how that influences their teaching but also to be aware of all of their students' backgrounds, prior experience and cultures. These aspects of a student shape who they are and how they think. Effective teaching cannot be accomplished without critical examination of the students' lives and culture and implementation of their lives and culture into the lessons. When students' lives and culture are implemented into lessons the students are more engaged, feel a connection to the content and meaning-making increases. The power of their education and societal change is placed in the students' hands.

Pluralistic Approach. The pluralistic teaching approach fits nicely with CRP, CSP, CRT, LatCrit, and EcoJustice Education on the foundation of giving everyone a voice. Often the voices that are affected by ecological crises are not heard and they need to be part of the conversation so that solutions can be created that work for everyone (Paulus, 2016). In the pluralist approach students need time for reflection and identity issues especially within the community and society (Paulus, 2016). In this approach the educator must be aware that different environments carry varying oppressive qualities and that those narratives need to be told as well. Those narratives are part of someone's prior experiences and meaning making (Paulus, 2016). In curriculum or lesson plans a pluralistic approach would have open discussions about students' experiences as well as how different people have been impacted or affected by the content being discussed. There would be times for reflection and discussing differing perspectives.

Ecojustice Education

Martusewicz, Edmundson and Lupinacci (2011) described ecoJustice education as a study of both social justice and ecological concerns and how they are interrelated (p. 10). In Davis and Schaeffer's (2019) curriculum about clean water in Michigan, they made note that fear can arise when environmental crises are "prematurely overemphas[ized]" however they say this pedagogy is "transformative" and gives students the power to create change (p. 370). Davis and Schaeffer (2019) created a year long curriculum that examined the Flint, Michigan water crisis. They used justice-oriented pedagogy to learn about the water crisis and how it affected the people in the area. This approach gave the students the power to create change.

Using real-life environmental crises gives students an interdisciplinary platform to hear and tell different narratives and examine the power structures, racism and environmental factors and needs that are present and involved. This examination helps students develop the critical examination skills needed to create change so that all can live in a healthy environment.

Critical Ecological Literacy. Cermak (2012) defined Critical Ecological Literacy (CEL) as, “the process of using reading and writing to create messages that question, confront, and reconfigure how environmental problems are constructed by one’s own overlapping racial, cultural and economic power relations” (p. 197). CEL follows closely with the ideology of Culturally Relevant Pedagogy and EcoJustice Education with the addition of reading and writing. This process could be used on its own or would fit nicely within EcoJustice Education. This process takes a broader view of the environment and how it relates with the people interacting with it on a daily basis. Cermak (2012) used culturally relevant hip hop audibly, orally, and in written form to teach and assess students’ understanding of social justice and environmental crisis. Hip hop was a culturally relevant way of expressing oneself and so it naturally became a way to assess the students’ knowledge when they were assigned to create their own rap that explained the environmental crisis.

Critical Ecological Literacy unlike Culturally Sustaining Pedagogy links the environmental problems with power, race and culture. Reading and writing provides a useful tool to reflect and synthesize complex ideas like environmental problems, power, race and culture.

Summary

Providing environmental education programming to diverse students will require taking a long examination of what will be taught, indicating where students will have opportunities to share their narrative, representation of all kinds of people in the curriculum and throughout staffing (Buhay, 2017; Mills, 2017; Paris & Samy Alim, 2017), questioning of power structures and how people are treated and analysis of students prior experiences outdoors (Davis & Schaeffer, 2019; Martusewicz et al., 2011). Using the practices and theories of Environmental Education, EcoJustice Education, Culturally Sustaining Pedagogies, Critical Race Theory and a pluralistic approach (Paulus, 2016), educators can provide engaging, experiential lessons (Monroe & Krasny, 2016) that acknowledges and celebrates differences and uncovers the hard truths of history and current society. Understanding the foundational elements of EE and the practices that make it sought after programming in contrast to institutional education will increase engagement of all students (Monroe & Krasny, 2016; Russ, 2015). Programming needs to use all the senses, be place-based, inquiry-based, play-based, and transparent of all narratives involved (Monroe & Krasny, 2016; Roberts, 2018). This will be hard work and welcoming diverse students into environmental education will not happen immediately. Conversations need to continue, educators need to continue to learn about different communities and infuse those communities' cultures into their lessons, and create space for all people to use and learn about the land (Arreguin-Anderson & Kennedy, 2013; Montero et al., 2018; Paris & Samy Alim, 2017).

In Chapter 3 the literature review will be used to create tools that can be infused into EE lessons to make diverse students feel welcome in EE. The tools will be based on the pedagogies; best EE practices, CSP, CRP, LatCrit, CEL, EcoJustice Education, and Pluralistic approach. These tools will provide opportunities for discussion, reflection, representation, assessment, and recognition.

CHAPTER THREE

PROJECT DESCRIPTION

Introduction

Although appreciation and respect for natural processes affects all aspects of society, environmental education programs are typically not relatable or applicable to students of different ethnic and socio-economic backgrounds. Environmental educators, therefore, need to design curricula that are both significant and relatable to students of diverse backgrounds. This capstone seeks to identify key barriers affecting racial groups and develop a toolkit for educators to overcome these barriers when developing their own curricula or programming. By providing educators with these tools, educators can more effectively design environmental education (EE) programming and reach all manner of diverse students. Through my careful research and analysis I seek to address the question, *How can environmental educators create programming and access to more diverse students?*

Overview of Project

This capstone project is a toolkit to engage and connect all students to the environment. Like most education and curriculum that has been created in the United States, EE too has been created with a male, Western European, heteronormative voice. To reach students that are outside those defined categories the pedagogy needs to change to include more diverse voices. From the research on EE practices (past and present), adversity facing racially diverse people, students' land histories, and pedagogies that support diverse students I have created a toolkit that can be inserted into existing

environmental education programming to increase racially diverse students' engagement in nature and environmental education programming. I had initially wanted to create an environmental education curriculum that could be used as a marketable program to diverse students. As research progressed on the subtopics the realization that a program so narrowly focused on diverse students' experiences in nature would be hard to market and be a profitable piece of an environmental education programming business model. The set of tools will be a much more versatile outcome that could be used in all environmental education programming. These tools will provide all environmental educators a way to teach about the fascinating natural world that they already know how to excellently do but also meet the needs of all their students in addition to Maslow's Hierarchy of Needs and Gardner's multiple intelligences that are already considered when creating curriculum and teaching.

Description of Project

The tools have been developed to address the ideas of racism, social injustices, colonialism, environmental crises, and power structures that the pedagogies of Critical Race Theory (Arreguin-Anderson & Kennedy, 2013; Miller, 2018), Culturally Sustaining Pedagogies (Montero et al., 2018; Paris & Samy Alim, 2017), EcoJustice Education (Davis & Schaeffer, 2019; Martusewicz et al., 2011), Environmental Education (Miller, 2018; Monroe & Krasny, 2016; Roberts, 2018) and Urban Environmental Education (Russ, 2015) call to attention and analyze. To increase participation of diverse students in environmental education programming, educators need to start having tough conversations and analyzing the current curricula and programming for the

above-mentioned oppressive structures that have been present in the United States for far too long.

Below are the tools that have been created for the toolkit to create EE programming and access to racially diverse students. These tools will provide representation of diverse people in curricula and physical settings, provide opportunities to discuss race and racism, create spaces that are welcoming to different cultures, and bring EE to a broader audience.

Activities for students to discuss experiences and feelings about the natural world

This would include advice on how to create opportunities for students to share their stories and experiences with the natural world which is important in understanding a student's cultural identity and relationship with the natural world (Martusewicz et al, 2011). These opportunities will not only give the students a voice in their learning but also inform the educator on the student's prior experience and how they can further the student's education in that area (Paulus, 2016).

Allowing students to express fears or concerns about being in nature can help the educator create adaptations and gradually immerse students into the natural setting that may be unfamiliar, or novel to the student while acknowledging and alleviating fears and concerns from a personal level.

When this sharing is done in a group it can create empathy, understanding and connectedness with other students. This kind of sharing can be done with a KWL chart, circle sharing with pointed questions, comfort circles, step forward activity, pre-program surveys (digital or paper), and questions with a 5 finger hand rating. These discussions

and check-ins are great for end-of-program or post program reflection to see growth and for the educator to adjust for the next day or be aware of for future program planning and for the student to see and think about their own growth during the program.

Additionally, by expressing and exploring experiences with the natural world, in such a manner, emphasizes a process in which students organically internalize their connection to the natural world. This natural process is compounded by the collaborative environment, directly facilitating interaction between the student and his/her peers and the educator. When used correctly such an approach encourages organic internal contemplation on prior experiences and highlights how these prior experiences and its associated observations are relevant in the present, connections that may not have previously been made.

Examples of ways to integrate rap and spoken word into EE curricula

Rap and spoken word are big components of United States black culture, an important and often neglected demographic in traditional education curriculum. Incorporating integral parts of students' cultures into curricula and teaching helps students to be engaged and connected to what they are learning (Cermak, 2012; Paris & Samy Alim, 2017). Cermak (2012) conducted his own research analyzing rap that addresses Eco inJustices with his students and found it helped to engage his students in EE but also to discuss race and social justice. Having students create rap and spoken word utilizes a way of expression that they are familiar with and provides a creative engagement with the environmental content. Furthermore, requiring students to engage in

and compose creative expression again re-emphasizes internalization and relatability in the subject matter.

This tool will include 10 different raps that can be used to examine different eco injustices. Each rap will include: title, rapper, YouTube link, lyrics, and eco injustice addressed. Rap used to examine eco injustices creates greater engagement in students. This tool can be used to teach, assess and as a way to express student's thoughts about a subject. Rap and spoken word can be an invaluable tool to bridge the culture gap between educators and students.

List and biographies of diverse scientists, conservationists, naturalists, biologists

The narrative in curricula/programming needs to be changed of who does science, spends time outside, or cares about the environment. The majority of EE programs pay homage to important historic conservationists, but these individuals are often limited to Caucasian men. Indeed, it is not uncommon to hear of John Muir, Aldo Leopold and Theodore Roosevelt. However, it is not often mentioned that George Washington Carver, a former slave that experimented with plants or Harriet Tubman who used bird calls to guide slaves through the Underground Railroad. However, diverse students need to see and know about people who look like them in EE programming as purported by the ideologies of Culturally Relevant Pedagogy (Paris & Samy Alim, 2017).

This tool will provide names, pictures and biographies of many different people of different genders and races in the natural sciences and outdoor education fields. Figures like Dr. Diane Glave, a trailblazer in bringing environmental access and programming to urban people of color are both relatable to persons of color and those

with limited exposure to the natural environment. Other such examples include Audrey and Frank Peterman, who are actively working to bring the benefits of natural public lands to minority groups by improving access. Marc Bamuthi Joseph is another great example, an African-American advocate for sustainability who works to increase awareness in urban environments through multi-media performances that beg the question, “What sustains us?”. The list continues, but many of these trailblazers while being both relatable to diverse backgrounds, and students with limited wilderness access, are not emphasized as role models in traditional EE programs.

This tool will include a list, picture and biographies of 20 people from the past and present, men and women, of all different backgrounds, from the United States, and who have worked or done amazing things in nature. Each person will include: a picture, when they lived (dates), where they are from, and their connection to nature

By identifying and highlighting not only the work done by these individuals but including and incorporating their biographies and personal journeys makes the content relevant and relatable to the learner through similar shared experience.

Case studies of Eco inJustice

EcoJustice Education offers a way of learning about the environment and also the complicated structures associated with it and gives students the power to find a solution (Davis & Schaeffer, 2019). EcoJustice case studies force critical thinking and problem solving from students. Selection of case studies needs to be based not only on the environmental lesson but also on how the persons impacted in the case study are relatable to diverse groups. Diverse students can then draw parallels to the plight of those persons

and realize the connections and consequences of improper management techniques and public policy to their own lives. Offering a real life example for students to study the land and then how humans interact with it makes the content more interesting and applicable to everyday life.

Furthermore, it is the diverse populations concentrated in urban environments that are often the victims of these case studies. Specifically, these case studies will highlight cases like the Flint, Michigan water crisis. Here, a population of urban city dwellers, predominantly non-white were effected with toxic drinking water. As previously discussed, it is the urban poor where racial diversity is most concentrated, and also the urban poor whose infrastructure is most susceptible to environmental policy mis-management due to systemic racism.

Another such case study is the oil pipeline construction on Native American lands, where decisions to supply the needs of one population directly impacts the environment and way of living of another population hundreds of miles away. Here we tackle two specific and drastically different groups of people. This case study analyzes how the fossil fuel-based energy needs of the nation impact the health and way of living of a group of people that were not involved in the policy creation.

This tool will include 10 different EcoJustice case studies primarily located in the midwestern United States to maintain relevance to students. These case studies will include: location, people involved, environmental impact, all sides perspectives, and EE activities that would complement the case study.

These case studies bring students' attention to the ethical question of, "Who deserves to have their basic needs met?", how humans interact with the land and how that interaction impacts humans and the land. Case studies create a multi-discipline lesson that incorporates opportunities to examine systemic racism, discrimination, government policy creation, the environment and the science that supports or negates decisions that were made.

Inclusive methods of evaluation/reflection

Language, cultural inferences, and commonly used methods of evaluation, often create a barrier to student learning and assessment. EE is particularly vulnerable to language barriers due to the vocabulary-rich content inherent in science content. Students who are English Language Learners or are not familiar with the new vocabulary are at a disadvantage when it comes to any kind of written or oral assessment (Staples et al., 2019). Scales, spectrums, visuals and drawings can inform the educator on feelings and content learned in an easy and efficient manner from students from all backgrounds (Anderson et al., 2016). EE generally does not have written assessments to gauge students' acquisition of knowledge but reflections are often used at the end of programs to see what students have learned and are usually oral. The reflection assessment in itself can be a barrier if English is not your primary language or reporting to the whole group is not comfortable.

This tool will include 10 different program assessment tools and descriptions, listing materials, amount of time, and best time to use. Using non-oral forms of assessment and reflection allows students a way to communicate what they have learned

in a non confrontational way. Using various ways to reflect and assess honors students' different cultures and ways of being. For those students that English is their second language, non verbal assessment gives them a way to truly show what they have learned without also having to interpret and then translate that information to the educator.

Urban nature/science activities

Due to systemic racism and social injustices many racially diverse communities have a low socioeconomic status (Montero et al., 2018). Providing EE within close proximity to students' homes and neighborhoods reduces the cost of transportation which could be one more barrier to participation in EE programming.

However, natural processes abound, even in urban environments. To maintain the best practices of EE by using the practices of place-based education, EE needs to take place in the environment that students live in. Using the natural environment in one's own neighborhood to teach environmental education creates a stronger connection to students' everyday lives and motivation to learn more (Russ, 2015). Some urban environmental education activities could be as simple as tallying wildlife and researching the role wildlife plays in that ecosystem to looking at watersheds and what happens to run off in an urban setting.

This tool will include 10 EE activities that can be taught in an urban setting. Each activity will list materials needed, number of optimal students, amount of time, Next Generation Science Standards addressed, and detailed steps.

Implementation of urban EE activities reduces barriers for students to attend and access EE programs. This tool will help students to build a connection to the natural

world where they live and feel a sense of responsibility to make it a better place for the community to live. When learning happens in a students' neighborhood they will be more engaged because they already have a familiarity and connection to the place.

Documentation of diverse peoples' land histories in the midwest

By examining diverse peoples' land histories and using Critical Race Theory (CRT), students can “confront the histories of genocide, colonialism and cultural erasure of the land” (Miller, 2018, p. 846). These histories are not gone into depth in the history books and are briefly addressed, if at all, in EE. All students must be made aware of the deep connections all people have had with the land, as well as, the massive trauma that many people have endured from decisions that were made by people in power about the land. These histories inform us and teach us how we should treat people and the land in a more sustainable way in the future. These histories will reflect that of the diverse people that have lived in the Midwestern United States so as to narrow the focus, otherwise this tool would be too large to use to sort through.

This tool will include 4 different timelines for Black, Asian, Indigenous, and Latinx people with detailed events of how they have used the land in the midwest, Minnesota in the last 300 years will be the primary focus. These timelines will record when different groups of people immigrated to Minnesota, environmental policy decisions that were made that affected their lives, large land purchases, and pivotal impacts different groups have made on the land.

By using this tool educators will have the information available and be educated on the full land history of Minnesota to better teach about the land to their students.

When educators include everyone's land history as part of the story of the land they create a sense of community and a connection amongst the students. Individual students will hear that their people are a part of this place and therefore will also feel a part of this place. When everyone is part of the discussion, everyone has a stake in the final decision.

Opportunities for multilingual infusion in EE curricula

Diverse people bring diverse cultures and languages. Critical Race theory and LatCrit Perspective recommend that to better meet the needs of students it is helpful to know what languages your students speak and be prepared with resources to assist them (Arreguin-Anderson & Kennedy, 2013). These resources could include interpreters, handouts and materials in different languages, planning out specific terminology and materials that will be used and providing those in different languages during the program, or labeling items that will be discussed in different languages. As the educator, asking what languages the students primarily speak will be a pertinent question to ask participants prior to your program so that you can plan accordingly.

This tool will include a questionnaire that Environmental Educators can use prior to programming to get pertinent language information that can be used in programming. This tool will also include a list of 10 items with descriptions and resource links that an Environmental Educator can do to be language inclusive in their programming.

When multilingual students get the opportunity to use their primary language in education they learn the content much faster and will create more meaning-making with the student. It is the responsibility of the educator to create programming that will make

the most lasting positive impact and providing opportunities for better understanding of content through language is a sure way to do that.

Setting/Audience

The tools developed for this project will be used primarily for school-age students but could be easily adapted for all ages. These tools will be available for anyone that will be working with diverse communities in an EE context. The audience is framed off of the experience of working in urban and suburban settings in the midwestern United States, utilizing natural settings like parks, school playgrounds, local lakes and waterways, and nature in neighborhoods. These tools could be used by school teachers, naturalists, any educators that work in the outdoors with registered programming, outreach programming or programming within a school who are teaching or developing environmental education curricula/programming. The demographics of the students benefiting from the tools would model the diversity of the urban area; Black, Latinx, Caucasion, Asian, and first generation African, Latinx and Asian immigrants. An important component of this research and the development of these tools is adaptation to the audience you are teaching. All students should feel seen and present in what they are learning. All of who a person is impacts their learning and learning outcomes (Paulus, 2016). Curriculum and teaching should support and reflect the students we are teaching.

Rationale

Environmental programming that ignores the shared experiences and backgrounds of diverse students undermines the ultimate goal of environmental education, mainly, “[to develop a world population that is aware of, and concerned about, the environment and

its associated problems, and which has the knowledge, skills, attitudes, motivation, and commitment to work individually and collectively towards solutions of current problems and the prevention of new ones” (UNESCO-UNEP, 1976, p. 15). Thus, if diverse groups are ignored by EE, a large portion of society is ignored, depriving educators of an opportunity to foster and instill a connection to the natural world in an important portion of the population. It follows that by neglecting these sectors, we ultimately undermine the larger objectives of EE.

Unfortunately, like most education and curricula that has been created in the United States, EE too has been created with a male, Western European, heteronormative perspective. To reach students that are outside those defined categories the pedagogy needs to change to include more diverse voices. One key aspect to enabling that pedagogical change, is the creation and implementation of tools designed specifically to address these diversity issues.

The need to examine cultural perspectives, and diverse experiences is not a new one. As previously stated in Chapter 2, Arreguin-Anderson and Kennedy (2013) point out that The North American Association for Environmental Education (NAAEE) informs environmental educators to include:

- “the cultural perspectives, needs, and interests of the target audience (the precise segments of the population or community with which you will work) have been identified, understood, accommodated, and addressed in program development and activities

- an assessment of target audience understandings and skills has been conducted, including consideration of such issues as literacy levels, languages spoken, etc; and
- appropriate educational methodologies are identified for the specific characteristics (age, experience, cultural background, and education background) of the target audience.” (North American Association for Environmental Education, 2004, p. 3)

Although the importance of identifying these requirements is obvious, current literature could benefit in additional research into how educators should meet these requirements. Specifically, the development of design tools and/or lessons that address cultural perspectives, assessing target audiences, and tailoring pedagogies requires further development. To put it more plainly, while we have identified the “what” that requires our attention, we must now begin to focus on the “how”. Tool development, as described in this project, begins to address the “how”.

These tools have been gathered and formulated from research done on EcoJustice Education (Davis & Schaeffer, 2019; Martusewicz et al., 2011), Culturally Sustaining Pedagogies (Paris & Samy Alim, 2017), and Critical Race Theory (Miller, 2018). These pedagogies incorporate tough conversation about systemic racism and ecological injustices, give students opportunities to share their experiences and make connections to the natural world, and provide examples of different cultural references to gain a cultural ownership of the EE field and to better understand EE through many different cultural lenses. This toolkit allows the educator to tailor their lessons to meet the needs of their students. Due to time constraints and specific goals and objectives of lessons,

implementing all the tools in this toolkit within a lesson would be too bulky and time consuming. Using the tools as the educator sees fit can create a space within EE where all people feel welcome, understood and like they belong. When everyone feels like they are part of the process they then feel like they have a stake in the success or failure of the end product.

Summary

The more tools that are used the better. Utilization of just one tool will not impact diverse participation in EE programs. Hard work needs to continue to happen to learn about our students, the lives they live, the cultures that support them and to break the colonial, white, male power structures that dominate language, curricula, and discussions. Diverse students will not feel like they are of value and can make a difference in environmental education if educators do not make the effort to impart these students into the curricula/programming from a foundational level.

Chapter four is a reflection of my research and creating the toolkit. Highlights will include struggles and successes from the creation and research materials that were most beneficial, as well as, feedback that helped to refine the toolkit. Chapter four will also mention potential implementation and sharing of this resource. Information is provided as to where these tools will be located and the organizations that may benefit from their use.

CHAPTER FOUR

REFLECTION

Introduction

While analyzing research and producing the tools to answer the question of, *How environmental educators can create programming and access to racially diverse students*, I went through my own journey and education of systemic racism in the United States and, more specifically, the role it has played in the midwestern United States. I found it important to understand how systemic racism and colonialism in U.S. history, in government, and in being outdoors has impacted current registration and involvement in environmental education. All of these systems have been interconnected much like the systems we find in nature. To break the racist and colonial cycles that have operated for hundreds of years, people who are of the majority and power need to do the intellectual and emotional labor. Those from minoritized communities are tired from fighting a racist system and do not need to explain and rationalize to the majority what and why they have suffered in society. As an outdoor educator, I felt the need to learn more about the people that live in my community and how I can serve them better in my professional life. In this chapter, I reflect on the creation of the tools, other related areas I can continue to research to address the research question and how this project can most effectively be used by environmental educators.

The toolkit created was my personal attempt to educate myself and create action towards the creation of welcoming EE programming for diverse people in my community. Each tool encompasses the research conducted on ee programming since its

inception, the effects of history with the land on current outdoor feelings, and pedagogies that address injustices and put into practice incorporation of all peoples' experiences and cultures (Eco Justice, Culturally Relevant pedagogy, Culturally Sustaining pedagogy, Critical Race Theory, Pluralistic approach).

This chapter reveals major learnings from my capstone experience, revisits the literature review, indicates implications that the toolkit and research has on policy, limitations found in the toolkit, future research or projects spurred from the toolkit, how results of the toolkit will be communicated and the benefits of the toolkit to the EE profession.

Major Learnings

Several learnings were born from this capstone paper and project. These learnings range from personal introspection of implicit biases to actions of individuals and organizations that are making great efforts to include everyone that is in their community.

Change and improvements start with the individual initiating the changes. I learned that it is my responsibility to examine my own background, reasons for teaching EE, how that impacts my teaching, and my motives for wanting to engage racially diverse students with the outdoors. As a white female, I possess inherent privileges in society and in my experiences in the outdoors. Once I recognized these privileges, I was able to understand and acknowledge the different experiences, currently and historically, that people may have in the outdoors and society and how that impacts their interest and engagement in EE programming. This enlightenment is the catalyst to finding ways to engage racially diverse people with the natural world.

I have learned in this process that to really welcome racially diverse people in environmental education, truths about being in nature for all people need to be made evident in lessons, trust needs to be formed, representation needs to be present, and incorporation of many different people's cultures must be within teaching and lesson planning. These elements are only the beginning steps to creating a welcoming environment in the outdoors for all. Environmental educators do not need to reinvent the wheel, many people and organizations are already doing great work in engaging diverse communities with the natural world. It takes a simple google search to find many organizations working with racially diverse communities in the outdoors.

As I have researched organizations and spoke to my content expert I have been amazed and in awe of actions and thought that outdoor-based organizations are putting in to better understand the communities they serve. Partnering with area park and recreation departments, taking a back seat to planning, bringing programming to apartment complexes, providing free camping kits to check out to reduce obstacles to getting outdoors, and understanding the time it takes to build relationships and develop partnerships are just some of the things I have read and heard are happening to create programming for everyone in their communities. Not everyone tasked with reaching out to racially diverse communities are educators and they are bringing their own leadership talents to meet the needs of those communities. I hope to take as much thought and care in developing relationships with the communities that I work with.

Literature Review Reflections

The ideas embedded in culturally sustaining pedagogies from Paris and Samy Alim (2017) and eco justice education from Martusewicz et al. (2011) really have impacted my thinking and approach to education. Taking an active role as the educator to learn about different peoples' cultures and then incorporate them into teaching, naturally creates connections with students and increases engagement. This obvious approach simply highlights how current teaching practices are rooted in white, male ideas and do not fit the needs of any students outside of the white, male demographic. Eco Justice education brings to the forefront discriminatory government policies and questions who is worthy of basic needs and granted access to natural resources. Both culturally sustaining pedagogies and eco justice education greatly informed all of the tools that were created for the toolkit. Through more research into these topics the tools could be even more refined to meet the needs of all students.

In the same vein, the articles "Deliberate Language Planning in Environmental Education: a CRT/LatCrit Perspective" by Arreguin-Anderson and Kennedy (2013), "Troubling Troubled Waters in Elementary Science Education: Politics, Ethics & Black Children's Conceptions of Water [Justice] in the era of Flint" by Davis and Schaeffer (2019) and "Hip-hop, Social Justice, and Environmental Education: Toward a Critical Ecological Literacy" by Cermak (2012) put the ideas of Critical Race Theory, Eco Justice Education and Culturally Sustaining Pedagogy into practice. Arreguin-Anderson and Kennedy, although focused on Critical Race Theory and LatCrit Perspective, seemed to echo the thoughts behind Culturally Sustaining Pedagogy by highlighting how Latinx

educators took their cultural knowledge to create culturally relevant material to coincide with the EE curriculum (2013). In Davis and Schaeffer's article they wrote about how they created a year long curriculum that focused on the Flint, Michigan water crisis that gave opportunities to examine urban planning, clean water rights, communities that were impacted, injustices that were committed and problem solving (2019). This article informed me on how eco injustice case studies can be an all encompassing lesson on natural resources, government policies, social structures and injustice. Cermak provided a strong argument in favor of using rap and spoken word within ee curriculum to process environmental concepts, express feelings of injustice and to draw from a historically cultural means of expression for many minoritized communities (2019). Cermak (2019) and Paris and Samy Alim's (2017) reference to use rap and spoken word in teaching, solidified the importance of including this technique as a tool within the toolkit.

As I created the toolkit and rationalized each tool I kept coming back to Paulus's article about pluralism in education. It seemed as if all the pedagogies that I studied came down to the pluralistic idea of teaching each student with all of their identities in consideration. Each student is different, coming to programs with different experiences and identities that have been formed by social structures. The educator must be aware of all these identities and how they impact the students engagement and experience at the EE program.

Implications

With more awareness to barriers that different communities face to the outdoors, one can only hope that more access to programming is provided whether that be in funds

for transportation to public lands, money to create better programming that appeals to more audiences, or funds and opportunities to hire and train more people that represent our populations to work in EE and the parks. Most of the people making decisions about public lands and parks are white people, this is changing, but if changes are to be seen at the programmatic level, representation needs to happen at the higher, decision making, levels. This research paper will bring more awareness to the need for equity in EE programming.

Limitations

Of course, time was a limitation in this project. In the unusual circumstances of 2020 and the pandemic, the ability to apply and test with in-person interaction was a limitation. Thankfully, with creative problem solving of a walking meeting outside with 6 feet of distance, I was still able to meet with my content expert to discuss progress and areas of improvement.

Future Research/Projects

One thought I would like to look further into is the idea of time within different cultures and what that means for quality programming. Amanda Fong, my content expert, explained that different cultures view time differently and when planning programming she goes by the adage, plan like heck and then let it go. This way you will have everything you need for the lesson but when the group arrives you need to be present in the moment and meet the group where they are. This approach takes some nuisance, experience and awareness but helps to develop relationships with different cultures.

Another topic to explore that is relevant to this project and research is building relationships and trust with communities before planning programs. What does that look like? Can organizations and employers recognize the importance of this and allow work time to build those relationships for future programming and partnerships? Some marginalized groups have a deep-seeded distrust of people offering educational opportunities to them and by looking at different moments in history this is very understandable. Educators need to be authentic and genuine, not trying to sell our programming but creating a relationship with the group we want to assist or provide an educational service to.

With the opportunity for professional development this fall and in discussion with my content expert the question of, why do you want to reach a particular audience?, came to attention. This question in itself is thought-provoking. Educators need to ask themselves why they are pushing programming for specific groups. It would be interesting and informational to learn more about the motivations of organizations and public lands to reach out to minoritized communities. Are the motivations tied to racist beliefs? Do organizations want to tokenize certain communities to look like they are serving diverse populations? Does everyone have to connect to nature in the same way? It would be intriguing to learn more about this aspect of culture, connection to nature, and different ways to recreate in the outdoors.

Sharing Results

I hope that other EE educators in the Hamline graduate program will be able to benefit from some of the research I have done and take the opportunity to read my paper

and project through the Digital Commons. The research that has been conducted and tools that have been created will also be a conversation starter as well as a wealth of knowledge that I can now confidently share in a professional context with colleagues. As a white, heteronormative, female, I am no expert on this content and have much more to learn and analyze. I encourage myself and other environmental educators to continue to take the lead in welcoming racially diverse students, as well as learning from EE leaders from those communities that are minoritized. Start conversations, create meaningful relationships, build trust, and ask tough questions of how to change your implicit biases in your teaching and include all people in your community in lesson planning conversations.

Benefit to the Profession

This research paper and project alongside with other research that has been done or is being conducted on promoting more communities participating in EE, will aid in growing connections with nature. This research will also aid in changes in environmental policies to create a safer, healthier, more pleasant place for all to live. This research and toolkit when applied in curricula will help to unveil discrimination and violence that has occurred in natural places, give voice to minoritized people, and help to create connections and engagement with the natural world.

Summary

In this chapter I reflected on the capstone process; my major learnings, the literature I learned the most from, implications to policy change, limitations, future research, sharing the research and project with others and the benefits of the capstone

with the profession. I learned that introspection of your own beliefs as an educator will affect how you teach and convey content, creating relationships with partners and students will impact engagement and connection with the outdoors and all hope is not lost because so many organizations are already doing amazing work with racially diverse students. The literature validates the major learnings by incorporating relationship building into teaching by listening to the student and taking into account their whole identity (intersectionality, culture, and personality). This research lends itself to assisting with funding to serve more communities that may not be able to afford traveling to public lands and changing representation in those who make decisions about programming. There is still so much to learn about how to make programming welcoming and accessible to all. I hope to continue to share my learnings and research with others and learn more about how I can share the outdoors and nature with all.

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