ROUTLEDGE

Youth Created Media on the Climate Crisis

Hear Our Voices

EDITED BY
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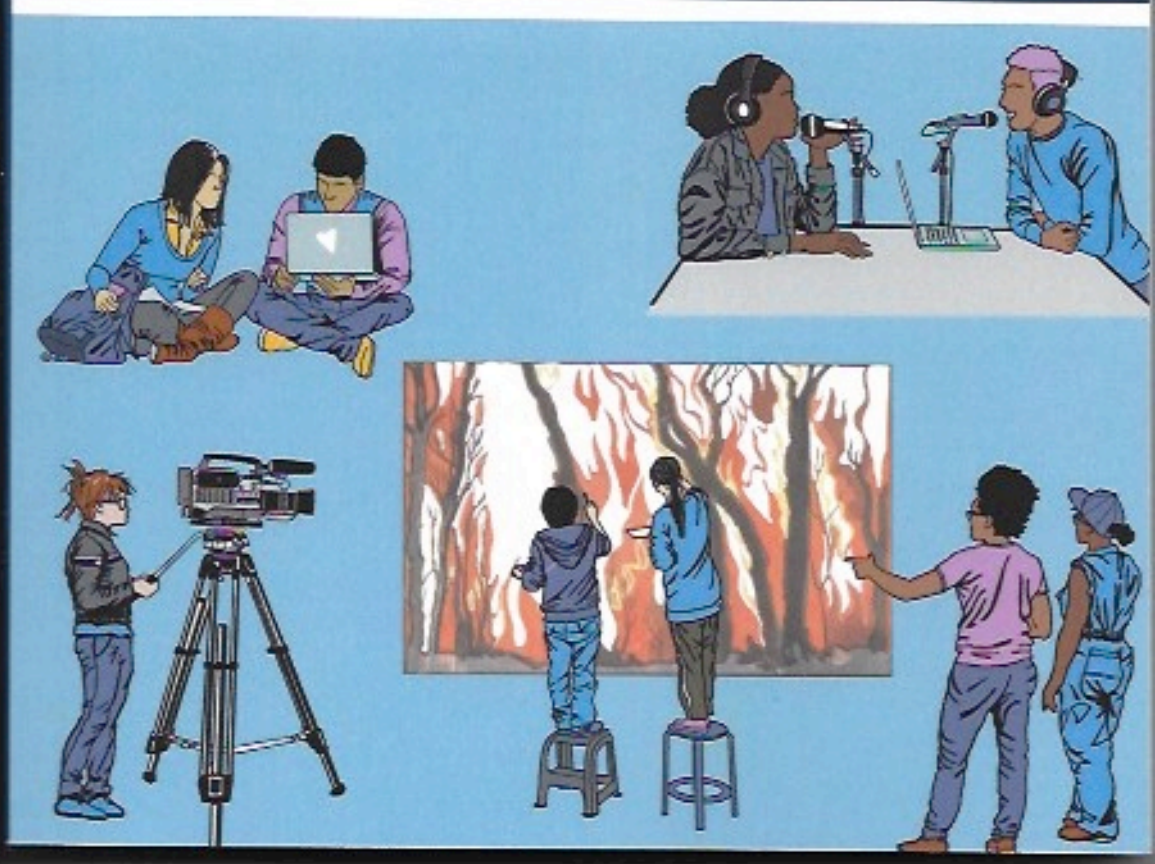

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10

THE LONG HAUL

Three Decades of Teaching Student Documentary Action Research for Environmental and Climate Justice

Steve Goodman

Students often view rising oceans, melting polar ice caps, and other disastrous effects of global climate change as disconnected from their lives, distant threats occurring in remote parts of the world. Some may feel that the problems are too overwhelming and that nothing can be done. Educators, particularly those teaching in diverse urban school districts, can play a critical role in helping students connect climate change to their daily lives by using media production to explore urgent questions of environmental science, public health, and racial justice. For example, students can investigate how climate change's catastrophic effects, such as massive heat waves, floods, and hurricanes, amplify pre-existing social, economic, and racial inequities for Black, brown, Indigenous, and poor white communities. They can then research problems, render stories, and propose possible actions at the intersection of environmental and climate justice.

This chapter discusses the collaborative action research and storytelling embodied in four student documentary projects about environmental justice problems faced by New York City communities spanning the late 1980s into the 2010s, and how these critical practices can inform student environmental media projects today. The youth co-created their documentaries in intensive, credit-bearing, after-school workshops at the nonprofit Educational Video Center (EVC) *evc.org*, of which the author was the founding Executive Director. They were drawn from New York City high schools for recent immigrants and small schools serving overage and under-credited students struggling to graduate.

The analysis of these four cases includes descriptions and dialogue from the footage and links to two short clips from one of the documentaries. In addition, the voices of two former EVC Documentary Workshop Program Directors,

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a former EVC student and her mother, are woven throughout the discussion. Interviewed while watching back the documentaries they facilitated and participated in years before, their reflections (lightly edited for clarity) provide unique insiders' perspectives on the teaching, learning, and production of these projects.

The first of these projects was produced when the climate crisis had yet to become fully part of the national conversation and before cell phones and social media had been invented. Now that students are all carrying a camera in their pocket and can upload their media messages to the world, the potential for student environmental media projects is nearly limitless. However, the focus is not on the production and dissemination technologies but on the teaching, learning, community partnerships, and actions that these student productions make possible.

Across their four projects, the students focused the viewers' attention on environmental and public health problems that were often invisible to the general public. Advocating for more sustainable and just environmental change, the youth producers documented the deadly chemicals dumped into our rivers and ocean by corporate polluters, *New York City and the Hudson River: Downstream and Up the Creek evc.org/product-page/new-york-city-the-hudson-river* (Educational Video Center, 1989); the tons of garbage carted away each day by trucks and barges, *Trash Thy Neighbor vimeo.com/175876642* (Educational Video Center, 1990). Youth producers also created videos about the diesel fumes of garbage trucks choking poor neighborhoods, *Shame on You! That Can Be Reused! evc.org/product-page/shame-on-you-that-can-be-reused* (Educational Video Center, 2007); and the lead dust and toxic mold growing behind the walls of public housing, *Breathing Easy: Environmental Hazards in Public Housing vimeo.com/66192997* (Educational Video Center, 2013) (for video clip transcripts of these two videos, see *t.ly/L-J4iii*).

Considering all four films together, a larger picture emerges from the cumulative products of capitalism's toxic and unsustainable growth, unbridled consumer excess, and the systemic racism that causes historically marginalized communities of color to suffer the worst consequences. Yet, with a sense of urgency and also humor, these students, family, and community voices remind us that these conditions of environmental injustice are not unalterable facts of life but are artificial problems that can be resisted and changed.

Student-Centered and Inquiry-Based Teaching within a YPAR Framework

Core to EVC's documentary pedagogy was its student-centered, inquiry-based approach and Youth Participatory Action Research (YPAR) framework. This meant grounding projects in students' questions, interests, and experiences. Their home, school, and neighborhood were often sites for investigation, media

making, and action. As students tapped their own family and community's "funds of knowledge" (Moll et al., 1992), the traditional teacher's position as the sole source of knowledge was de-centered.

Their student-centered approach strengthened students' accountability and ownership of their learning. For example, before they began their projects, students collaboratively created group agreements to establish norms and ground rules for safe and inclusive conversations and work together. They also drew production calendars and planned backward from the final screening, marking deadlines for the research, shooting, and editing phases that led up to it. The teachers integrated social-emotional learning into the projects by starting workshops with regular team-building rituals such as "highs and lows" (also known as "roses and thorns"). They provided everyone a dedicated time to share personal successes and problems they may have experienced in or out of school. They also fostered students' self-reflection through daily journaling time by asking students to consider what they've learned through their day's work and what creative ideas they may have for upcoming work, such as shot lists, interviews, or edit plans.

While the instructor's facilitative role remained crucial, the routine use of peer teaching strategies reinforced and distributed knowledge as students coached their peers on skills they had just learned to perform, such as operating the camera, the boom mic, or editing software. These authentic learning experiences allowed students to practice new identities as critical researchers, camera operators, storytellers, and environmental educators and activists when they used their videos to inspire viewers to question, debate, and take action in response.

Driven by students' questions, each video production was like peeling an onion; each question and layer of research revealed another beneath it. As former EVC Documentary Workshop Program Director Dave Murdock (April 18, 2022) described the investigative process with the *Trash* documentary:

> If you can start small with like a paper bag blowing down the street and then you ask, what happens to this thing?... you're incorporating daily life. Keeping it small at the beginning. And letting it build up. Once you're on that detective story of, 'What happens to this stuff?' it's really interesting. You start seeing it everywhere. You start seeing the garbage man, and the garbage trucks. You wonder, where do these trucks go?

When her students had questions about the impact of truck pollution in the community, former EVC Documentary Workshop Program Director Christine Mendoza prompted her students to take the next step in their *Shame on You!* project and interview people on the South Bronx streets about the high asthma rates there.

Students developed a sense of agency to question people on the street and the city's water and garbage sanitation officials. Developing their questions and conducting interviews sharpened students' research skills and social-emotional learning as they had to leave their comfort zone and work collaboratively to overcome obstacles and solve real-world problems that arose in the media-making process.

Not only did the EVC instructors weave student-centered and inquiry-based teaching strategies throughout the production process, but they challenged their students to apply their findings to the environmental problems that they were investigating. This approach was informed by the Participatory Action Research pedagogical framework that has long been practiced in Africa and Latin America. This framework is based on the notion that problems of injustice can best be solved by those most directly impacted by them in collaboration with outside researchers. It engages young people as active researchers and draws upon their experiences and insider perspectives to initiate social change and solve the problems that are obstacles to their well-being (Cammarota & Fine, 2008; Goodman, 2018; Petrone et al., 2022).

In these intergenerational "contact zones" (Fine & Torre, 2019) of dialogue, analysis, and reflection, the students drew upon a diverse range of collaborators for their documentary research, including peers, family members, environmental and public health advocates, doctors, scientists, and residents in the community. As co-creators of media art and new knowledge, the students used interviews, verite footage, visual documentation, art, music, puppets, diaries, surveys, games, humor, dramatic re-enactments, and more to re-present their environmental findings and narratives for youth, school, and community audiences. In this way, students' participatory research can redefine what counts as knowledge in a school's curriculum and instruction (Caraballo, 2022).

Student Engagement: Meeting Students Where They Are

Some EVC students initially struggled to connect to the environmental subject of their documentaries. They were also concerned about how their documentary would engage their urban peers in an environmental subject.

Growing up in New York City in the 1980s, EVC students encountered multiple epidemics in their communities, including AIDS, crack, homelessness, youth crime, and police violence. They said they hadn't really thought the environment was an important social problem, at least not one that urban students of color needed to be concerned about.

However, the environmental justice movement had begun to take root in the early 1980s during protests in North Carolina against the state's dumping of the deadly poly chlorinated biphenyl (PCB) chemical in a landfill in a poor Black farming community. It was sparked by the civil rights leader Rev. Dr. Benjamin Chavis when he declared, "This is environmental racism." He defined it as, "racial discrimination in the deliberated targeting of communities of color for toxic waste disposal and the siting of polluting industries" (Chavis, 1993, p. 3) and "the systematic exclusion of minorities from environmental policy making, enforcement, and remediation" (Almassi, 2021, p. 22). Chavis coined the term and helped bring a racial and social justice frame to this growing movement that was also protesting petrochemical and lead poisoning in poor and segregated communities across the country and the world (Fears & Dennis, 2021; World Economic Forum, 2020).

But environmental racism and environmental justice had not yet become popularized among the youth at EVC. Even though they didn't necessarily perceive the relevance of investigating environmental pollution in their urban communities, as Mendoza (March 10, 2022) put it, "The key was meeting the students where they are. If they're not interested in it, figuring out why they're not interested in it. Finding out what a potential entry point could be with them." Murdock also looked for possible connections and entry points and found one in his students' love of horror movies. Seeking to connect with their urban peers who would be watching their film, *Trash Thy Neighbor evc.org/product-page/trash-thy-neighbor*, they used creativity, humor, and their knowledge of horror movies.

The students opened their video with a low tracking shot, following behind a student's boots walking through garbage-strewn streets of Manhattan, forcing the viewer to take a closeup look at the garbage we throw out, but it never really disappears. An organ ominously plays classic horror movie chords as the unknown walking student narrator in *Trash* (1990) warns us, "There's a danger out there, lurking, waiting, building every single day.... Soon, IT may take over the whole planet.... No one can escape IT, whether you're Black, White, Hispanic, Asian, young, or old. Especially you!" The camera tilts up to a medium shot, so we finally see who is speaking. "IT is –" and in a nod to then-President George W. H. Bush, the student narrator says, jabbing his finger at the camera with each letter, "Read My Lips! G-A-R-B-A-G-E!" At this reveal, a student then gives a piercing horror movie scream off camera as the narrator walks off-screen, leaving a bag of garbage behind in the background.

Nearly 20 years later when Mendoza's video workshop began working on another environmental documentary about the problem of garbage, *Shame on You! That Can Be Reused*, her students similarly didn't initially understand how this problem connected to their lives as urban youth of color. Seeing their resistance to the topic, she recalled thinking, it would be great for my students to meet other young people "who look like them, who act like them and who might influence them to show them that this is an issue that is important for them to explore. So that peer-to-peer interaction and connection were critical in getting them on board to be excited about this project."

They visited and filmed a discussion with an after-school environmental justice youth group in the Hunts Point neighborhood of the South Bronx. The youth were organizing against the truck traffic and the toxic diesel fumes they spread in their neighborhood. One of the youth participants explains, "We do social justice and environmental justice… It's not fair. Everybody should try and take care of their environment equally instead of always dumping everything on the South Bronx."

The environmental justice youth group was a big inspiration for the EVC crew. They helped shape the direction the video crew would then explore, and environmental racism became a central focus of their film. In their opening narration, the EVC students state, "Environmental racism affects a large number of people who live in low-income communities. While making this documentary, we went to the South Bronx to investigate the injustices in the area."

Even as the EVC students came to learn about how important the concept of environmental racism was, they knew they needed to find an engaging way to teach their peer audiences about it. Mendoza (March 10, 2022) explained that "the students said, 'If we're going to make this film, it has to be fun and it has to be exciting. And we have to have fun making it.'" Like the *Trash* crew, these students got creative. They acted out playful scenes about recycling in the school lunchroom, staged a student recycling game, and made two puppets (whom they named Billy and Betty) out of paper bags to move the narrative of their documentary forward.

Mendoza (March 10, 2022) felt that it was important to support her students' puppet making and other creative ideas for their project and said, "'How can we make this work?' was always the question." While designing, scripting, voice acting, handling, and shooting the puppet scenes, they start with puppet Billy coughing and breathing in an inhaler. Betty asks, "What's wrong?" Billy says, "All the garbage transfer truck fumes are making my asthma act up." Adding statistics to the scene Betty says, "One in four people in the South Bronx has asthma. Can this be the reason?" A title card then appears: "It is estimated that around 3,000 trucks drive through Hunts Point every day."

The disproportionately high rate of asthma in low-income communities of color was also a focus of the 2013 EVC documentary, *Breathing Easy: Environmental Hazards in Public Housing*. In this case, the students investigated the lead poisoning and toxic mold epidemic in New York City's 400,000-resident public housing system. Although they knew that reporting on these hazards would be of general interest, to engage student audiences effectively, they wanted to personalize the problem and document how it affected another student.

One crew member, Raelene, had described to the class her family's unhealthy living conditions and her struggles with asthma. However, she was initially not comfortable being filmed for their project. She finally agreed after her peers convinced her that her participation could help others who may not be aware that they are living with lead, mold, or other similar hazardous conditions in their homes. So she took a video camera home and recorded her thoughts in a video diary.

Starting the Inquiry: Defamiliarizing the Familiar

A strategy that the EVC instructors used to help their students connect with the subject of their films was to teach them to take notice of that subject in their daily life. To do so, students observe the ordinary things they may have passed by or stepped over before with the naked eye and then use their camera to portray these things. In other words, they were learning to defamiliarize the familiar everyday experiences. As a result, across each project, the students became more aware of what they might take for granted and began to ask questions.

In the students' opening narration for *New York City and the Hudson River*, they call upon their viewers to take notice of the familiar, "You know when you cross the George Washington Bridge on the way to New Jersey? Ever notice that body of water that you pass over?" A wide shot captures the George Washington Bridge, spanning the river beneath it. Murdock (April 18, 2022) says:

> You have this huge river in your city. Did you ever think about it when you're driving over? It's getting them engaged in a personal way on the thing… questioning about how clean it is. Or why isn't anybody swimming in it, or can people fish in it. It's kind of opening your eyes to what's right in front of you.

The students working on the *Shame on You!* documentary also learned to make visible the seemingly invisible problem of the deadly polluted air that was all around them. In this case, it was the diesel exhaust fumes and fine particulate matter from sanitation trucks and the nearby highway traffic. Even though it was causing many residents in the South Bronx to suffer high rates of asthma, the heavy traffic was often seen as just an immutable fact of life.

As with the *Trash* and *Hudson* projects, Mendoza also helped her students to make personal connections with their documentary, *Shame on You!* (2007). She helped them to document and make the problem visible by surveying residents on the streets of Hunts Point about whether they knew anyone with asthma.

Mendoza helped her students prepare for their first "shoot" in the Bronx neighborhood by role-playing mock interviews in the classroom and debriefing what they learned from the experience. While some students played the interviewee, others practiced how to introduce themselves and their project to

VIDEO CLIP 10.1 Clip from Shame on You. Online available at: https://vimeo.com/369988483

a stranger, hold the microphone, actively listen and ask follow-up questions, properly frame the camera shot, monitor audio levels, and communicate with each other as a team.

When they arrived in the Bronx, one of the first people they interviewed said, "Yes, my daughter has asthma." Another man said, "Yes, my mother, my son." A woman answered, "Including myself, I have my granddaughter. And I think the majority of the people who live here." Her estimate was likely not too far off since according to the students' research, the South Bronx asthma rate was three times the national average (see Video Clip 10.1).

Mendoza (March 10, 2022) described her students' reactions after they gathered this survey data:

> "Man! All of these people in the South Bronx have asthma.... I didn't ever think it was connected to the environment that I was raised in. OK, maybe this is a bigger problem than we had originally thought....We found this! Now we have to find someone who's going to tell us about this!" So, it was like following the students' curiosity.

When they started to defamiliarize the familiar everyday sight of trucks passing through the neighborhood, they could begin to analyze the connections between the traffic and the rise in respiratory illness. In fact, they found reports that documented two to three truck trips per minute hauling garbage in and out of the residential streets and data that showed the South Bronx has the highest age-adjusted asthma death rates by far among all counties in the state.

In *Breathing Easy*, the filmmakers also called attention to and made visible hidden environmental hazards of lead dust and mold not only for their viewers but also for EVC student Raelene and her mother, Michele Holmes. Michele (March 25, 2022) explained the hidden nature of the mold after the New York City Housing Authority (NYCHA) moved her family into what they claimed was a mold-free apartment in the building:

> I didn't know what to look for... I didn't know it was already there and they just painted over it. And after being there one month, it was my first ER visit in many years. I didn't know it was because of the mold. I didn't know what those spots were. And they were appearing all over the bathroom, which was connected to my bedroom.... By then I already had Raelene, she had her first asthma attack a couple of days after she turned five. Later on one of my grandsons, he developed it. A couple of days after he turned four. And the common denominator was we all slept in my bedroom. The three of us. And to this day we still have it.

Following the Inquiry: Environmental Racism and Public Science

As Murdock (April 18, 2022) had observed, once his *Trash* documentary students started noticing the garbage trucks all around the city, they asked, "Where do these trucks go?" Following the trucks, they ended up atop the Fresh Kills landfill in the borough of Staten Island. The sanitation worker they interviewed for *Trash* (1990) explained, "This is the biggest landfill in the world and the only operation where the garbage comes in by barges." Their camera pans across cranes and bulldozers, dwarfed by mountains of garbage as far as the eye can see, as swarms of seagulls circle and dive around them.

At the time, dump trucks and barges were bringing in about 29,000 tons of garbage daily. Before it closed, 150 million tons of waste had been dumped there (New York City Department of Parks and Recreation, n.d.). This waste is the byproduct of our throwaway society, where we recycle just 5% of our plastic waste and throw out 15–25% of the food we buy, releasing methane into the atmosphere (Gammon, 2022; Lippard, 2016).

When the Fresh Kills landfill was finally closed a decade after the crew filmed there, the city's solution to disposing of the unsustainable flood of residential garbage was to ship most of it into low-income communities of color for processing by multiple privately operated transfer stations. So, in 2013, when the *Shame on You!* documentary crew also followed a trail of trucks and garbage, they broadened their inquiry to make visible the hidden forces of environmental racism and the social inequities that impacted Black and brown residents in one of the poorest communities in the Bronx.

To understand the concept of environmental racism, students not only needed to learn about pollution and public health but also about the social, political, and economic dimensions of how power works in their city. Whenever possible, the EVC instructors connected these issues to students' lived

experiences and to more complex political and scientific concepts explained by scientists, doctors, economists, and public health advocates. In their video, the students made these more abstract concepts easier for their viewing audiences by editing in more plainspoken comments from community members and concrete images that illustrated their meaning.

EVC instructors facilitated other students' critiques and used professionally produced documentaries to teach these advanced editing techniques. Sometimes by showing clips with the audio off, they analyzed how editors used images, graphics, narration, and sound bites to tell stories and explain complex ideas. Students also sharpened their editing skills when they presented their works-in-progress in rough cut screenings that the instructor facilitated with tuning protocols. Giving and receiving multiple perspectives of critical feedback from peers, teachers, and project partners helped students improve their videos and deepen their understanding of how audiences make sense of their work.

In *Shame on You!* (2013), a community development leader explained the concept of environmental racism as follows:

> The communities with very little economic power, almost always low-income, get stuck with polluting facilities, whether it is a bus terminal, a sewage treatment plant, or a garbage incinerator, and things like this. They are put there because the communities are poor, they have very little political clout, and land is cheaper there than in any other part of the city.

To express the political and economic concept in everyday language, the students edited a sound bite of a Bronx resident who put it plainly, "Manhattan is money. They don't have to deal with the circumstances that we have to deal with, 'cause we don't have that many high-class uppity, uppity people like that running around." Community activists further reinforced this idea from a green worker cooperative and from a public housing association who told the students, "They dump on people of color. We've all been dumped on for many, many years. It's an injustice. It's environmental racism." And finally, the students learned to illustrate important ideas from these interviews with b-roll images of trucks driving through neighborhood streets and of a cement mixer and power plant. As Mendoza (March 10, 2022) explained:

> There's something very powerful and authentic about hearing a professional ... say something, and then having the students go out and see it for themselves .... And every single time we did a street interview, we made sure that the b-roll shots and background were reflecting what we were talking about. ... visual storytelling was important in those street interviews.

In *Hudson River* (1989), the students began their inquiry by talking with the men who were fishing on the river banks in Harlem, many to bring food home for their families. When asked whether the fish they caught were safe to eat, one of the men assured them, "You could tell that the fish are clean by looking at the gills.... When you catch a sick fish, it's very obvious."

Interviews with environmental scientists and advocates helped deepen the students' scientific knowledge base and develop their curiosity and scientific inquiry habits. For example, when they interviewed the Hudson Riverkeeper, they learned that in fact, you can't tell whether a fish is contaminated with PCBs just by looking at it, and the chemical is dangerous in very small amounts.

> "It's another detective investigation," observes Murdock (April 18, 2022). "You have to check out if you can really tell if the fish are sick. No, you can't. PCBs, you can't taste them, you can't smell them. Well, what's a PCB? And then you're onto this next question to find answers to."

The *Hudson* video crew interviewed an environmental scientist at Columbia University to learn about PCBs. They learned that PCBs were an industrial chemical used to manufacture transformers, capacitors, and other electrical equipment. Moreover, one of the major electrical manufacturing plants in the country was General Electric, located on the Hudson River 150 miles north of New York City. Between 1942 and 1977, General Electric poisoned the river, dumping an estimated 1.3 million pounds of toxic PCBs into the water (Riverkeeper, 2009). From their research, the students included this warning in their film's (1989) opening narration: the Hudson River was "so polluted that New York State warns that if you eat more than one fish per month, you could get cancer."

Although their cameras and the documentary they were producing gave EVC students access to people, locations, and institutions other teenagers would not normally have had, they still felt intimidated going into an elite university to interview a scientist. Recalling the interview, Murdock (April 18, 2022) advised, "They might think, 'I don't want to talk to him, I don't know anything about the Hudson River.' Well, that's why we're going to talk to *him*. You don't have to know everything about the river when you talk to them—you have to do a little bit of research to ask the questions. But generally, you're there to find out from the interview, and then you take that interview and go somewhere else with it."

Their inquiry led them to research what is being done to prevent these toxic chemicals from polluting the river. They visited the North River Wastewater Resource Recovery Facility in Harlem, which treats the wastewater before it flows into the Hudson. They were angry to learn that when storms flooded the city's sewers and drain pipes, the Facility released untreated household and industrial sewage and toxic waste into the river.

Students in the *Breathing Easy* project also had to learn about, and then explain to their audiences the hidden dangers of chemical hazards for vulnerable populations. While it was important to learn the science, Raelene (March 25, 2022) recalled how challenging it was to understand the medical language a doctor used to describe the negative effects of lead in the blood, "The doctor, just every word that he spits out, I was like, 'What? Are these clinical terms? Like, dumb it down a little bit!' So his section was a little hard to edit." But the students made the potentially lethal impact of lead poisoning—especially for children—easier to understand with title cards of facts from the CDC. Moving from research to action, they next edited a scene of an environmental health advocate showing Raelene's mother how to test for lead dust in her apartment.

Taking Action: YPAR and Community Partnerships

Community partnerships with environmental activists and funders were essential for all four student documentary projects. Following a YPAR approach, EVC instructors introduced the youth to the rich and diverse assets within their community, including environmental justice educators and advocates, researchers, and public health experts, to teach them about the problems they were exploring.

However, *Breathing Easy* was the only project where a community-based environmental justice organization also advocated for one of the students and her family, who were directly experiencing the environmental racism that the students were researching. This was only possible because Raelene and her mother Michele decided to allow the EVC students to document their story. Although it was not an easy decision to make, Michele (March 25, 2022) reflected on the conditions that prompted her to open her home to her daughter's class video project:

> Well at that point, I was at my wit's end.... I was angry, but I was tired. I didn't know what to do. So, at this point, it was like, maybe this will help. At that point, I blamed myself for the mold. I blamed myself for my daughter and one of my grandsons developing asthma because of the conditions we were living under. The asthma attacks would occur every month after I cleaned the mold in the bathroom and sprayed down the entire kitchen for the roaches. And I was just at my wit's end.

What made this collaboration with WEACT for Environmental Justice a transformative experience for the youth production team, and particularly for Raelene and Michele was the close relationship they developed with the organization's environmental justice staff, particularly with the community health advocate Ana Parks. Significantly, this was an intergenerational family

partnership where both Raelene and Michele felt heard and supported, giving them social capital for what grew to become a long-term relationship with WEACT. As Raelene (March 25, 2022) reflects:

> I will never forget that walk with Ana Parks that we have at the end of the [film's] intro. Because I had never really talked to anyone like Ana before. I never really found myself pouring my story out to anyone.... I connected with her more because she stuck with us. She fought with us.... So there was a real relationship there. So the fight continued with her.

The class collaboration with Ana Parks and WEACT also deepened Raelene's consciousness of how these environmental hazards impacted her health, which later led to action. She recorded her reflections on the "silent killers" of mold in her home in her video diary. Watching her video diary back ten years later, Raelene reflected on her process:

> I had no sense of direction for this diary. I just figured, you know what? I'll treat it like an actual diary and talk freely and see where that takes me. I thought... they're lurking in your house and the next thing you know, you're very sick. And you don't know why (March 25, 2022).

Raelene's conversation with Parks and a section of her video diary was edited into the documentary's opening sequence, "My Ceiling Looks Ridiculous," and can be accessed here in Video Clip 10.2.

When Parks inspected their apartment, she was shocked by the extent of the mold infestation covering the bathroom ceiling. She noted her findings, took samples for lead dust testing, and explained the next steps she would take in

VIDEO CLIP 10.2 Clip from Breathing Easy documentary: "My Ceiling Looks Ridiculous." Online available at: https://www.tcpress.com/goodman-chapter-one

VIDEO CLIP 10.3 Clip from Breathing Easy documentary: "I Don't Know Where to Turn." Online available at: https://www.tcpress.com/goodman-chapter-one

response. Parks' home inspection and dialogue with Michele modeled for the student producers and their viewers how they too could use their cameras to document the problem, partner with community environmental activists, and advocate for their families if they found lead, mold, and other environmental health hazards in their homes (see Video Clip 10.3).

Of course, Raelene and Michele were not alone in their struggles with the city government for safe and healthy living conditions in public housing. In fact, health hazards were rampant and systemic in the aging buildings run by NYCHA, putting thousands of low-income residents at great risk. NYCHA violated the Americans with Disabilities Act for its failure to remedy the mold for residents with asthma, and other federal and local laws when it failed for years to inspect for lead-based paint in its apartments. As of 2022, forty billion dollars in repairs are still needed in NYCHA, the biggest landlord in New York City, and the largest public housing authority in North America. In addition, Hispanic and Black female-headed families made up 93% of all families in NYCHA public housing. Given the scope and racial inequity of the problem, the EVC students understood this as a case of systemic environmental racism (Goodman, 2018, p. 21).

Moving from research and documentation to action took a range of forms and necessarily looked different for each project. Student action can differ in YPAR projects depending on their goals and reasons for conducting their research in the first place. Some result in a conference presentation, a co-authored policy paper, or even marches and sit-ins (Petrone et al., 2022).

Each EVC youth producer presented their environmental documentaries at premiere screenings with school, family, and community audiences for public dialogue and action. They also won multiple awards and were featured at national and international youth media festivals and, by the early aughts, were

also disseminated online. In addition, students were invited to present them at various libraries, colleges, nonprofit organizations, and funders. More specifically, *Hudson River* was broadcast as part of environmental programming on WNET public television. *Trash* was screened by environmental partner Christodora. *Shame on You* was used in schools and communities for environmental education by the partner Council on the Environment of NYC (CENYC). EVC students and the Holmes family presented *Breathing Easy* at WEACT's national housing conference, and the film was exhibited at the David J. Sencer CDC Museum in Atlanta in association with the Smithsonian Institution.

Students also modeled and documented actions within the production of their documentaries. For example, the *Trash* student producers not only made us aware of community buy-back recycling centers but also used the final segment to show how they can recycle and reuse instead of throwing more garbage in the landfill. A student spills a drink on a table and uses a sponge instead of a paper towel to clean it up. Another student, with his face completely lathered in shaving cream, leans right into the camera to tell us to use razors where just the head comes off instead of using a fully disposable razor. He then flips the head off and says, "Capisce?" After watching these scenes, Murdock (April 18, 2022) said, "The thing that's really important, on both the *Hudson River* and the *Trash* videos, is the humor. It allowed them to be funny and to find something that's funny in it."

Teaching young people how to recycle was a goal promoted by CENYC, one of the partners for the *Shame on You!* documentary. The crew interviewed a teen who was actively improving recycling efforts in his public housing complex. In addition, the EVC students staged and recorded a recycling game in the middle of their high school hallway to teach their peers how to recycle bottles, cans, and plastic containers properly. Mendoza (March 10, 2022) remembered:

> Students thought that no one would want to play the recycling game. So they thought—"What can we do to entice people to play the recycling game? Let's give them food! Teenagers always want food!" They baked their own cookies and brought them in the next day. But they were so engaged, none of the people who played the game even took a cookie!

In the *Hudson River (1989)* project, the students' main goal was to develop their viewers' civic engagement and environmental awareness of corporate and government malfeasance and accountability in the face of massive degradation of our rivers and oceans. They learned that New York City dumped almost five million tons of untreated industrial toxic sludge in the ocean each year. The students end their film with a closeup of the Riverkeeper standing on the banks of the Hudson, strongly urging citizens not to allow or make an exception for those who break environmental laws and degrade the natural resources that

belong to all of us. "The fish belongs to the people of New York. The water belongs to the people of New York.... If we can send that message to these people, that those are our standards, it's going to have an effect on the rest of our lives and the rest of the things that we live with." The frame freezes and fades to black.

The message here is, as Murdock (April 18, 2022) puts it:

> It's not a natural force. It's all human decisions. We've made the decision somehow not to put a lot of money into recycling. We've made the decision not to force companies to clean up their own pollution. And so once people understand that it's not just a given, but it's been made to seem like a given. But if you really look into it, it's not.

The *Breathing Easy* crew took a few different actions to address the problems they were researching. First, they shot and edited a short instructional video for WEACT to show Harlem residents how to test for lead dust in their apartments. As noted above, they screened their documentary in various venues city-wide to promote community dialogue against NYCHA's environmental racism in public housing. And on a more personal level, they sought to use their documentary to pressure NYCHA to eradicate the mold from Raelene's family's home fully. These experiences not only motivated the students to become active but had a profound impact on Raelene and her mother. Michele (March 25, 2022) explains how she became an environmental justice activist:

> The video made me change ... Initially, we were one family, in one apartment that was overrun with indoor environmental issues. After the video, we were a family seeing that now others were coming to us saying, "Oh, we have the same problem." That re-opened the activist part of me ... not only did I learn more, but I advocated. We spoke at several conferences. I in turn went to City Hall and spoke on news conferences ... and to Washington DC .... So, now I walk into a legislator's office, it's no longer a fear. And most people don't know that they have these privileges.

Reflecting back on what taking action meant for her, Raelene (March 25, 2022) said:

> I felt like this fight was for my mother to take off with. 'Cause I like to fight a different way. She likes to go to these town hall meetings and send these emails....And I would make a video and show you the fact. I would go on and tell stories visually. And have that confidence to tell my story. Regardless of how hard it is to watch or how cringey it is for certain people. The story has to be told.

The collaborative process of documentary inquiry, research, and action was life-changing for many EVC students involved. Michele (March 25, 2022) expanded on how transformative the experience was for her daughter.

> Speaking from a parent's perspective, just watching the opening and video diary brings me to tears every time I see it. EVC made a huge impact and change on Raelene. It made a change in her education, her outlook, and her future. And even though the issue regarding *Breathing Easy* still is not over, it pulled the fighter out of her. And it gave her opportunities. She went back to school. She thought she was just going to get a Graduate Equivalency Diploma (GED). Instead, she went on to get an Associates and Bachelors degrees.

Climate and Environmental Justice over the Long Haul: Carrying the Work Forward

The next generation of students is now carrying the work forward. Environmental youth movements are calling for urgent action in response to the growing global climate catastrophes. Yet, the overwhelming scale of these problems, as well as the normalization of them, has also caused many to slip into passivity, cynicism, and hopelessness. The challenge then for educators is to meet students where they are and teach them to use media to investigate how it impacts their lives in their cities, towns, and neighborhoods and make their voices heard with a sense of hope for climate and environmental justice.

This earlier generation of EVC students created media exemplars for learning, researching, and chronicling environmental citizen activism in urban communities. Animated by students' questions and community voices, their projects connected systemic environmental degradation to students' lived experiences. They started small, questioned the familiar and the given, forged intergenerational community partnerships, and used participatory research, humor, and creativity to call youth and adult audiences to action. For example, they created video stories about the early recycling centers and Hudson Riverkeeper's legal action in the late 1980s to youth and adult activists' calls for environmental justice and healthy communities in the South Bronx and Harlem in the 2010s. Doing so opened their eyes to the decades of hazardous housing and unchecked disposal of waste and toxic chemicals in our land, water, and air that caused the poorest communities to disproportionately suffer from government and corporate abuse and neglect.

These documentaries and lessons learned while creating them still speak to teachers and students today who are engaging in YPAR work at the intersection of the climate crisis and environmental justice. Teachers can leverage community assets and students' considerable creative skills in media production and social media networking for research, documentation, storytelling, and

organizing to create instructional public health videos, action research projects with environmental justice organizations, or other media projects.

Key to the student-centered YPAR approach is engaging students in their community outside school as a vibrant space for critical research, problem-solving, and filmmaking. Although administrative and parental permissions are usually required, and transportation is often needed, the rich opportunities for authentic student learning and media creation make it well worth the trouble.

Climate projects will vary depending on students' grade level, class and project group size, technology access, frequency and duration of classes or after-school clubs, administrative support, teacher experience, and other factors. Whether the YPAR media projects are introductory or in-depth, teachers will need to scaffold skill-building support for students so they can most effectively use media to convey their messages and make their voices heard.

By facilitating a wide range of possible activities embedded in the production process, students can learn to identify a key climate justice problem that they want to investigate and change; interview peers and community members about their experiences with the climate problem and possible solutions; map their knowledge, new questions, and who best can answer them; partner with community environmental advocates, artists, or public scientists for further video documentation, research, and action; create music, animation, spoken word, or other elements of creative expression; review video footage and create an edit plan; create an action plan using their video to educate audiences and inspire change; edit and present their video to spark remote and in-person dialogue and climate activism in school, community and beyond (Goodman, 2018, p 139).

The following are some possible lines of inquiry and sources that may serve as launching pads to prompt student discussion and investigation. Students can then create videos on how extreme heat waves, hurricanes, floods, and toxic air pollution disproportionately impact the health and well-being of underserved communities of color—and what can be done to improve these conditions:

- Aging cities like New York are hit with the scorching heat that impacts all residents, but Black New Yorkers are twice as likely to die from heat as white residents are (Barnard et al., 2022). Students might document the urban tree planting and green space initiatives to support heat-vulnerable low-income communities.
- Intolerably hot classroom temperatures disproportionately inhibit learning for Black and Latinx students who are less likely to have air conditioning in their homes or schools. By 2025, an estimated one in four public schools nationwide will need to install or upgrade air conditioning systems. Students might research this problem and what can be done as urban schools are increasingly sending students home early for "heat days" (Meckler & Phillips, 2022).

- Smoke exposure from forest fires and hotter, longer warm seasons lead to an increase in air pollutants, pollen, and other allergens that are especially harmful to people suffering from asthma and other respiratory illnesses (Centers for Disease Control and Prevention, n.d.). Students might research air quality and disparities in respiratory illness in their community.
- Mold outbreaks in low-income housing followed Hurricane Katrina in New Orleans and Hurricane Sandy in New York (Pike, 2020). Students might research how the respiratory health of low-income housing residents can be safeguarded as risks grow of hurricanes and floods, and crumbling infrastructure.
- Poor residents who live in basement apartments are vulnerable to flash floods, as was the case when 11 New Yorkers died when stormwater filled their basement apartments after Hurricane Ida (Barnard et al., 2022). Students might investigate housing codes and environmental safety measures proposed to prevent more deaths.
- An 85-mile stretch between Baton Rouge to New Orleans, Louisiana (dubbed "Cancer Alley") has the densest concentration of petrochemical plants in the country, located near mostly Black and poor towns, with a cancer risk rate 50 times the national average. Students might research community efforts to document and change similar toxic housing patterns for communities of color (Cho, 2020; Laughland, 2022).

These are just a few possible climate and environmental justice problems for which students can use media to investigate and propose solutions. For example, at the time of this writing, extreme floods and disinvestment in broken water systems have left more than 150,000 predominantly low-income Black residents of Jackson, Mississippi without drinking water. In our climate-changed world, student voices advocating for sustainable and just environmental action are needed now more than ever.

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