

# **Professional Seminar in STEM Leadership Professional Development Final Reflection Paper - Billy Green**

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## **1. Mini Professional Development Project Title**

**“Science in Transition”**

## **2. Justification. (Why did you select the topic?)**

During the Methods Course in my first semester in the Endeavor program, I did my Nature of Science paper on an article titled “Science in Transition”. Reardon in her article presents one of the largest transgender studies in the world that highlights the safety and efficacy of treatment for transgender people. Simultaneously, I was leading an LGBT youth panel, and one of the self-identified heterosexual cis-gendered females, asked a general question to the people of trans-experience - “How do those transitioning feel about taking hormone therapy, when long term effects of the hormone supplements and its effects on humans have not been published or studied?” The students question reminded me of the Reardon article and the fact that a panel of very well-spoken individuals could not answer this question left me with many questions: Why has Science not studied the long-term effects of hormone therapies for transgendered people? Did I ever study the science behind transitioning in my upper level science courses? How do I, as a Science Educator and Researcher, address the lack of representation of LGBT individuals in the field of STEM? These experiences and questions was the impetus to the professional development I presented engaging teachers, counselors, and school admin in critical conversations involving the intersections students and provide teachers with the resources to create spaces that affirm gender non-conforming youth in STEM.

## **3. School Name(s), Number of Educators, Grade Level(s)**

### **Presentation 1- January 27, 2020 - (IN-PERSON)**

*Bronx UFT Regional Office - 87, Guidance Counselors and Social Workers - High School*

### **Presentation 2 - April 2, 2020 - (REMOTE)**

**4. Brief Summary of Project (What did you do with teachers?). Include how the project indicates the integration of NASA assets and STEM content and pedagogy learned through Endeavor.**

Science in Transition: Creating Spaces for Inclusive Practices in STEM Classrooms is a four-part workshop that introduces teachers to the intersectionality of the students in their classroom through a lens of STEM learning. It is essential that students are able to see themselves represented in all subjects.

Activity introduced teachers to my experience as a Gay, Multiracial, and poor, individual that battled with navigating multiple identities and the stigmatization associated with these marginalized identities. The story of Sally Ride was used to highlight how an American Icon had an identity (Bisexual/Lesbian) that she kept hidden for years. Chelsea Gohd, "This Pride, Be Inspired by Sally Ride's Legacy" introduces the beautiful story of Sally Ride and her partner. I challenged teachers to use these resources during Women's History and LGBT History month to ensure their classrooms are culturally responsive to the needs of their individual students. In addition, teachers watched a NASA "It Gets Better Video" to show the inclusive practices and spaces provided to LGBT individuals by NASA.

Activity two introduced an article titled "Is Science Too Straight?" and prompted teachers to question the careers presented by NASA in the "It Gets Better" video. Teachers explored terms like "passibility", "realness", and "gender expansive". They reflected on their experiences and were asked to write descriptive narratives on two

transgender people that were not easily identifiable as trans-people. This sub activities goal was to demonstrate that creating inclusive spaces can be influenced by our personal societal influences and is a process that requires a collective effort and intentional planning.

By activity three, teachers had many questions about the language revolving around those who identify with being gender expansive. Activity three presents SOGIE the astronaut and the “NASA Guidelines for Gender Transition”. SOGIE is an acronym for “Sexual Orientation, Gender, Identity, and Expression” and is a gender expansive astronaut. Teachers used the two documents to create “Gender Icons” that were age appropriate for their classrooms. Teachers interacted with the vocabulary and created a google slide to present their Google Icons.

Activity four engaged teachers in a curriculum scavenger hunt on the NASA resources for elementary school educators website. Most of the teachers in the workshop were reluctant to teaching and engaging their students in science content. They offered reasons like: “lack of training”, “level of understanding”, and “time”. In this activity, I wanted the elementary teachers to gain a comfortability with navigating the NASA resources. They were given time to explore and pick two resources they would prospectively use in their own classrooms. Teachers shared their findings in a post activity discussion on the ZOOM call.

**5.Reflection (How did teachers respond to your PD? What feedback did they give you on the content and pedagogy?)**

**Teachers provided qualitative feedback in the form of a journal response to their professor, below are two selected teacher feedback responses.**

I really appreciated Billy Green's presentation. He was extremely engaging, funny and intelligent. I loved how he was unapologetically himself. From the start of the presentation I was extremely engaged. I loved his first activity with us. Writing down what we see based on the	Billie's presentation was both eye opening and inspiring. Unfortunately, my internet connection here in Massachusetts isn't always very strong, and so the audio and video cut out for me several times. However, I did catch a fair
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photos was an interesting assignment. It was challenging and thought engaging and made me feel uncomfortable in some aspects, but that was the nature of the assignment. It is important to be uncomfortable sometimes, it challenged me to think about how I view those around me and how my prior experiences influence the way that I define people. It was hard to define people just based on their looks but that was the point of the assignment, to show up how our culture forces us to put people into certain categories based on the way they look.

It was really inspiring to hear about Mr. Green's family life and the impact supportive parents have made on his life. My sister is part of the LGBT community and my parents have been nothing but supportive. She has had similar experiences when it comes to schooling. My parents a lot of times need to speak out on her behalf. Many teachers didn't understand her. My parents got a lot of calls from the school trying to define my sister and seem almost unapproving. It is hard to see what those go through when they do not have those supportive models in their lives. I know a handful of people who do not have the same support and their life trajectory has been quite different. I think as a teacher it is extremely important to be supportive, dedicated and understanding to our students who are experiencing gender expansive identity. We do not know the nature of their home lives and if we can be that supportive role model in their lives, it could change the way that they view themselves and could ultimately impact them for the rest of their lives.

-L.B. Hunter College  
Graduate Student

amount of interesting points.

I think one of the main things to keep in mind when thinking about LGBT icons in the science world, and how to connect them with our students who are exploring their sexualities, is that modern representation is important. Miss T. mentioned something similar in her presentation when she displayed our sketches of what we imagined a scientist to look like. She said that most people imagine a scientist to look like Albert Einstein, despite scientists coming in all forms. The public perspective of what a scientist might or should look like is damaging to students who want to pursue that goal and do not fit that narrow descriptor. Mr. Green coincidentally ended up raising that point as well, because having representation that exists in the present day can be enough to remind young students that whatever their goals are, they can strive for them because they are not alone in that pursuit. Not only that, but they can be shown that pursuing these goals is very possible for them.

Of all the parts of the presentation (that I was able to view with my internet connection), my favorite portion was when we were asked to write descriptions of the two models without any context of who they were. Like the others who shared, I was focused on their poses, physiques, and what might be going through their heads, unaware of who they actually were beyond these snapshots. I was also surprised to learn that they were both trans, both due to what Mr. Green dubbed passability and because of my own internal biases, but fortunately my descriptors for them did not change much after that. I do think they may have been thinking more about their looks than cis models would, due to potential prior persecution for their passability, but it just goes to show that looks alone should not have too much to do with your profession even if you're a model.

- J.A. Hunter College Graduate  
Student

6. Include name, title, and contact information of two educators who attended the PD.

Dr. Gifty Asamani – Master Science Teacher - [gasamani@gmail.com](mailto:gasamani@gmail.com)

Kathleen Lopez – Elementary School Educator - [sorworship@gmail.com](mailto:sorworship@gmail.com)

***I believe this student sums up my presentation and its intentions:***

*“ Dr. Green’s presentation on April 2, 2020 through Zoom was very informative. The dynamic and engaging presenter challenged us to think about how we see others and encouraged us to get to know our students for who they are and not just what we see.*

*He discussed LGQBTIA+ issues and noted that, as teachers, we will have students that are gender expansive. As such, it is important to create an environment of inclusion. It is also vital to highlight when heroes that are part of the curriculum, also identified as part of the LGQBTIA+ community. For example, Sally Ride was the first American astronaut that went into space. She was a physicist and she was bi-sexual. Since representation for children is so important, as teachers it is imperative that we learn to highlight identities that gender expansive students might connect with. This might be difficult in some school communities but it is important that we offer acceptance and create an inclusive classroom that promotes respect for all. I found this presentation engaging, informative and an inspiration in try to foster an environment of respect that propels students, regardless of how they identify, to meet academic and career success.” – Kathleen Lopez*