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Powering Connections: Teacher Candidate Perspectives on Computing-Integrated Education

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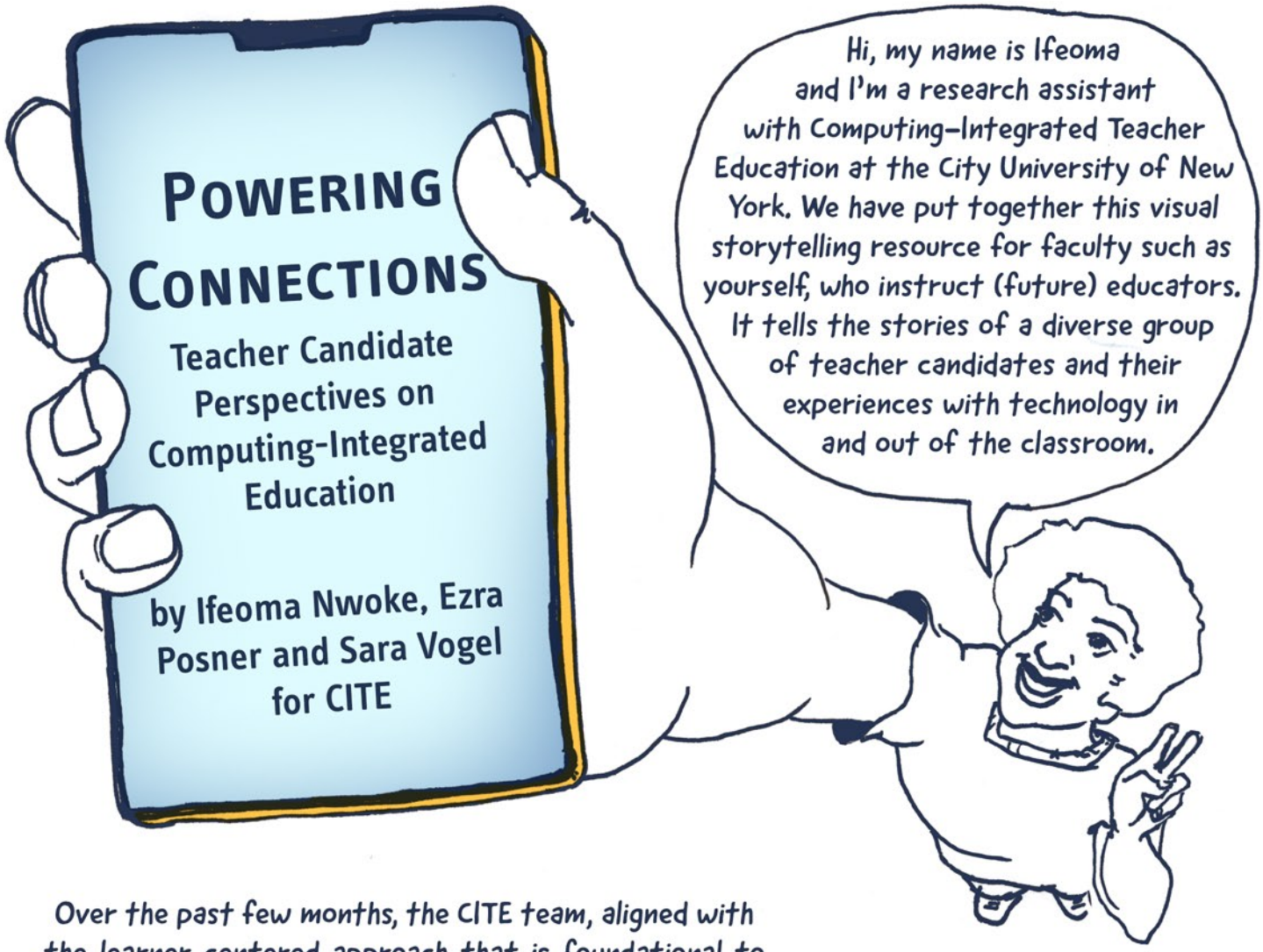
Powering Connections

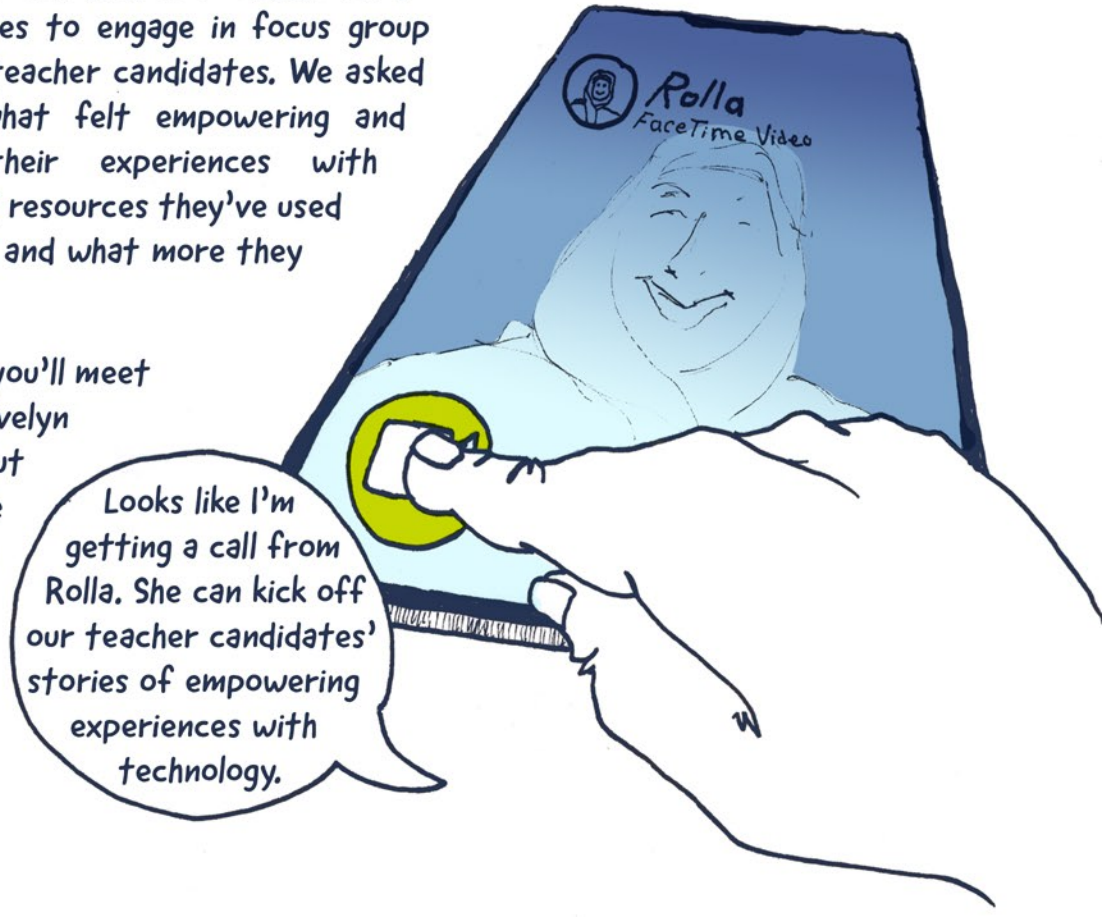
Teacher Candidate Perspectives on Computing-Integrated Education

by Ifeoma Nwoke, Ezra Posner and Sara Vogel for CITE



Over the past few months, the CITE team, aligned with the learner centered approach that is foundational to this project, visited classes to engage in focus group style conversations with teacher candidates. We asked them questions about what felt empowering and disempowering about their experiences with technology, what tools and resources they've used to learn about technology and what more they want to learn.

Over the next few pages, you'll meet Rolla, Warrick, Lisbeth, Evelyn and Michelle and hear about each of their unique experiences. I'll be with you along the way to share some context and interesting facts.



This is Rolla, she's a sophomore at the College of Staten Island studying Early Childhood Education. She also works as an out-of-school teacher at her mosque.

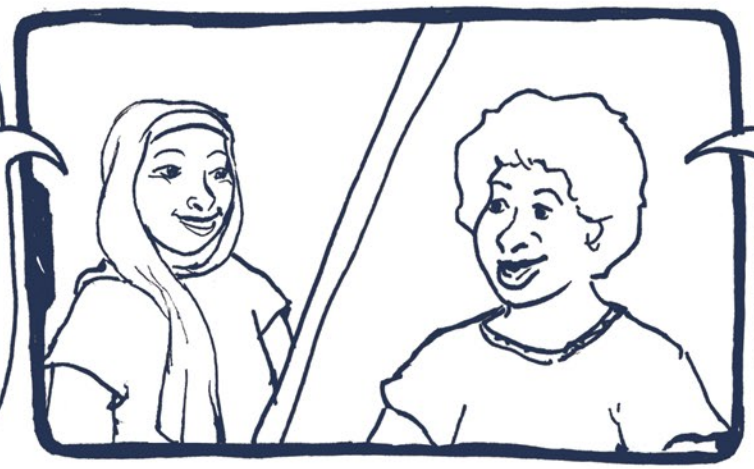
That's right, I started to teach religion and Arabic back in 2017. Sometimes, my young students have difficulties grasping new sounds and letters in Arabic.

To help her students connect with a sound that was new to them, Rolla made a video using Scratch, which is a free programming environment that is used to create interactive animations and games. She had learned Scratch with her CSI professor, Ting Yuan.

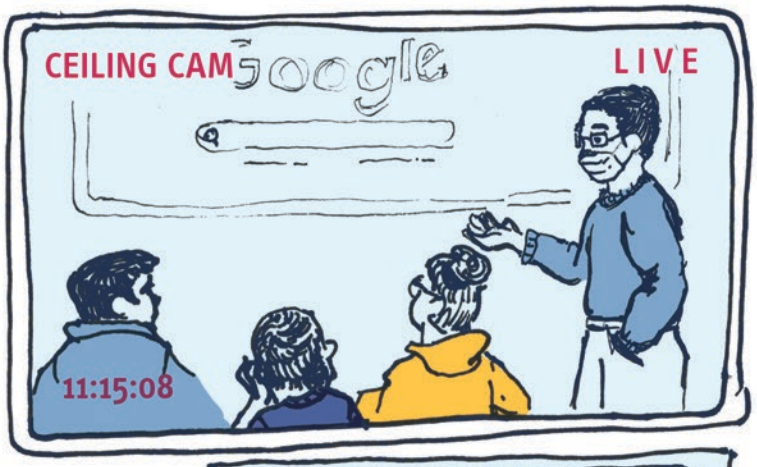
"Advice I'd give to teachers and anyone who wants to bring Scratch in is to be open with the idea. There wasn't a rubric. By just playing with it, we learned that Scratch and coding is such a big thing."

-Rolla Khass

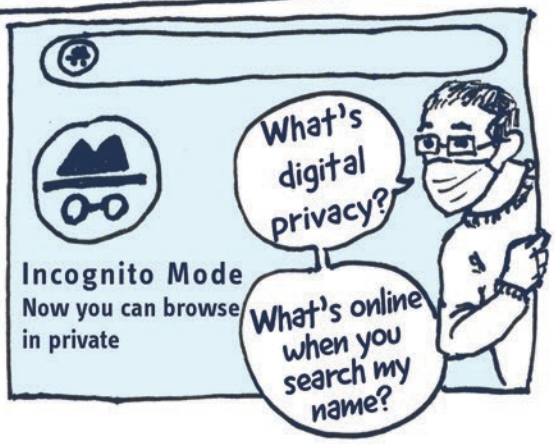
It makes me excited as an educator that I'm able to create videos easily with such a platform. I would usually have to search for these online.



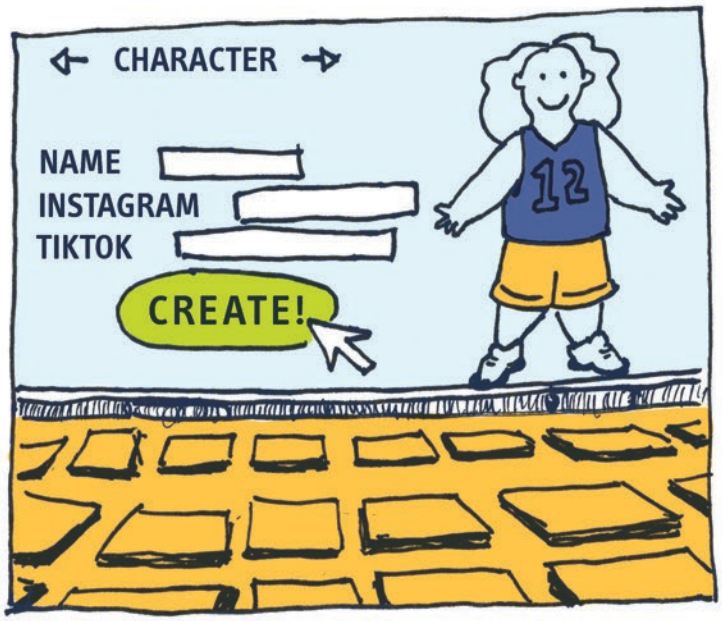
Thank you for sharing your story Rolla. Next, let's look at another example of a teacher candidate using technology to empower their students.



Meet Warrick, a student at Hostos Community College studying Early Childhood Education. He said that as a man of color it is important for him to support students that look like him and come from his community. As part of Professor Jacki DiSanto's course, Warrick created an interactive lesson to empower students to consider what it means to be a digital citizen and the importance of being digitally safe.



Warrick had his students explore digital privacy by creating characters in a digital game and by making in-game choices that impacted the characters' online private information.



Thanks for sharing your story, Warrick, and for highlighting ways that students can better understand digital privacy.

We know that navigating technology brings its challenges. We live in an age of information overload and that can sometimes make us feel disempowered and alienated. In the following two stories, we'll see two teacher candidates navigating disempowering experiences.

One of these teacher candidates is Lisbeth, who speaks to her experience with technology during orientation at Lehman College. She felt so overloaded with information, that she considered dropping out of the program.

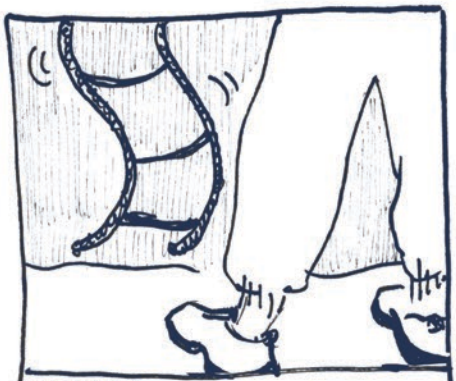
At the start of my Lehman journey I had an online meeting to get headed in the right direction.

There were lots of instructions!

But where could I find my email?

And how was I supposed to reset my password?

The most helpful thing is asking questions.



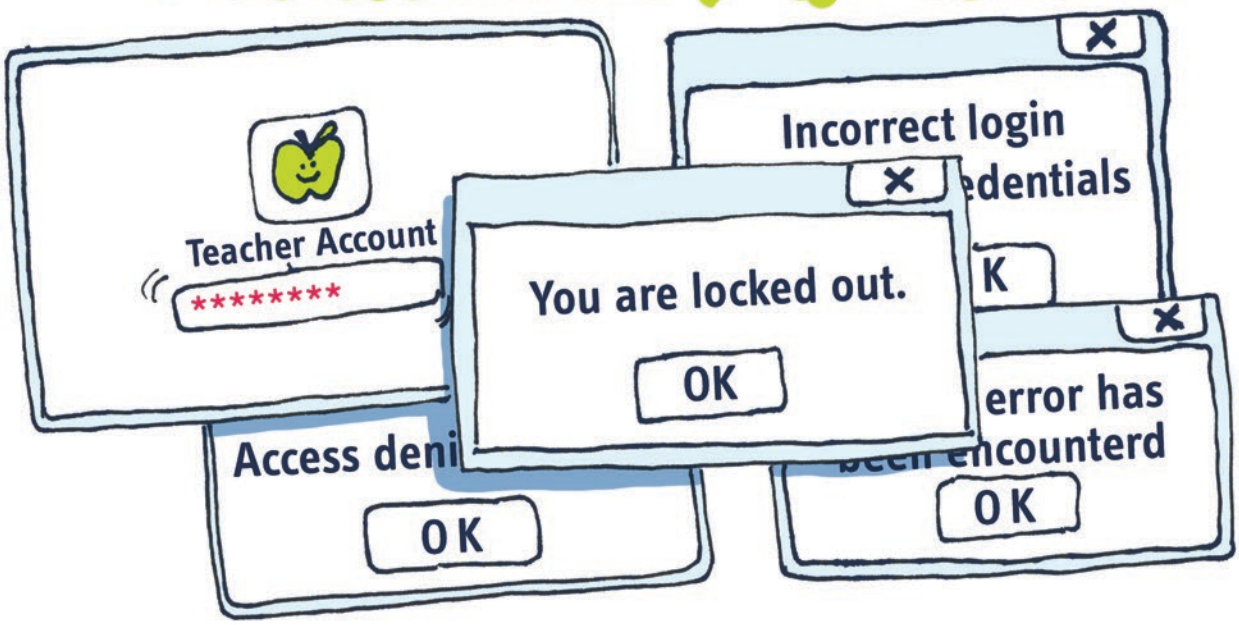
Just ask and someone might help you.

Someone might guide you in the right direction.

Thank you for sharing your story, Lisbeth. It's inspiring to see how you transformed a moment of disempowerment into empowerment by reaching out and finding support.

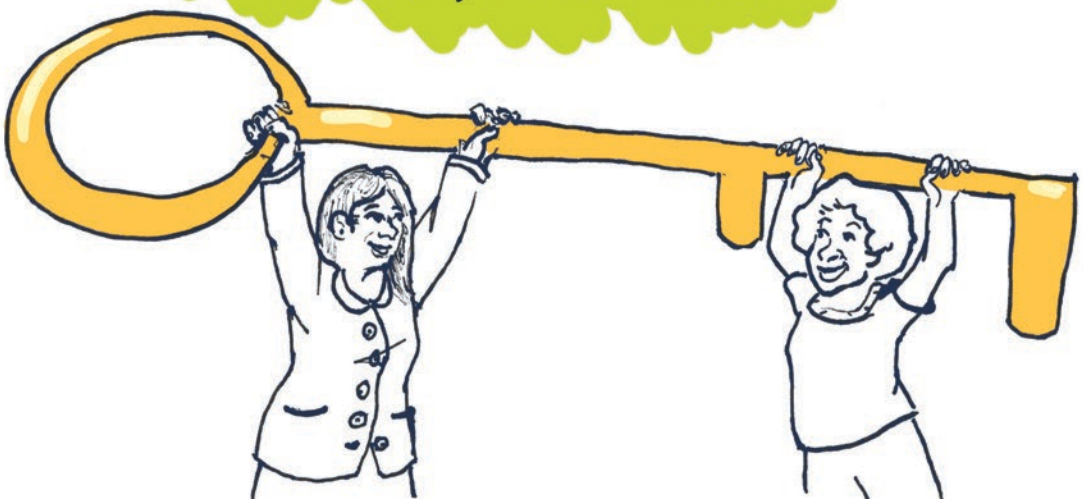
Evelyn is another teacher candidate who navigated a disempowering experience. Evelyn is a substitute teacher who was asked to teach a class without knowing how to log onto the computer or how to use the Smartboard. She wasn't able to follow the teacher's lesson plan since it was all on the computer, and she felt discouraged and disempowered around technology.

"I was never going to use the Smartboard anymore... and I thought I was never going to learn."



But later on, a positive experience helped to empower Evelyn to use technology in class. She was working with her son's preschool teacher, Ms. Rosario, and told her that she didn't know how to use Google Slides. Ms. Rosario volunteered to teach her how to use Google slides.

"So she shared it with me and she walked me through and now I believe I'm an expert."
-Evelyn Hernandez

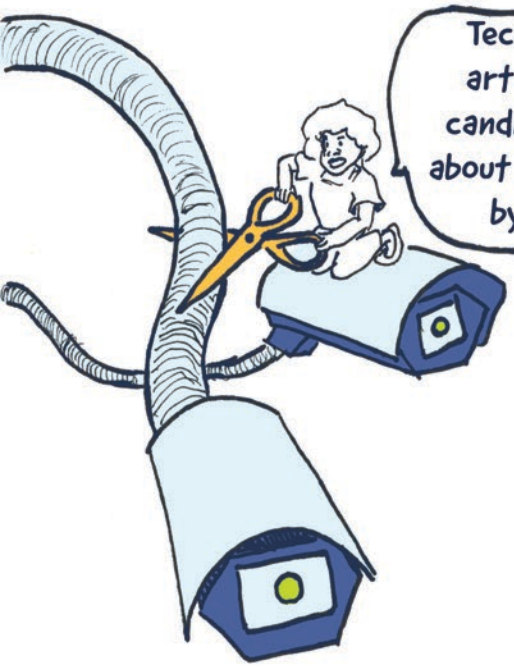


While we've highlighted how technology can be used in a transformative way in the professional and personal lives of teacher candidates, we also want to note that teacher candidates also had some misgivings about the role of technology and its rapidly changing influence on society. This tension plays out through the different roles that teacher candidates have as parents, teachers and students. Lore is a teacher candidate and a parent. Through teaching, parenting, and being a student, Lore has seen benefits but is worried about the negative impacts technology can have.

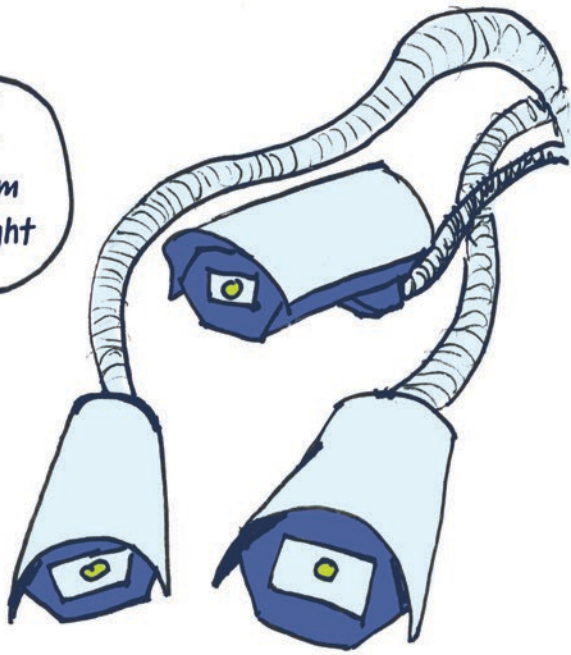
"I didn't know my son was a YouTuber. I don't allow that now because you're exposing yourself to the world. I shut it down. But because he was nice, he was able to get back on it and make sure that I can trace it. I want him to be tech savvy. You can make a living off of technology, and you'll be alright, and your kids will be alright."

–Lore Prophete

Many teacher candidates grew up in a generation where access to technology was limited but now have children and teach children who are digitally literate. Some of the misgivings included concerns about the health impact of sitting in front of screens for extended periods of time leading to strained eyes and sedentary lifestyles. There were also concerns about cyberbullying and how technology contributes to self esteem and body image issues for young people. Plus, the increased access to digital spaces potentially makes young people more vulnerable to exposure to harmful content or bad actors. Then there's the issue of privacy in digital spaces—one teacher candidate mentioned the fear of how technologies like facial recognition and AI violate their privacy.



Technology can also be an inspiration for art that voices critical opinions. Teacher candidate Michelle Ortiz created this poem about algorithms in a biliteracy course taught by Cecilia Espinosa at Lehman College.



Algorithms that Reinforce Racismo

by Michelle Ortiz

Algorithms that send my mother credit cards
aunque sé que saben que ella ya está endeudada
Algorithms that label my mother's credit card delinquent
Algoritmos que amenazan con cerrar la tarjeta de crédito de me papá
Because he doesn't use it
Porque no quiere deberle al banco
Algorithms that confuse my parents when they
Quieren comprar vuelos
To visit their homeland
República Dominicana
Not being able to buy their own flights
Algoritmos que me obligan a ver lo que sale nuevo de ZARA
And denies me an Apple Credit Card
Algoritmos que ven tu código postal
And instantly, your car insurance goes up
Si tuviera un carro
Algorithms that hold us back

How does Michelle's poem reveal connections between technology and literacy, justice, and power? What other injustices does technology perpetuate?

Although Michelle's poem illuminated ways that technology can be used maliciously, this doesn't mean that technology itself is bad. For example, Warrick showed us that technology can both endanger and protect us in his lesson on digital privacy.

Below we have two examples of students using an assistive text-to-speech program. One student programs the tool to make fun of another student, and the other student uses it to support their reading comprehension as part of their Individualized Education Plan.

One of our teacher candidates observes that as technology changes, "kids are being even more innovative in the way they use technology for harmful behaviors," and is worried that people hide behind their screens like shields. Yet the very same technologies are used to create more equitable, empowering, and joyful spaces. How is our teaching affected by this tension between harming and helping? And what does this tension mean for the ways that we integrate technology into our classrooms?

Now that we've come to the close of this journey of telling the stories of CUNY teacher candidates and their present relationships with technology, we want to leave you all with what the future can hold, to share the radical imaginings of teacher candidates about what role technology can play in empowering them and their students, and in transforming communities.

Teacher candidates see a world where...

Thank you to the teacher and educator candidates who shared their perspectives with the CITE equity working group to develop this resource.

Professor Jessica Velez's Historical, Philosophical, and Cultural Foundations of Education Spring 2023 class at Brooklyn College

Dr. Sunyata Smith's Spring 2023 class at Lehman College

Dr. Melissa García's Spring 2023 Bilingualism for Classroom Teachers, Birth to Grade Six class at Lehman College

Dr. Laura Scheiber's Spring 2023 Social Foundations of Education class at Kingsborough Community College

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Lehman College Students

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Evelyn Hernandez
Jennifer Estrella
Sanzida Islam
Erika Rodriguez
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Taiena García
Afruza Akhi
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Hostos College Student:

Warrick Balfour

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