



DENVER PUBLIC SCHOOLS  
FOUNDATION



Photo credit: David Zalubowski, Associated Press

# Films for the Future

**Raising the Curtain  
on the  
Technology Gap**

**Feature Film  
*Without A Net:  
The Digital Divide in America***

**DPS Foundation Documentary  
*Connecting in a Digital World***

**February 18, 2021  
Virtual Panel Discussion**

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## About the Feature Film *Without A Net: The Digital Divide In America*

Released in 2017 by Verizon Wireless, [Without A Net: The Digital Divide In America](#) is a documentary exploring the importance of equitable technology education in America's public schools. While examining the technological challenges students from economically deprived schools often face the film also looks at the transformative potential of fully equipping all students for a digital world. Together, we will see the need for a multi-faceted solution to closing the technology gap in public schools.

## About DPS Foundation Documentary *Connecting in a Digital World*

For the first time ever, DPS Foundation produced its own documentary to use the power of storytelling to bring our viewers into the lives of our students, educators and community. You will hear about the importance of digital connection and the triumphs and lessons learned during the pandemic and what connection means to student success overall.

**SAVE THE DATE**  
**April 14, 2021 | 5-6 p.m.**

Virtual screening of  
the narrative film  
*Listen*

**Films  
for the  
Future**

Raising the Curtain  
on the Need to  
Listen Attentively



# About the Panel

The panel will bring national and local perspectives to the challenges and opportunities of the digital world and how they relate to the success of our students. During this time, our panelists will guide us as we unpack the learnings of the feature film and DPS Foundation documentary. *Thank you to our panelists!* We are grateful for their support and bringing their expertise and perspective to this event.

## MODERATOR

**D Shoots**, *Vice President and Chief Financial Officer, The Colorado Trust*

D is a lifelong Coloradan who attended the University of Colorado at Denver and graduated with a degree in Business Administration. She comes to The Trust with a finance background across nonprofit, government and corporate industries. D speaks across the country about leadership and her journey as a teen mom to financial executive.

## PANELISTS

**Jonathon Best**, *Computational Thinking & Design Teacher, The CUBE High School, Denver Public Schools*

As The CUBE's computer science teacher, Jonathon inspires STEM learning by educating students in algorithmic learning, building, tinkering, and coding design. He is committed to helping students prepare for a future where human and computer interaction will only become more frequent and complex. He wants students to print impossible shapes out of a 3D printer, to make robots for their convenience, and to sew and outfit equipment with wearable technology.

**Dr. Violeta García**, *Founder/Principal Consultant, STEM Learning by Design*

Dr. Violeta García's mission is to advocate for the advancement of students who have historically been marginalized and re-engage them through experiential educational opportunities. Dr. García's consulting business, STEM Learning by Design works with nonprofits, schools, and school districts to develop tools and resources to inspire and prepare learners of all ages to pursue careers in STEM through a justice, equity, diversity, and inclusion (JEDI) lens.

**Dave Landy**, *Chief Information Officer, Denver Public Schools*

Dave is an information technology executive with an extensive track record of driving critical transformation initiatives. He has been with DPS for the past three years as the Chief Information Officer where he is responsible for managing the Department of Technology Services. There, Dave works to ensure all students and educators have the resources and tools they need to succeed in remote and in-person learning including providing home internet for our city's most vulnerable students.

**Matt Weinberg**, *Principal, Max Ventures*

Matt brings a national perspective as a frequent public speaker and an op-ed contributor for Forbes, TechCrunch, and several other publications. His experience includes helping to drive \$6 billion in federal funding to early-stage technology startups. Prior to that he was at the NYC Economic Development Corporation and managed city-wide funding programs that developed and supported the city's entrepreneurial ecosystem.

# Statistics

*Without A Net: The Digital Divide In America* was produced in 2017 and therefore some of the statistics mentioned are now out of date. Please see below for updated facts and figures.

**Film statistic:** By 2020, 77% of all U.S. jobs will require computer skills. - U.S. Department of Labor

**Update:** Employment in computer and information technology is projected to grow 11% from 2019 to 2029, much faster than the average for all occupations. - [U.S. Bureau of Labor Statistics](#)

**Film statistic:** One-to-One Laptop programs significantly increase K-12 student achievement in writing, mathematics, and science. - University of Michigan

**Update:** In May of 2020 EdWeek Research Center found 59% of teachers said they had at least one device for every student. - [Education Week](#)

**Film statistic:** 23% of school districts do not have sufficient bandwidth to meet the current needs for digital learning. - Education Super Highway

**National Update:** As of 2019, 99% of schools nationwide are on scalable connections. - [Education Super Highway National](#)

**Colorado Update:** In Colorado 1,379 schools have fiber infrastructure and 12 schools still need scalable broadband. As of 2019, 7% of Colorado students are meeting 1Mbps per student, in comparison to 24% nationally. 1,963 students still need more bandwidth for digital learning. Since 2015, the cost of broadband in Colorado has decreased by 71% compared to an 81% decrease nationally. - [Education Super Highway Colorado](#)

**DPS Update:** In DPS, 100% of schools have sufficient bandwidth. However, student homes do not. As of January 2021, an estimated 1% of DPS families are still without internet access (down from 8% in the Spring of 2020). - Denver Public Schools

**Film statistic:** 60% of teachers feel they are inadequately prepared to use technology in the classroom. - Samsung Electronics America

**Update:** In a 2020 interview, Detroit Superintendent Nikolai Vitti said some of his teachers are so far behind the digital teaching curve that it won't be until the 2021-22 school year when district-wide curriculum plans are tailored specifically toward the fleet of new devices. Vitti emphasized it's not just the teachers who can use the extra time learning how to use the devices effectively: "I'm a little skeptical that all our students are comfortable in the space of online learning." - [Education Week](#)

**Film statistic:** After ten months of considering the fair-funding lawsuit, the supreme court of Pennsylvania remains undecided.

**Update:** In May 2020 there was a new order granting an extension. The trial is set for 2021. In February of 2021 Governor Tom Wolf of Pennsylvania proposed spending an additional \$1.55 billion for education, driving most of those dollars to districts with significant unmet needs using the state's fair funding formula. - [The Public Interest Law Center](#)

# Technology in Denver Public Schools

## HARDWARE

Before the pandemic:

- Close to 14,000 students were using ChromeBooks in the classroom and at home
- DPS estimated that roughly 65% of students did not have access to a computer at home

In 2020, DPS:

- Ensured every student has access to technology (through district-issued and personal devices)
- Began efforts to further student access to technology through district-issued and personal devices (primarily ChromeBooks)

DPS distributed to students, an estimated:

- 75,300 devices (ChromeBooks primarily, as well as iPads and other internet-accessible computers) to 82% of students, 18% of students use personal devices

## CONNECTIVITY

Before the pandemic:

- 700 students were using hotspots to access internet at home
- DPS estimated that roughly 8% of students did not have internet access at home

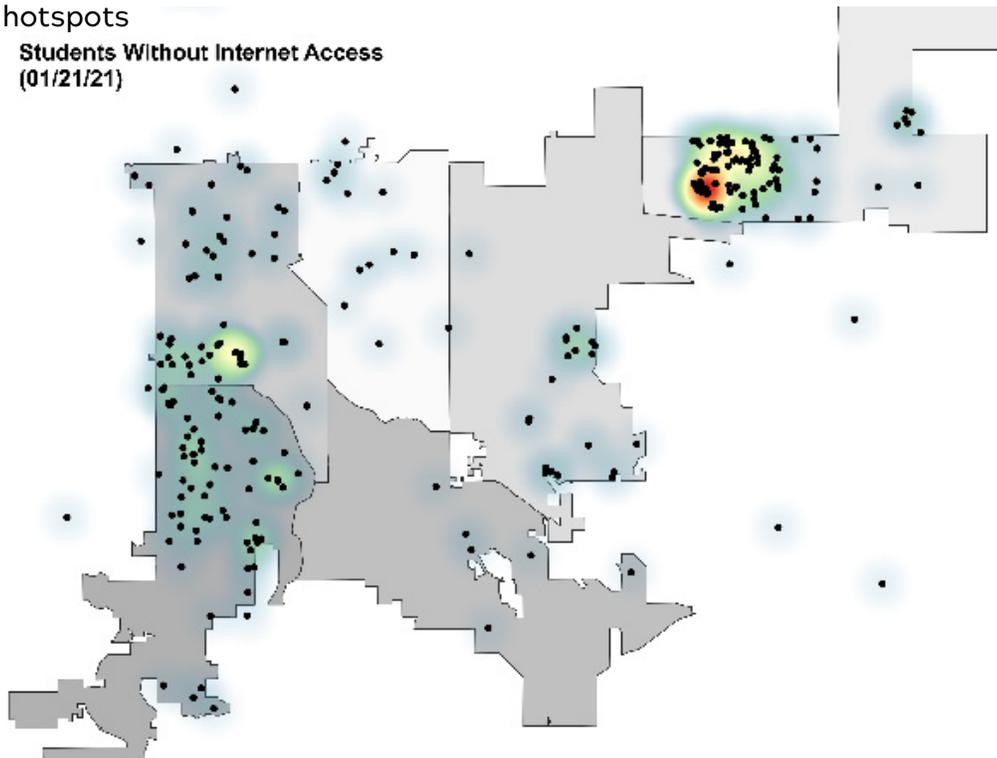
In 2020, DPS:

- Continued efforts to ensure every student has reliable and adequate internet access at home to meet the evolving needs of remote instruction and learning
- Began efforts to further student access to adequate home internet in 2021

DPS distributed to students, an estimated:

- 5,200 hotspots

Students Without Internet Access  
(01/21/21)



Heat map indicating locations where students (DPS knows of) currently without adequate internet access, helping determine where hotspots were needed

# Technology in Denver Public Schools (cont.)

## TRAINING

DPS partnered with DPS Foundation and Comcast to provide Professional Learning for Parents around Media Smart Students and give programs to DPS schools and families.

- Parent programs around [Raising Media Smart Kids](#)

[DPS Educational Technology and Library Services \(ETLS\) YouTube Channel](#) hosts professional learning for educators

- Views on the ETLS YouTube Channel spiked in March and April of 2020 (when remote learning began) and again in August and September of 2020 as remote learning began with the start of the new school year

DPS provided professional learning during summer months on teacher work days with no students to over 5,000 educators

Through Schoology, a DPS adopted learning management system for access to DPS supported curriculum, professional development and digital content for classroom instruction, DPS provided synchronous and asynchronous learning. Offerings include:

- Engaging Students in Remote Learning
- Digital Citizenship 101
- Differentiation in Remote Learning
- Building Relationships and Effective Communication with Students and Families
- Using G-Suite Tools for Remote Learning

DPS has a team of digital coaches (6 regional coaches & 3 digital coaches) who provide office hours, answer emails and provide support through Google Meet to individual teachers

DPS created one-pagers for teachers to support them with different technologies

## DPS BY THE NUMBERS 20-21 SCHOOL YEAR



Current Student Enrollment



90,744

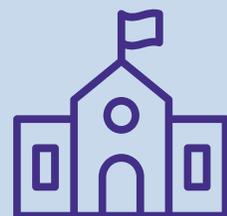


56,023 students qualify for free and reduced-price lunch



206

DPS SCHOOLS



# As you watch the film...

1. What are the key messages?
2. Are there individuals, scenes, and images or lines that stand out for any particular reason?
3. What feelings does the film bring up? Was anything surprising to you?

# Notes

# Thank You, Documentary Participants

**Thank you to all documentary participants for their time and giving us a glimpse into their lives. Their stories and unique perspectives helped us shine a light on the realities of navigating our different journeys in remote learning.**

## **Educators & Parents**

Jonathon Best, *Computational Thinking & Design Teacher*, The CUBE High School, DPS  
Jennifer Buckland, *Principal*, Green Valley Elementary, DPS  
Tori Cadle, *Special Education Teacher*, McKinley-Thatcher Elementary School, DPS  
Antonio Esquibel, *Principal*, Abraham Lincoln High School, DPS  
Rosa Herrera, *DPS Parent*  
Lara Hussain, *Director of MyTech*, DPS  
Michelyn Johnson, *Program Specialist*, Office of Family and Community Engagement, DPS  
Dave Landy, *Chief Information Officer*, DPS  
Nadia Madan Morrow, *Executive Director*, Multilingual Education Department, DPS  
Jeff Roberts, *School Technology Partner*, Abraham Lincoln High School, DPS  
Lindsey Rutledge, *EdS, NCSP, School Psychologist*, South High School, DPS  
Priscilla Shaw-Rahn, *Instrumental Music Teacher*, Hamilton Middle School, DPS  
Bri Williams, *DPS Parent*  
Tiffany Williams, *Assistant Principal*, Rocky Mountain Prep - Creekside, DPS

## **Students**

Alexanny, Hamilton Middle School  
Ariel, George Washington High School  
Ashley, George Washington High School  
Edge, Hamilton Middle School  
Fardeen, Hamilton Middle School  
Flavian, Hamilton Middle School  
Hannah, Hamilton Middle School  
Isabella, George Washington High School  
Iyana, Grant Beacon Middle School  
Jose, George Washington High School  
Kaliah, Dr. Martin Luther King Jr. Early College  
Liberty, Rocky Mountain Prep - Creekside  
Luciana, Career Education Center (CEC) Early College of Denver  
Maia, Lena Archuleta Elementary School  
Mason, Lena Archuleta Elementary School  
Massai, Green Valley Elementary School  
Melvin, Career Education Center (CEC) Early College of Denver  
Mireya, Cherry Creek High School  
Sophie, George Washington High School  
Tabarak, South High School  
Thomas, George Washington High School

*Thank you to filmmaker  
Ryan Budnick of*



*Thank you to film consultant Ben McKee, Video Consultant & DPS Videographer*

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