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ENVIRONMENTAL INJUSTICE

Incorporating Environmental Justice into Youth Education

Morgan F. Prittie

Merrimack College

2020-2021

MERRIMACK COLLEGE

CAPSTONE PAPER SIGNATURE PAGE

CAPSTONE SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE

MASTER OF EDUCATION

IN

COMMUNITY ENGAGEMENT

CAPSTONE TITLE: Incorporating Environmental Justice into Youth Education

AUTHOR: Morgan F. Prittie

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Abstract

Social Justice is a concept which is often glossed over or excluded from student education, particularly the issues associated with Environmental Justice. Discrimination, oppression, and poor environmental practices all coalesce into dangerously impactful issues, which can be combated by further education and exposure. This project seeks to spread awareness of Environmental Justice issues, provide educators with the tools to implement social justice education, and express the importance of such exposure to students. This interdisciplinary project utilizes the facilitation of a workshop with lessons, activities, and opportunities for participants to engage in discussions. The goal of the workshop was to describe the need of Environmental Justice education among adults, children, and educators, provide materials and various methods for educators to integrate such concepts into their curriculum, and emphasize the importance community plays in supporting social justice efforts. The findings suggested that workshops, lessons, and discussions on the topic of Environmental Justice and community are impactful tools in inspiring action and the integration of social justice topics into curriculum. This project, despite its limitations, is an important example of how educators are open to engaging their students in new way and preparing them for topics untraditional covered in standard curriculum.

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Incorporating Environmental Justice into Youth Education

In the United States, people from all walks of life must overcome many difficult obstacles in order to achieve their goals and live a happy healthy life. These obstacles could include education, finances, housing, or even relationships. However, there is a portion of Americans who face an additional obstacle, one which can often be invisible and difficult to overcome. This obstacle is not only oppressive, but also dangerous to themselves, their families, and their communities' overall health and wellbeing. This issue has not only been known to affect the quality of their neighborhoods and homes but also take the lives of their community members. This obstacle is called Environmental Injustice, also referred to as Environmental Racism.

According to the Environmental Protection Agency (EPA), Environmental Justice (EJ) is defined as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (2020). In order to achieve EJ, the EPA has also created goals. These include achieving an equal degree of protection from environmental hazards and providing equal access to the environmental decision-making process. Its overarching goal is to ensure safe, healthy, and sustainable community and natural environments for all people, again regardless of race, ethnicity, or income (Greenaction, 2020).

The National Center for Environmental Assessment found that that black people are exposed to about 1.5 times more particulate matter than white people and that Hispanics had about 1.2 times the exposure of non-Hispanic whites. The study found that people in poverty had about 1.3 times more exposure than people above poverty (Mikati, et al, 2018). Interestingly, it also finds that for black people, the proportion of exposure is only partly explained by the

disproportionate geographic burden of polluting facilities, meaning the magnitude of emissions from individual factories appears to be higher in minority neighborhoods.

Additionally, in a 2016 article by the Center for American Progress, author Jasmine Bell cites similar findings in the relationship between demographics and environmental injustice. In the article, a study by Yale concluded that non-Hispanic whites have the lowest environmental hazard exposure rates via air. Meanwhile, Hispanics and African Americans had higher environmental exposure rates which were linked to serious health issues such as asthma, cancer, and lung disease (Bell, 2016). Other claims in the article pointed out the increase in hazardous waste sites in communities of color, disproportionate rates of lead poisoning in children of color, and water contamination levels in low-income and communities of color (Bell, 2016).

Using current and past occurrences of EJ movements in the United States as well as various frameworks including Conflict Theory and Arnstein's Ladder of Citizen Participation, this capstone will discuss potential solutions to environmental injustice as well as changes community members and educators can make towards improving their environments for future generations. This issue is important to the average citizen because it affects millions of Americans across the country, the majority of whom are in vulnerable communities such as communities of color and low-income communities. Hazardous waste is a dangerous and unfortunate result of the United States' lifestyle; however, it is an injustice to predominately place the burden on disadvantaged communities. The purpose of this project is to spread awareness through the development of a youth-based reading and exploration curriculum that will explore these dangerous issues in order to bring more attention to current EJ movements and issues as well as promote advocacy for affected vulnerable communities.

Literature Review

In school, at home, and in society children and young adults are exposed to many different social issues. In school children are taught about American history, and racism is treated as a concept from the past, despite undeniable evidence that it still exists today. They are taught that equality and fairness are important values to have but are not taught what decisions and actions they should make to promote these ideologies. Preparing children for adulthood is the overall purpose of schools and to do so, educators must understand how to properly educate students on more than history but on social issues that still trouble the nation. The purpose of this project and literature review is not only to review important concepts, terms, and theories of EJ but also to discuss the effectiveness of children's books in education and theoretical frameworks to guide the overall project.

What is Environmental Justice?

Unlike other social issues, EJ is not always outwardly recognized and accepted because of its delayed effects and its non-visible characteristics. However, more recently the EJ movement has gained more attention in the media, and in common conversations because of its connection to recent novel events in the US like the water pollution in Flint, Michigan, the Black Lives Matters movement, and the Covid-19 Pandemic (Bagley, 2020; Pellow, 2016). That being said, the EJ movement could be considered relatively new in the US as it did not become a recognized social issue until the 1980s. This may mean that adults today who were not directly exposed to EJ may not have learned about this social issue until later in their lives.

According to the US's Environmental Protection Agency, the EJ movement emerged in the United States in 1987 after a shocking study was released called Toxic Waste and Race (EPA, 2020). The study was conducted by the United Church of Christ Commission for Racial

Justice and explored the issue of hazardous substances after several instances of contaminated soil were dumped in African American communities, affecting their quality of environment and health. At the time similar studies focused on the environmental and health effects caused by toxic chemicals and other hazardous waste created by factories and facilities but did not connect the hazards to demographics. In *Toxic Waste and Race* (1987), researchers found that the majority of the people were being affected unknowingly and were part of African American, Hispanic, Asian American, Pacific Islander, and Native American communities.

Over the years, the definition and concept of EJ has expanded as more issues have been connected to communities' environments. Examples of issues that are considered part of the EJ movement include food insecurity, quality of the environment, air, water, and land pollution, climate change, waste management, and the collection of resources such as mining or oil (Center for Sustainable Systems, 2020). In 2018, the US Department of Agriculture reported that 11.1% of households experienced food insecurity, meaning that affected households did not have access to healthy foods required for a healthy lifestyle. The Department also reported that based on demographics, Hispanic identifying households, and Black identifying households experienced higher rates of food insecurity compared to the national average. Hispanic households averaged 16.2% and Black households averaged 21.2% (USDA, 2019). In addition, the burden of construction and resource collection has been inadvertently pushed onto the shoulders of minority communities. Infrastructure like dams threatens vulnerable populations' lands, water access, jobs, and the quality of the environment. They also threaten the natural landscape and ecosystems of the region. Facilities like natural gas reserves, coal reserves, and uranium reserves are located across the US, with an uncomfortable amount being in Indigenous lands (Center for Sustainable Systems, 2020).

What Causes Environmental Injustice?

As previously stated, the EPA defines EJ as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (2020). In analyzing this definition, one can also theorize what behaviors and actions cause environmental injustice in communities across the US. Environmental injustice itself is the term used to describe cases or events that may require EJ. Its conception arose from the evidence that certain communities or groups are disproportionately exposed to environmental risks compared to majority populations (EJOLT, n.d.). Various studies have been conducted which reveal several main causes of environmental injustice. Three major causes that have been identified include a lack of involvement by vulnerable communities in environmental decisions, poor environmental regulation, and unequal enforcement of environmental regulations (Berardelli, 2020; Diaz, 2016).

Lack of involvement by vulnerable communities is a prevalent issue when in diverse regions and often results in these communities being disproportionately burdened with environmental injustice hazards such as factories or waste management facilities. The lack of involvement can stem from several behaviors, one of which being that low-income or minority communities cannot afford the time and resources to participate in local government whereas middle and upper-class communities do. Because of this, middle and upper-class communities can advocate for environmental hazards to be built away from their neighborhoods and schools (Diaz, 2016). The privilege that middle, upper and white communities possess to participate in impactful environmental decisions ultimately disadvantages low-income and communities of color and continues the cycle which is environmental injustice. In addition to this point, a study

by Cerrell Associates in 1984 analyzed which demographics would be most resistant and least resistant to the construction of waste facilities in their communities. The report concluded that communities that were considered low-income would show less resistance than those which were considered middle to upper-income households (Cerrell Associates, 1984).

Robert Bullard (2020), considered to be the father of EJ by the movement, also found that institutions have a history of taking advantage of vulnerable communities to expose their waste and pollutants. Both in a historical and modern sense, waste follows “along the path of least resistance”, meaning that groups that do not have the knowledge, resources, or time to resist ultimately are burdened with environmental hazards (Bullard, p.239).

Poor environmental regulation is another notable cause of environmental injustice and often correlates with the prior reason. In making environmental decisions, policymakers will often attempt to place the burden of environmental hazards on areas with lower populations in order to limit resistance and negative effects. However, in doing the policymakers will unintentionally, and potentially purposefully, place environmental burdens on these smaller communities which are often disadvantaged. “Policymakers should closely examine the principles that guide regulatory siting decisions for their potential to subject vulnerable populations to a disproportionate amount of environmental harm” (Diaz, 2020, para 9). In other words, to avoid contributing to environmental injustice any further, policymakers should avoid exposing vulnerable communities to disproportionate levels of environmental hazards, even if that means distributing hazards more equally. Ultimately, by choosing to burden areas with smaller populations, Policymakers take a utilitarian approach. This means that they are making the decision that will result in the greatest amount of happiness in society. However, a common criticism of utilitarianism which could be comparable, is that it ignores justice and the needs of

minority communities because they are not part of the majority society (UKEssays, 2018). This means the utilitarian approach can cause general injustices in a variety of situations and including those which involve the environment.

Unequal enforcement of environmental policies is another contributor to environmental injustice and can result in inconsistent standards and qualities of the environment despite having the same regulations. In her article, Diaz (2016) wrote that environmental policies in low-income areas are often not as heavily enforced because of discrimination, lack of involvement, and business decisions. These practices are dangerous not only because they affect the communities close by, but also because it encourages the creation of facilities that produce hazardous wastes (Diaz, 2016).

Discrimination and Racism with Environmental Justice

The concept of racism is both a nationwide and global issue that correlates with countless social issues, one of which being EJ. At its' root, racism is understood as "the marginalization and/or oppression of people of color based on a socially constructed racial hierarchy that privileges white people" (ADL, 2020, para 1). The concept of race is very different from ethnicity, which is understood as a person's nationality and is widely recognized as being socially constructed in order to categorize peoples based on their appearances and characteristics like skin color, hair type, and facial features (ADL, 2020). Another term that is important to know when discussing the relationship between discrimination and EJ is systematic racism. Systematic racism is a form of racism and or discrimination that specifically describes institutions, policies, or societal practices that advantage white people and disadvantage people of color (ADL, 2020). Among these terms, environmental injustice can also play a role in the oppression of groups and communities. Oppression is understood as a system that combines

cultural norms and institutional power to regularly discriminate against and disadvantage certain groups and advantage others (Lorde, n.d.). Environmental injustice is only one factor in the many social issues that make up oppressive systems in America.

Discrimination, oppression, and racism are major elements of EJ as many of the causes of injustice are results of systematic discrimination against minorities in the US. Communities that are most affected by environmental injustice are often low-income and or communities of color, groups which are disadvantaged compared to middle-class or white communities. Environmental racism is one term used in the EJ movement to specify a type of environmental injustice. What makes environmental racism different from injustice is that it specifically refers to the disproportionate level of environmental hazards communities of color are impacted by. However, the two terms are similar because they both identify EJ as the solution to their issues (Greenaction, 2020). Environmental racism is a concept that is so powerful, that its mark can be seen on the foundation of town structures. For example, if one were to evaluate a town map and compare it using demographic data from the same town, one may find that the majority of environmental hazards like factories and recycling centers are in communities of color. However, in analyzing the majority-white neighborhoods, one may discover a lack of these environmental hazards. In an article by Bullard (2008) he reported that in US neighborhoods with waste facilities nearby, 56% of the residents were people of color while neighborhoods without waste facilities comprised 30%.

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Key Theories and Environmental Justice

To fully understand the cycle of EJ and comprehend the extent of its impact it is vital to relate the issue to societal theories. Conflict theory is a notable philosophical and psychological theory that implies that there are always two groups of people in society that are in a struggle over resources. These two groups are the dominant group and the oppressed group (Hunter & McClelland, 2018). The dominant group has accrued power and privilege, most times being blind to the experiences of the oppressed. Because of this, they are ultimately unaware of the advantages they possess and the disadvantages of the oppressed. The oppressed are treated unfairly, unequally, and taken advantage of by the dominant group. This conflict between the two groups will eventually lead to the oppressed group protesting for equality (Hunter & McClelland, 2018). This protest can turn into a revolt, which will almost always result in a

solution arising. However, as the oppressed group gains more resources, the dominant group will lose theirs, causing the cycle of oppression and domination to become reversed and to repeat itself. Marxist believes that the cycle of conflict will continue, and that equality will never be fully reached between the two groups (Hunter & McClelland, 2018). However, analyzing the theory, from an EJ perspective, can help understand the history and possible future of the movement as well as methods to teach it.

In applying conflict theory to EJ, the dominant group would be considered middle and upper-class communities as well as white communities. The oppressed group would be the victims of EJ such as low-income communities and communities of color. Having the privilege and ability to control their environments, the dominant group has become blind to environmental injustices. This then results in the dominant group lacking knowledge and understanding of the issues the oppressed group faces such as poor environmental quality, food insecurity, and exposure to environmental hazards. In confronting their environmental oppression, the dominant group may respond by denying its existence, blaming the oppressed group, or offering solutions that are not possible. For example, the dominant group might suggest that the oppressed group simply move to a location with a better environment, but for them, this might be an unrealistic solution for numerous reasons related to a lack of resources. As the EJ movement has grown, it has gained more attention and awareness resulting in complaints and protests across the US.

Another theory that can be applied to EJ and even contribute to the future of the movement is Arnstein's Ladder of Citizen Participant. The Ladder of Citizen Participation is a theory created by Sherry Arnstein in 1969 and has been widely used in the social justice and community engagement field. The theory explores the development and growth of community members as they gain more power through education and community participation. The

metaphorical ladder illustrates how as citizens become exposed, aware, and educated they begin to ascend the ladder. In the process, they gain agency, control, and power in their community. In order, these rungs are manipulation, therapy, informing, consolation, placation, partnership, delegated power, and citizen control. As a citizen climbs the ladder, the rungs below them also disappear, meaning they cannot regress in the process (Arnstein, 1969).

In associating the Ladder of Citizen Participation with EJ education in youth, students can theoretically take the place of the citizen. Children and young adults all have the potential to become active members of their community and most likely will participate to some degree once they enter adulthood. However, if they were able to begin their process through the Ladder of Citizen Participation at an earlier age, that means they might be more inclined or inspired to engage with their community as adults. EJ is not an issue that can be solved overnight as it's a complex system created by decades of injustices. As will be discussed later, the most prevalent and successful EJ initiatives are facilitated by grass-roots organizations and local efforts, in other words, local citizen participation. By involving, exposing, familiarizing the youth with these issues, and inspiring them to take action; communities can look forward to stronger levels of participation in their future members.

The most significant aspect of the theory in relation to social justice is to inspire students early on so they begin the process sooner and participate at a more significant level in adulthood. For example, if a student is taught about the environment, injustices, and the dangers of pollution from an early grade to high school, by the time they've graduated they would already have enough exposure to the topic and issue to potentially pursue further education or a career in environmental studies. With that in mind, educators and parents would be in the ideal position to expose children and young adults to EJ and other social issues through academics and

conversations. By simply incorporating occasional assignments, lessons, or projects educators and parents can jumpstart their progress through the ladder.

EJ as a whole is a topic that is well studied and thoroughly discussed in today's climate. Its impacts on society's systems, infrastructure, and norms are undeniable, making it a very influential and dangerous social issue. However, further study on EJ as it relates to youth-based reading, curriculum, and social justice education will lead to a better understanding of how to spread awareness to future generations.

Education and Environmental Justice

In grade schools, students learn about a variety of topics ranging from history to math, to English. These classes cover a range of lessons; however, students are not commonly taught about social issues or social justice, at least not directly. A history class may touch upon racism and an English class may discuss censorship. However, many other social issues are not discussed by educators or parents. Educators have a unique role as they have the power and ability to influence children from a young age. By teaching children from advantaged and disadvantaged communities about social issues, including EJ, educators can develop strong values and empower them to create inclusive communities built on equality and responsibility.

Unlike other social movements, EJ is built predominantly on grassroots organizations and local efforts. This means that in order to promote smaller organizations, events, and individual education is needed in communities. One of the most effective ways to spread awareness and educate about EJ is through educators like parents and teachers. Jeanne Peloso (2007) discussed the importance of social justice education in school and stressed the value of teaching children how to exercise their own rights. The education of EJ could effectively be incorporated into curriculums like biology or general science using information from the local environment and

other projects such as Urban Nutrition Initiative and the Edible Schoolyard Project (Peloso, 2007). Other subjects like history and health are also able to incorporate EJ into their curriculums by discussing the effects of pollution, food insecurity, lead poisoning, and the general history. With younger children, courses or lessons could be censored to be conscious of their ages, and instead of discussing injustices, teachers and parents can emphasize the importance of a quality environment and the value of equality. Different materials and activities may also be incorporated to better educate students depending on their age. Games, literature, and picture books are effective ways to expose children to a variety of topics safely and are great resources for explaining social justice.

Picture books hold a lot of power in educating children both inside and outside academics. Their characters, stories, and themes teach their readers about many life lessons such as the power of friendship, love, sharing, and more. In 2016, Scholastic reported that nearly 62% of parents ages 3 to 5 read to their child(ren) most days. Not only are these moments essential quality times between parents and children, but the stimulation of the pictures and words are vital to children's development. In older children, picture books with fictional characters and animals can even be used to teach lessons and theories. For example, in one study, children were introduced to a fictional character and shown how they changed from generation to generation, essentially teaching them the basic elements of evolution. 3 months later the children revisited the topic and were able to recall and apply the theory to other creatures (LoBue, 2019). This same concept can be applied to social justice education, more specifically EJ. Characters and stories help children understand concepts so when educating children on movements like EJ, teachers, and parents should focus on curriculum with these characteristics, especially for younger students.

Utilizing conversations around EJ or social justice in the classroom is not only important in the expansion of academic learning and civic responsibility but it can help bridge the gaps created by environmental injustices. As mentioned earlier, Arnstein's Ladder of Participation is a valuable tool in acknowledging the power that comes with exposure and education to community challenges. EJ is a very complex topic and can be difficult to fully understand with only one or two encounters with it. The importance of inspiring children from a young age and developing values of community and engagement cannot be stressed enough in the fight to address these dangerous issues. Early exposure either from parents reading picture books about the friendship between humans and trees or children working on projects based around trash in their neighborhoods can make all the difference on their future paths and the future of their communities. This being said it is vital that society normalizes and incorporate these topics into the educational curriculum to ensure future activism and community awareness.

Project Plan

In an attempt to increase awareness, encourage education, and community participation I am planning on hosting a workshop on environmental justice geared towards students, teachers, educators, and parents in an effort to teach participants about the importance of social justice education in schools as well as environmental justice.

Situation Statement

Environmental injustice comes in many different forms varying from environmental quality, to quantity of greenspace, to food insecurity. These issues mainly impact low-income communities or communities of color because of their lack of resources and education around environmental justice. In relation, this project seeks to create a provide the tools to create an environmental justice curriculum/lesson plan and educational workshop which can be used by

teachers, parents, and guardians to educate young children on the impacts and dangers of environmental injustice using resources like children's books, activities, and projects.

Define Your Goals

- GOAL 1: Participants will describe the need for EJ among adults, children, and educators
- GOAL 2: Participants will map/sketch ways they can integrate EJ into their existing curriculum
- GOAL 3: Participants will assess various educational materials to determine the EJ message and lessons that can be learned from the materials
- GOAL 4: Participants will passively be able to incorporate EJ into their classrooms

Target Audience and Stakeholders

For this project, the target audience for participants are educators and future educators such as teachers, students, parents, and guardians. The stakeholders or the groups which will be influenced by the project are both the participants and the children and or students which will be influenced and educated about Environmental Justice through the participants.

Crafting a Clear Message

Our environments could be considered one of the most influential aspects of our lives. The quality and purity of the air we breathe, the water we drink, and the land we live on influences both our mental and physical health. However, studies show that the burden of environmental hazards are not distributed equally among us all.

According to the National Center for Environmental Assessment, African Americans are exposed to 1.5 times and Hispanic people are exposed to 1.2 times more particulate matter than white people. The exposure to pollutants either in the air, water, or land can cause harmful effects such as asthma, high blood pressure, and even cancer (2018). Among these issues, these

communities often face other challenges considered Environmental Justice such as food insecurity and lack of green spaces. Environmental injustices across the country are a deadly force that can cause great harm to our communities, families, and children. As part of a community, children should be educated on such social issues from an early age in order to inspire change and spread awareness of the harmful and deadly side effects

Incentives for Engagement

Stakeholder: parents and educators

Incentive: gain knowledge about Environmental Justice, learn how to teach students about the issues, and inspire future generations to advocate for changes in their community's environment.

Stakeholder: general public

Incentive: bring awareness to the severity of Environmental Justice and the need for social justice education in schools.

Stakeholder: students and children

Incentive: learn about the issue of Environmental Justice and the influences it can have on their community's health as well as the world.

Identify Outreach Methods

There are several methods which will be used to market and spread awareness of this workshop. These methods include utilizing social media, mass emails, contacting Education Departments at Universities and Institutions, advertising on college campuses, and spreading awareness through other organizations such as Groundwork Lawrence and the Merrimack Institute for New Teacher Support.

Responsibilities Chart

NAME	ORGANIZATION OR AFFILIATION	RESPONSIBILITIES	CONTACT INFORMATION
Eddie Rosa	Groundwork Lawrence	Reference	Erosa@groundworklawrence.org
Vallary Ross	Groundwork Lawrence	Reference	vross@groundworklawrence.org
Yevette Garcia	Groundwork Lawrence	Reference	ygarci@groundworklawrence.org
Melissa Nemon	Merrimack College	Assist in creation of materials, activities, and evaluations	nemonm@merrimack.edu
Amanda Alcox	MINTS Program	Assist in advertisement of workshop and facilitation	Alcox@merrimack.edu
Noah Drouin	Keene State College	Assist in facilitation of workshop	Noah.Drouin@ksc.keene.edu
Kate Orbon	Merrimack College	Assist in facilitation of workshop	Orbonk@merrimack.edu

Tools/Measure to Assess Progress

Data will be collected through the following methods:

- Pre-workshop survey – An anonymous survey will be sent out to those who have registered for the workshop in order to collect information on their knowledge about Environmental Justice, their background, reason for attending the workshop, etc...
- Discussions, activities, and evaluation – During the workshop participants will have the opportunity to participate in discussions and activities based on environmental justice education, community, and responsibility. There will also be specific activities towards the end of the workshop which will focus on evaluating what the participants have learned.
- Post-workshop survey – After the event, participants will be sent another survey to complete which will collect additional information based on their post-event experiences and thoughts of the quality of the workshop.

Implementation Timeline

January 2021	Confirm participants and complete preparations for the workshop Marketing for workshop starts
February 2021	Continue marketing for the workshop Have participants register for workshop via email Send out pre-workshop survey Implement the workshop on February 16th Send out post-workshop survey
March 2021	Evaluate effectiveness of the workshop
April 2021	4/21: Full capstone draft due 4/30: Submit final capstone paper for publication

Logical Framework**I will...**

Create an educational workshop geared towards educators, students, and parents that will teach participants how to use children's books, projects, and activities to educate children on environmental justice issues and movements.

So that...

Participant will gain more awareness of environmental justice issues at the local and national level as well learn how to educate and address environmental justice conversations with their children and or students.

So that...

Participants who do educate their children and or students are able to portray environmental justice issue accurately and effectively to inspire interest in the coming generation.

So that...

Current and coming generations promote environmental justice value such as equality, inclusivity, and fairness in order to achieve safer communities for everyone.

Implementation Notes

At the time of this project, the United States is being greatly impacted by the COVID-19 pandemic. Restrictions and guidelines discourage large gathering, so the project is constructed in order to take place completely virtually. However, if this project were to be recreated in the future, post pandemic, then it can be adjusted to be implemented in person.

Methodology

The two-hour workshop, *Incorporating Environmental Justice into Youth Education* was held over Zoom in collaboration with the Merrimack Institute for New Teach Support (MINTS). The virtual, but highly interactive workshop provided an opportunity to educators to learn about Environmental Justice, community participation, and how to incorporate them into the classroom. Several forms of data were collected before, during, and after the workshop which will be analyzed to determine whether the goals of the project were met and if attendees were inspired to implement the discussed topics into their classrooms, lessons, or lives.

Participants

During the virtual workshop, *Incorporating Environmental Justice into Youth Education*, there were multiple participants who attended. The majority of participants were interested in Environmental Justice and or were an educator. The workshop was open to the public but was most strongly advertised to MINTS members and educators in the Keene, NH community.

MINTS is a program at Merrimack College in North Andover, MA which provides support to current and new teachers in the field. The program offers guidance, resources, and developmental opportunities to its members as well at the greater educator community. They commonly host guest speakers, forum, and workshop which their members are able to attend and earn accredited certificates for.

Materials

In the workshop there were multiple necessary materials used in implementing the event. In late December, the workshop was first advertised to all MINTS members as part of a Community Engagement Graduate speaker series (see Appendix A). Posters were then routinely emailed and posted on website and social media until the day of the workshop. Before the

workshop, a Pre-Event Evaluation (see Appendix B) was released two days prior to the workshop which asked demographic questions as well as general questions to gauge the participants level of knowledge about Environmental Justice.

During the workshop, the virtual meeting application Zoom was used to host the event. For activities, participants used materials like internet accessible devices as well as paper and colored writing utensils. Assistants who help to facilitate the group activities were provided with digital documents to direct the group and record qualitative data.

At the conclusion of the workshop, a Post-Event Evaluation (see Appendix C) was released to attendees to collect data on their experience and take-aways from the workshop. In addition, a digital document was given to all attendees with educational tools such as project examples, related literature, and related videos.

Procedure

It was determined that the most effective way to organize this workshop was in collaboration with the MINTS program. The workshop was advertised to all educators in association with MINTS as part a three-part speaker series by graduate students in the Community Engagement program at Merrimack College. In addition, the information was shared with faculty and graduate students at Keene State College and faculty at Keene Middle School, both located in Keene, NH. Multiple meetings were held with Amanda Alcox, the New Teacher Support Specialist at MINTS, in preparation to review formatting, evaluations, communication, and implementation.

The initial advertisement for the workshop began in January and continued until the day of the event. In order to attend, participants had to fill out a form to an online RSVP to the workshop. Two days before the event, participants who had resisted for the workshop were

emailed with a Pre-Event Evaluation which collected information about the participants knowledge on Environmental Justice prior to the workshop as well as basic demographic information. On the day of the event, another email was sent out with the Pre-Event Evaluation as well as the link to access the workshop over Zoom.

The workshop began virtually at 4:00 PM with an introduction of the facilitator. Using a slideshow as a visual, the purpose, goals, and agenda were explained and followed by an “ice-breaker” activity. The attendees were prompted to create a virtual “wordcloud” (see Figure B) using their devices and a website called Mentimeter. The question asked was “What do you associated with EJ & Community?”

Afterwards, the attendees were taught briefly about the history, definitions, different types, and dangers of Environmental Justice/Injustice. Following the lessons, the attendees learned about the relationship between community participation and Environmental Justice, specifically in relation to the Arnstein’s Ladder of Participation theory. Attendees then participated in a Kahoot trivia game related to the information they were exposed to, using their devices. The trivia question asked during the activity were mostly related to Environmental Justice and climate change facts.

After the activity, there was a brief discussion on how the information was connected to education and students with the attendees offering their own opinions on the relationship. Following this, the attendees were split up into groups and give approximately 20 minutes to brainstorm any ways in which educators could incorporate the information they learned into the classroom. Attendees were broken up into three groups, with one facilitator taking notes for later analysis. After the allotted time, attendees return to the main session and shared their ideas with

the group. Another discussion followed amongst the attendees using the chat room and verbal speech.

The last activity in the workshop was a mapping activity which attendees could utilize in their classroom to better understand their student's understanding on community. The attendees were asked to have a piece of paper as well as multicolored writing utensils. They were then prompted with a series of questions about their community, places they feel safe, places they feel unsafe, and so on. In between, the groups took pauses to discuss what it meant to feel safe, unsafe, welcomed, and unwelcomed. During this, facilitators were asked to document any discussions or words used.

To conclude the workshop, all attendees were provided with a virtual document with resources and project ideas based on the topics discussed. Following the presentation, the document was updated with ideas from the first brainstorming activity. Attendees were also provided a weblink complete the virtual online Post-Event Evaluations. As the session wrapped up, the facilitator stayed longer to address any follow-up question before the workshop concluded.

Findings

There were 15 participants who attended the virtual workshop, *Incorporating Environmental Justice into Youth Education*. There were two attendees who arrived late but were able to participate in the activities. In the initial MINTS registration shared over email and social media, there were 28 participants signed up to attend. Ten participants completed the Pre-Event Evaluation, and 15 participants completed the Post-Event Evaluation.

Post-Event Registration Demographics

When asked to identify their gender in the Pre-Event Evaluations, 60% of registrants identified as female (n=6), 30% identified as male (n=3), and 10% preferred not to say (n=1). Following the identity question, registrants were asked to share their age. There were a variety of different ages identified with nine different age ranges provided. The most popular age ranges being 40% between the ages of 18 and 24 (n=4), and 20% being between the ages of 45 and 54 (n=2).

Another question which was asked in the Pre-Event Evaluations of the registrants, was for registrants to identify the highest level of education that they completed. Similar to the other questions, there were a variety of options that the registrants could have chosen from. 40% of registrants identified that they completed their Bachelor's degree and another 40% identified that they had completed a Master's degree. The rest of the registrants had completed either an Associate's degree or Doctorate degree. Additionally, registrants were asked to identify their current occupation. Of the 10 participants, 30% work at Middle Schools (n=3), 40% work in Kindergarten and or Elementary Schools (n=4), 20% work as General Educator, and 10% work in Higher Education (n=1).

When prompted to identify their ethnicity in the Pre-Event Evaluation, participants were given the option to choose multiple identities. 80% of registrants chose to identify as White (n=8), 10% identified as Black/African American, 10% identified as Asian (n=1), and 10% preferred not to say (n=1). One participant identified as both White and Black/African American.

Pre-Event Registration Environmental Justice Responses

In the Pre-Event Evaluation, the registrants were prompted with question on about their knowledge of Environmental Justice issues. When asked whether they had any previous

experience with Environmental Justice, 40% answered yes (n=4), 30% answered no (n=3), and another 30% answered maybe/I don't know (n=3). The next question asked how registrants would rate their understanding of Environmental Justice. For this question the majority of participants responded with not very good at 40% (n=4), 20% stated neutral (n=2), 30% stated somewhat good (n=3), 10% stated very good (n=1). The final question about Environmental Justice in the Pre-Event Evaluation asked participants what type(s) of Environmental Justice issues are most important to them. Registrants each answered differently for the most part with 4 answering that they weren't familiar with any types. Additionally, there was 1 mention of housing, 2 mentions of equal opportunities and access, 2 mentions of pollution, 2 mentions of recycling.

Workshop Icebreaker

During the workshop, the introduction activity in which attendees participated in was an icebreaker word cloud. Attendees were encouraged to answer the question, what word(s) do you associate with environmental justice and community? In the wordcloud, the more a word or phrase is mentioned, the larger it appears. The largest words that were created were "in need", "renewable", "access", "sustainable", "recycling", and "climate".

Figure 1: Ice Breaker Word Cloud



Workshop Activity One

For the first activity, attendees were split into 3 groups and asked to brainstorm ideas on how they can incorporate concepts like environmental justice and Community into their classrooms actively or passively. Each group came up with unique ideas which are presented in Figures 2, 3 and 4. Some examples of ideas that were presented were incorporating concepts like reduce, reuse, and recycle into the classroom, providing visual environmental justice examples like photos or maps, and community investigation activities.

Figure 2: Brainstorm Classroom Idea Notes Group 1

Brainstormed Ideas	Ideas that will be shared
<ul style="list-style-type: none"> ● Adapting concepts of reducing, reusing, and recycling and applying to real-life (projects) ● Give students a visual representation of the dangers of not properly disposing of waste for reuse purposes (i.e. compare plastic bottle vs. perishable item in a classroom over time). ● Have students break down where they live, analyze information/statistics from their environment, and compare to that of other places. Expose them to other places <ul style="list-style-type: none"> ○ Google Maps Street View (visit other places) 	<ul style="list-style-type: none"> ● Give students the opportunity to actually see these things <ul style="list-style-type: none"> ○ Visual ○ Have discussions about these topics ○ Watch videos or clips that define the issues to raise their understanding/introduce them to the issues. ○ Projects - have students track what their footprint looks like - bottles used, sheets of paper used. <ul style="list-style-type: none"> ■ Chart these things ■ Analyze results

Figure 3: Brainstorm Classroom Idea Notes Group 2

Brainstormed Ideas
Students Choose - Graphic Organizers to Map out Ideas Collected during Group Work
5 groups of 4 students Make a rubric to map out collaboration so students have guidelines
Topics - Water Garbage disposal When the trash is not disposed of properly Recycling Transfer Station Separator
Core Values - https://trevormuir.com/2019/03/15/collaboration-rubric/
Hybrid/Home Connection - Groups would have 2 students at school/2 students at home
Exit Ticket - Choose your topic Define your role for the first step in your project Identify how you will contribute ideas for the first step of the project

Figure 4: Brainstorm Classroom Idea Notes Group 3

Brainstormed Ideas	Ideas that will be shared
<ul style="list-style-type: none"> ● Introducing a novel and talking about/identifying the injustices in the novel (7th grade) ● Electricity in science class - showing maps of places around the world that are completely dark... where people in the world do not have access to electricity (5th grade) ● Technology and engineering (windmills, plastic recycling, electricity) (6th grade) ● Use a novel (The Hate U Give) and in the book, there are rich descriptions between communities that the main character has to navigate... look at the access issues and social justice issues and the environmental issues ● Tom Sawyer, Huckleberry Finn, Confessions of Nat Turner ● Interdisciplinary lessons ● Look at environmental issues over time in the community - using different novels to cover a span of time - see how they change and see how they attempted to be addressed ● You have \$100 to grocery shop... what can you get for \$100... what can you buy versus what does it cost ● Looking at the effects of the gold rush on people and environmental research 	<ul style="list-style-type: none"> ● Using novels ● Connect with people in the community about certain topics (sanitation issues, businesses producing waste - how do you get all angles of an issue) - invite them to the classroom and also travel to the community sites - meet people, talk with people ● Grocery shopping activity

Workshop Activity Two

The second activity which attendees participated in was a Community Mapping Project. The documented responses to the question asked during the activity are displayed in Figure 5 along with the correlating questions. In response to being asked about the meaning of community, attendees stated, “feeling content”, “safe”, “common goals”, “freedom”. When asked what it feels like to belong, attendees responded with words like, “celebrated”, “loved”, and “shared interests”. The last question during the activity was what does it mean to feel like

you don't belong? Some of the attendees responded with "judgement", "disrespect", and "violence".

Figure 5: Activity Two Mapping Notes

Observations During Mapping Activity
<p>What is the meaning of Community?</p> <ul style="list-style-type: none"> ● Included in initiatives that bring change ● Feeling content ● Freer to pursue goals and aspirations rather than worrying about where your next meal is or where you will sleep ● Feeling safe ● Sharing community events ● Working towards something bigger; common goals <p>What does it mean to feel like you belong?</p> <ul style="list-style-type: none"> ● Celebrated ● Included ● Loved ● Shared interests ● Goals ● Ideals <p>What does it mean to feel like you don't belong?</p> <ul style="list-style-type: none"> ● Judgment ● Not really listening ● Disrespect ● Stereotypical questions about culture/community ● Violence ● Neighborhoods to stay out of (drug transaction, assaults,

Post-Event Evaluation Demographic Responses

In the Post-Event Evaluation, which was provided to participants who attended the virtual workshop, participants were asked the same demographic questions as seen in the Pre-Event Evaluation. In the Pre-Event Evaluation, there were 10 participants, however in the Post-Event Evaluation there were 15 participants. With the increase of responses and high chance of change in participants, the demographic information differs from the Pre-Event Evaluation.

Of the 15 participants, 64.3% identified as female, 21.4% identified as male, and 14.3% preferred not to say. When asked to identify their ages the majority of attendees chose ages 18 to 24 with 40%, 20% chose ages 55 to 64, 13.3% chose ages 35 to 44, 13.3% preferred not to say, 6.7% chose ages 25 to 34, and 6.7% chose ages 45 to 54. Out of the same group of attendees when asked what their highest completed degree was, 7 stated that they had completed Bachelor's degree, 5 completed Master's degrees, 2 completed Doctoral degrees, and 1 completed a Professional degree. When prompted to identify their occupation 14 out of the 15 participants responded with various answers and level of detail. Overall, 4 work in Middle Schools, 4 work as General Educators, 5 work in Kindergarten and Elementary Schools, and 1 works in High School. Lastly, when asked to identify their ethnicity 66.7% chose to identify as White, 13.3% chose to identify as Asian, 13.3% chose not to say, and 6.7% chose to identify as Black/African American.

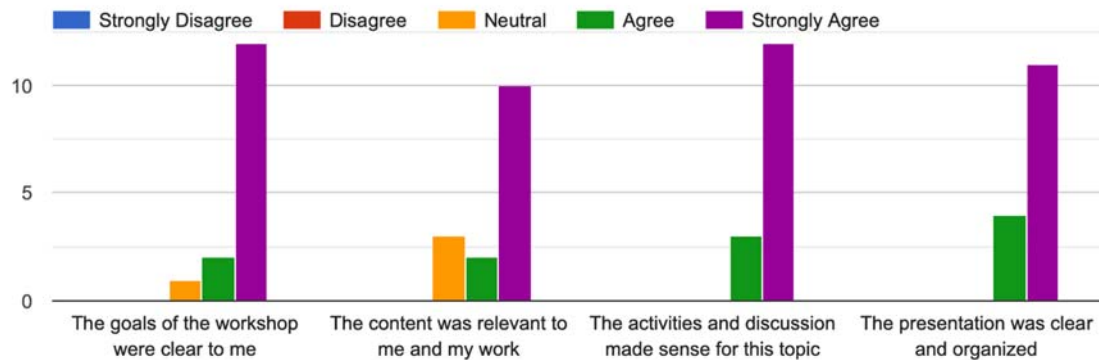
Post-Event Evaluation: Workshop Quality Responses

After the workshop concluded, attendees were prompted to rate the quality of the workshop, presentation, discussions, activities, and overall event. Questions were framed with a spectrum of potential responses for participants to share their feedback. The first question asked participants to rate the workshop overall. The vast majority, 13 of the 15, rated the workshop "Very Good", with the others rating it "Good". The next section of quality and assessment questions were broken down into three structure. These structures included workshop structure and workshop topics. This section of questions had responses on a scale between "Strongly Agree" and "Strongly Disagree". In the workshop structure portion, 12 attendees strongly agreed that the goals of the workshop were clear to them. 10 attendees strongly agreed that the content was relevant to them and their work. 12 attendees strongly agreed the activities and discussion

made sense for the topic of environmental justice. In the last question in this section, 11 strongly agreed the presentation was clear and organized. Additionally, attendees were invited to provide feedback and suggestions on how the workshop could be improved. The most common suggestions were to offer more resources and materials, focus on one type of environmental justice specifically, and lastly improve the conclusion to provide an overview of the workshop.

Figure 6: Workshop Structure Responses

Workshop Structure: How strongly do you agree with the following statements?



In the section, workshop topics, attendees were asked questions related to their understanding of the main topics of the workshop like environmental justice, education, and community. When asked if they better understood environmental justice as a result of the workshop, 12 attendees strongly agreed and 3 agreed. When asked if they better understood one type of environmental justice, 10 strongly agreed and 3 agreed. Additionally, 11 attendees strongly agreed and 4 agreed that they better understood the impact environmental can have on a community as a result of the workshop. 8 attendees strongly agreed that felt comfortable about incorporating environmental justice lessons and projects into their current or future classrooms, with an additional 6 agreeing and 1 neutral. In response to being asked if they have a better

understanding of the importance of community, 9 strongly agreed, 5 agreed, and 1 responded neutral. 10 attendees strongly agreed that they understood the relationship between community participation and environmental justice as a result of the workshop. The last question in the workshop structure section, asked attendees if the tools and materials provided to them for use after the workshop were applicable. 11 strongly agreed, 3 agreed, and 1 responded with neutral.

Post-Event Evaluation: Future Intentions and Environmental Justice Responses

In addition to collecting information on their experiences, data on their future intentions with the information was also collected. Similar to the previous section, the rating was on a scale from “Strongly Agree” to “Strongly Disagree”. Attendees were firstly asked if they were interested in learning more about environmental justice, to which 9 strongly agreed and 6 agreed. The next question asked attendees if they would be interested in learning more about community and 8 strongly agreed, 6 agreed, and 1 responded with neutral. When asked if they were interested in incorporating environmental justice or social justice topics into lesson plans, 10 strongly agreed, 4 agreed, and 1 responded with neutral. The last question asked attendees if they would share what they learned from this workshop with my friends, family, and or colleagues. 6 attendees responded with strongly agree and 9 responded with agree.

The next questions in the Post-Event Evaluation, probed attendees about their knowledge of environmental justice after the workshop. Attendees were asked, after this workshop, what type(s) of environmental justice are most important to you. The answers varied overall, but resulted in 6 mentions of equality and opportunity, 2 mentions related to water, 3 mentions of reduce, reuse, recycle, 3 mentions of food insecurity, and 2 mentions of everything discussed in the workshop. Lastly, attendees were prompted to share the most valuable thing they learned from the workshop. There were 6 mentions of clarity or the education of environmental justice, 5

mentions of social justice youth education, 3 mentions of the breakout groups and discussion, and 2 mentions of the activities.

Observations During MappingActivity

What is the meaning of Community?

- Included in initiatives that bring change
- Feeling content
- Freer to pursue goals and aspirations rather than worrying about where your next meal is or where you will sleep
- Feeling safe
- Sharing community events
- Working towards something bigger; common goals

What does it mean to feel like you belong?

- Celebrated
- Included
- Loved
- Shared interests
- Goals
- Ideals

What does it mean to feel like you don't belong?

- Judgment
- Not really listening
- Disrespect
- Stereotypical questions about culture/community
- Violence
- Neighborhoods to stay out of (drug transaction, assaults,

Discussion

This project had several important goals in which it strove to meet. Generally speaking, its goal was to spread awareness of the issues of environmental justice and educate educators on how they can utilize social justice topics in their lessons and curriculum to promote community values and inspire future action. Specifically, *Incorporating Environmental Justice into Youth Education* endeavored to describe the need for EJ education, provide examples of how to actively and passively integrate EJ into education, and lastly provide an opportunity to assess these examples. The workshop and project sought to bring attention to EJ education and meet

these goals by offering a beginner-friendly space to learn about current types of EJ, its connection to community, and how educators have the influence and power to increase awareness and inspire students to tackle these issues in the future. Between the interactive activities, EJ lessons, and group discussions, the workshop offered multiple opportunities for attendees to hopefully learn about this pressing issue.

Overall, the responses in the Post-Event Evaluation for *Incorporation Environmental Justice into Youth Education* reflected very positively. Out of 15 responses, 13 (86.7%), rated the workshop Very Good overall with 9 of those 13 responses strongly agreeing that the content was relevant to their work. This project sought to be relevant, up to date, and beginner friendly. Additionally, the interactive activities and discussions were meant to be engaging as well as valuable. Additionally, 12 responses (92%) strongly agreed that the activities and discussion made sense for the topic. 5 responses also mentioned that the most valuable portion of the workshop were the breakout groups, discussions, and activities. A response wrote, “I think the most valuable aspect of this workshop was hearing from people of different backgrounds/jobs/perspectives. Conversation is so powerful.” The data and comments collected suggests that the workshop and its activities and discussions were successful in conveying EJ issues and being relevant to the attendees.

This project aimed to educate attendees on EJ issues, despite whether they had prior experience or not. Prior to the workshop, the Pre-Event Evaluation collected information about attendee’s knowledge of EJ. Although, the same individuals who filled out the Pre-Event Evaluations were not guaranteed to be the same ones who filled out the Post-Event Evaluation, the data is still valuable in suggesting the workshop’s effectiveness. In the Pre-Event Evaluation, the responses revealed a variety of level of experience. 4 out of the 10 responses stated that they

had previous experience with EJ, 3 stated they hadn't had previous experience with EJ, and stated they weren't sure. Although these responses were not guaranteed to have attended, this data suggests that the workshop attracted individuals from a variety of levels, but the majority came in with little to no previous experience with EJ. Six responses or 60% rated their understanding of EJ as not very good or neutral. In addition, when asked to share a type of EJ that was most important to them, 3 participants responded with N/A. Overall, these findings potentially propose that a majority of attendees or those who were interested in attending had very little knowledge of EJ or were only briefly exposed to it previously.

In comparing this data with the responses from the Post-Event Evaluation, it can hypothetically suggest how much attendees were able to learn from the workshop. According to data collected in the Post-Event Evaluation, all 15 responses strongly agreed or agreed that they had a better understanding of EJ as a result of the workshop and all 15 responses also strongly agreed or agreed that they had a better understanding of at least one type of EJ issue as a result of the workshop. This same data correlates with another question which asked participant to identify what types of EJ issues are important to them after attending the workshop. Unlike in the Pre-Event Evaluation, there were no N/A responses, only one participant who chose not to answer. The most common responses to the question were mentions of equal opportunities, water related issues, food insecurity, pollution, and recycling; all of which were topics either mentioned or heavily discussed during the workshop. Overall, in comparing these results to the Pre-Event responses, it is implied that as a result of the workshop, Incorporating Environmental into Youth Education, attendees gained a better understanding of EJ as a concept and issue as well as gained information on how to incorporate it.

Limitations of the Study

Although this project was successful, there were several challenges that may have limited the study. This project had to be commenced during the COVID-19 pandemic and thus has been limited in its implementation, demographic reach, and timeline. In order to comply with COVID-19 safety standards, the workshop was held virtually which both limited and made it more accessible to audiences. Interested attendants were able to attend the workshop regardless of distance, however it limited the attendants to individuals who were able to access the application Zoom. Having the workshop completely virtual limited the formatting, activities, and overall structure of the facilitation of the event. In addition, this may have also limited the number of Post-Events Evaluations completed since it's completion almost entirely depended on the attendees. The timeline of the project was also disrupted partially because of changing in the Merrimack College calendar and the Spring 2021 start date. Traditionally, the Spring semester begin towards the end of January, however the college changed the date to February to prevent COVID-19 exposures.

Another limitation encountered was in the collaboration with the MINTS program. Although this was ultimately beneficial in outreaching to the educator demographic, it may have also discouraged non-MINTS members from attending the workshop. The workshop was heavily advertised to MINTS members and could have attracted a more diverse crowd if exposed to more institutions and or organizations.

Lastly, there was an error that occurred in a RSVP reminder email the day before the workshop occurred. In the email scheduled by the MINTS program, the date was written incorrectly, resulting in at least one participant missing the workshop. There was a corrected

email sent out immediately after the error was noticed, however this could have still impacted the turnout negatively.

Implications for Future Studies

This project has been a successful example of how educators can be inspired to incorporate new materials and social issues into their current curriculums. As Arnstein examples in her theory, the Ladder of Participation is a process which does not regress. Therefore, if more educators were to expose students to concepts like EJ earlier in their development, then they may be more inclined to participate in their community or engage in social issues later in life.

However, this begs the question of whether this hypothetical domino effect is accurate.

Potentially, a long-term project following the exposure and development of students and their level of community participation could be facilitated in order to explore this hypothesis. Students could be introduced to a social justice issue or multiple through lessons and passive activities and researchers could check-in with the participants over the span of their childhood to adulthood to evaluate whether that initial and or consistent exposure to social justice issues influenced their level of community participation or even career.

If this project were to be duplicated or repeated, future researchers should consider doing a series of workshops which explore each topic more in depth. Additionally, having the workshop in person could result in different outcomes since the activities can be more physical and the discussions can be more natural. Also, having attendees complete the Pre-Event Evaluation at the beginning of the workshop would guarantee that that the Post-Event Evaluation would be the same population, resulting in more accurate findings on the amount of knowledge gained after the workshop.

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Appendix A: Event Flyer

The Merrimack Institute
for New Teacher Support
(MINTS) Presents:



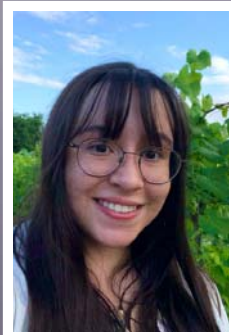
MERRIMACK COLLEGE
SCHOOL OF EDUCATION & SOCIAL POLICY

Email: mints@merrimack.edu

Incorporating Environmental Justice Into Youth Education

(Live Session on Zoom)

Date: Tuesday, February 16, 2021
Time: 4:00pm - 6:00pm EST
Audience: K-12 Educators



Morgan F. Prittie is the
Hands to Help Fellow in
Lawrence, MA, and is in
the Master of Education
in Community
Engagement Program at
Merrimack College
Class of 2021

This beginner workshop invites participants from any level of educational experience who are interested in (1) the Environmental Justice Movement; and (2) the integration of social justice education and discussion into the classroom. Together we will define and learn about the Environmental Justice issues and the movement, discuss teaching students about social justice and the importance of community participation, engage in educational activities and lastly gain a list of resources and materials to use in the classroom if you so choose.

Although this workshop is geared towards Elementary or Middle School classrooms, the concepts and activities can be altered and applied to High School as well.

This workshop is free & open to the public.
Certificates of Participation (2 hours)

Appendix B: Pre-Event Evaluation**Incorporating Environmental Justice into Youth Education Pre-Event Survey**

Thank you for signing up to attend Morgan Prittie's workshop, "Incorporating Environmental Justice into Youth Education". As a graduate fellow at Merrimack College, I am conducting this workshop for my Capstone Project. Please take a moment to fill out these questions prior to the workshop on Feb 16th at 4:00PM to help me in the research portion of my project. All answers will be confidential and will only be used for data collection purposes. Please DO NOT include your name in any of the answers. Thank you!

Environmental Justice

The questions in this section focus on your previous experience with Environmental Justice. Please answer them to the best of your ability.

1. Have you had any previous experience with Environmental Justice?

- Yes
- No
- Maybe/ I don't know

2. How would you rate your understanding of Environmental Justice?

- Poor or None
- Not Very Good
- Neutral
- Somewhat Good
- Very Good

3. What type(s) of Environmental Justice issues are most important to you? If you are not familiar with any, please type N/A.

Information About You

This section focuses on demographic questions. Please answer them to the best of your ability

4. What gender do you identify with?

- Female
- Male
- Non-binary
- other
- Prefer not to say

5. What is your age?

- Under 18
- 18 to 24
- 25 to 34
- 35 to 44
- 45 to 54
- 55 to 64
- 65 to 74
- 75 years or above
- Prefer not to say

6. What is the highest degree or level of school you have completed? If currently enrolled, the highest degree received.

- No schooling completed

- Nursery school to 8th grade
- Some high school, no diploma
- High school graduate, diploma or the equivalent (for example: GED)
- Some college credit, no degree
- Trade/technical/vocational training
- Associate degree
- Bachelor's degree
- Master's degree
- Professional degree
- Doctorate degree

7. What is your current occupation? If an educator, please indicate grade and or subject.
(example: 6th Grade English Teacher, Classroom Aid, College Student, etc.)

8. Please specify your ethnicity (Check all the apply)

- White
- Hispanic / Latinx
- Black / African American
- Native American / American Indian
- Asian
- Middle Eastern / North African
- Native Hawaiian / Pacific Islander
- Other
- Prefer not to say

Appendix C: Post-Event Evaluation

Incorporating Environmental Justice into Youth Education Post-Event Survey

Thank you so much for attending "Incorporating Environmental Justice into Youth Education". As a graduate fellow at Merrimack College, I am conducting this workshop for my Capstone Project. Please take a moment to fill out these questions to help me in the research portion of my project. All answers will be confidential and will only be used for data collection purposes. I appreciate you taking the time to support my learning by helping me to gain insights on my workshop.

1. Overall, how would you rate this workshop?

- Very Poor
- Poor
- Fair
- Good
- Very Good

2.

Workshop Structure: How strongly do you agree with the following statements?					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The goals of the workshop were clear to me					
The content was relevant to me and my work					
The activities and discussion made sense for this topic					

The presentation was clear and organized					
--	--	--	--	--	--

3.

Workshop Topics: How strongly do you agree with the following statements?					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
As a result of this workshop, I better understand what Environmental Justice is					
As a result of this workshop, I better understand at least one type of Environmental Justice issue					
As a result of this workshop, I better understand the impact the environment can have on a community					
I feel comfortable incorporating Environmental Justice related lessons/projects					

into my current/future/potential classrooms					
As a result of this workshop, I have a better understanding of the importance of community					
As a result of this workshop, I understand the relationship between Community Participation and Environmental Justice					
The tools discussed, and materials given to me are helpful and applicable to me					

4.

Future Intentions: How strongly do you agree with the following statements?					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

I am interested in learning more about Environmental Justice?					
I am interested in learning more about community					
I am interested in incorporating Environmental Justice or other Social Justice topics into my lesson plans					
I will share what I have learned from this workshop with my friends, family, and or colleagues.					

5. After this workshop what type(s) of Environmental Justice issues are most important to you?
 If you are not familiar with any, please type N/A.

6. What is the most valuable thing you learned from this workshop?

7. How can this workshop be improved?

Information About You

This section focuses on demographic questions. Please answer them to the best of your ability

8. What gender do you identify with?

- Female
- Male
- Non-binary
- other
- Prefer not to say

9. What is your age?

- Under 18
- 18 to 24
- 25 to 34
- 35 to 44
- 45 to 54
- 55 to 64
- 65 to 74
- 75 years or above
- Prefer not to say

10. What is the highest degree or level of school you have completed? If currently enrolled, the highest degree received.

- No schooling completed
- Nursery school to 8th grade
- Some high school, no diploma
- High school graduate, diploma or the equivalent (for example: GED)
- Some college credit, no degree
- Trade/technical/vocational training
- Associate degree
- Bachelor's degree
- Master's degree
- Professional degree
- Doctorate degree

11. What is your current occupation? If an educator, please indicate grade and or subject.

(example: 6th Grade English Teacher, Classroom Aid, College Student, etc.)

12. Please specify your ethnicity (Check all the apply)

- White
- Hispanic / Latinx
- Black / African American
- Native American / American Indian
- Asian
- Middle Eastern / North African
- Native Hawaiian / Pacific Islander

- Other
- Prefer not to say

Appendix D: Participants Take-Away Resources

Incorporating Environmental Justice into Youth Education Resources List

Sample Projects

- Community Solutions Project (Middle or High School)
 - Students form groups and evaluate/propose solutions to environmental community issues.
- Recycling Projects (Any Grade)
 - Students can collect recyclable materials from their homes/schools and use them to create art, useful items, and more.
 - Examples - recycle crayons, create sculptures, or make paper.
- Community Walks (Any Grade)
 - Group takes walks around the community or local area and discusses aspects they enjoy or want to improve.
 - While walking, students can reflect on their environment and appreciate it.
- Classroom Collage (Any Grade)
 - Students contribute photos and drawings of their “community”. These can be things that need attention, or they feel connected to.
- More lessons and activities. (n.d.). Retrieved February 12, 2021, from <https://groundworklawrence.org/moreactivities>

Educational Literature

- Elementary
 - Gonzalez, M. C. (2014). *Call me tree = Llamame arbol*. New York: Children's Book Press.
 - Kamkwamba, W., Mealer, B., & Hymas, A. (2019). *The boy who harnessed the wind*. New York, NY: Puffin Books.

- Netflix Film as well
- Nagara, I. (2016). *A is for activist*. New York: Seven Stories Press.
- Paul, B., Paul, M., & Zunon, E. (2020). *I am farmer: Growing an environmental movement in Cameroon*. Solon, OH: Findaway World, LLC.
- Seuss, G. T. (1979). *The Lorax, by Dr. Seuss*. New York, New YORK: Random House.
- Middle and High School
 - Cooper, C. J., & Aronson, M. (2020). *Poisoned water: How the citizens of Flint, Michigan, fought for their lives and warned the nation*. New York, NY: Bloomsbury Children's Books, Bloomsbury Publishing, part of Bloomsbury Publishing Plc.
 - Engle, M. (2018). *Forest world*. New York, NY: Atheneum Books for Young Readers.
 - Ezeilo, A., & Chiles, N. (2020). *Engage, connect, protect: Empowering diverse youth as environmental leaders*. Gabriola Island, British Columbia: New Society.
 - Gilio-Whitaker, D. (2020). *As long as grass grows: The indigenous fight for environmental justice, from colonization to Standing Rock*. Boston, MA: Beacon Press.
 - Sze, J. (2020). *Environmental Justice in a Moment of Danger*. Berkeley, CA: University of California Press.

Educational Videos

- AJ+. (2016, Jan 29). *What is environmental racism* [Video]. YouTube. <https://www.youtube.com/watch?v=TrbeuJRPm0o>
- Crash Course Kids. (2016, Jan 22). *Climate change: crash course kids #41.2* [Video]. YouTube. <https://www.youtube.com/watch?v=SzcGTd8qWTg>

- Grist. (2016, Jan 26). *Environmental justice, explained* [Video]. YouTube.
https://www.youtube.com/watch?v=dREtXUij6_c&t=3s
- ProPublica. (2017, Aug 4). *A brief history of environmental justice* [Video]. YouTube.
<https://www.youtube.com/watch?v=30xLg2HHg8Q>
- NowThis News. (2017, Nov 1). *What it's like to live on cancer alley* [Video]. YouTube.
<https://www.youtube.com/watch?v=aCT6BO7wlDs>
- NRDCflix. (2017, Dec 13). *What is environmental justice* [Video].
YouTube. <https://www.youtube.com/watch?v=fIu-AfQ0cBM>