

# Injustice embedded in Google Classroom and Google Meet: A techno-ethical audit of remote educational technologies

## *L'ingiustizia incorporata in Google Classroom e Google Meet: una verifica tecno-etica delle tecnologie educative a distanza*

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**ABSTRACT** Forcing pre-COVID-19 structures of school onto the realities of the global pandemic ignores the systemic structures embedded in public education which made pre-pandemic school places of harm for students marginalized by racism and neoliberalism. Informed by critical theories of educational technology, this study investigated how the design of technologies central to emergency remote education carry powerful perspectives about the nature and dimensions of learning. We used the conceptual framework of a techno-ethical audit which asks scholars and practitioners to analyze technologies in order to uncover assumptions of pedagogy, implications for democracy, and complicities in injustice inherent to the design of the technology. The audit found a system that limited meaningful interaction, envisioned students as technology users with little agency or control, and predisposed students to unnecessary practices of surveillance and monitoring, all while subjecting them to regimes of data collection and sharing for corporate profit. Applied at scale and in marginalized communities, the current system denies justice for millions of students subjected to harmful educational practices. Through this study, we present three recommendations to improve online learning: teach the crisis; implement project-based learning; and investigate experiences with technology.

**KEYWORDS** Educational Technology; Google; Online Learning; COVID-19.

**SOMMARIO** Utilizzare le strutture scolastiche pre-COVID-19, adattandole forzatamente alla realtà della pandemia globale, significa sottovalutare i pericoli insiti nelle strutture sistemiche, incorporate nell'istruzione pubblica delle scuole pre-pandemiche, nei confronti degli studenti marginalizzati dal razzismo e dal neoliberismo. Questo studio, basato su teorie critiche delle tecnologie educative, analizza il modo in cui la progettazione di tecnologie centrali nell'istruzione emergenziale a distanza, porta con

sé prospettive potenti sulla natura e le dimensioni dell'apprendimento. Abbiamo utilizzato il framework concettuale di una verifica tecno-etica, attraverso cui abbiamo chiesto a studiosi e professionisti di analizzare le tecnologie con l'obiettivo di scoprire i presupposti della pedagogia, le implicazioni per la democrazia e le complicità nell'ingiustizia inerenti alla progettazione della tecnologia. La verifica ha individuato un sistema che limita le interazioni significative, considera gli studenti come utenti della tecnologia con poca libertà di azione o controllo e li predispone a inutili pratiche di sorveglianza e monitoraggio, il tutto mentre li sottopone a regimi di raccolta e condivisione dei dati per il profitto aziendale. Applicato su larga scala e nelle comunità emarginate, l'attuale sistema nega un diritto di giustizia a milioni di studenti sottoposti a pratiche educative dannose. Attraverso questo studio, presentiamo tre raccomandazioni per migliorare l'apprendimento online: insegnare la crisi, implementare l'apprendimento basato su progetti, e indagare sulle esperienze tramite la tecnologia.

**PAROLE CHIAVE** Tecnologie Didattiche; Google; Apprendimento Online; COVID-19.

## 1. INTRODUCTION

In the spring of 2020, when the term “*emergency remote education*” emerged (Williamson, Eynon, & Potter, 2020), it seemed an apt descriptor of the severity of the precarity. Since the global pandemic was an emergency situation, the field of education needed to mobilize an immediate response. Seizing the moment, educational technologists, who never met a platform they did not like, offered up videoconference as the solution to this emergency. While it became clear that there were sociotechnical constraints of this brand of emergency education (i.e., Zoombombing, screen fatigue, and coerced online presence were almost immediately apparent), there has been little acknowledgement from powerful institutional actors (K-12, higher education, tech companies) of the dangers of sustaining this brand of education.

However, we acknowledge that we are learning online because we are living in crisis - or, to put it more bluntly, the world is on fire. Many people in our communities have become ill, and a significant number are dying. As of February 1, 2021, over 400,000 people in the United States have died from COVID-19, and there have been over 24 million positive cases in the US alone (Center for Disease Control and Prevention, 2020). The consequences of this mass destruction were felt almost immediately. By mid-April, an estimated 26 million people were unemployed (Pickert, 2020). Across the country food lines stretch for miles, as families wait for donated groceries to be placed in their trunk (Healy, 2020).

The structures of racism and sexism are exacerbating the public health and economic crisis - reminding us that the world has been on fire for some time. The virus disproportionately infects and kills minoritized people, especially Black (Evelyn, 2020) and Latinx people (della Cava, 2020). The rates of domestic violence, most frequently perpetrated against women and children, increased across the world as families remain home (Taub, 2020). Against this backdrop, school districts around the United States prioritized the health and safety of their communities, students, and teachers by offering emergency remote education. By the start of the 2020-2021 school year, many districts offered students and teachers an opportunity to remain fully online. However, instead of reimagining the possibilities of school, or considering the needs of the students in this unusual moment, most districts shoehorned traditional schooling practices into a two-dimensional and virtual space.

Forcing pre-COVID-19 structures of school onto the realities of the current moment intensifies educational injustice. It ignores systemic structures which have long made school a place of harm for students marginalized by racism, and neoliberalism (Apple, 2004; Dumas, 2014; Ewing, 2018). Online education

that fails to address unjust structures simply relocates the suffering from the schoolhouse directly into families' homes. This is most visible in the gap between who may access the internet, who has devices at home, and which districts are able to offer support (Romm, 2020). It is compounded by the neoliberal emphasis on school choice and charter schools. For instance, in the fall of 2020 an increasing number of families chose to send their children to cyber-charter schools in Pennsylvania, creating a financial burden on the existing public schools (VanAsdalan, 2020). These inequities are further exacerbated by the injustices inherent in technologies. Technologies are not neutral (Krutka, Heath, & Mason, 2020), and they recreate offline injustices in online spaces (Benjamin, 2019).

Scholars have noted that global challenges such as natural disasters, like the pandemic, offer us opportunities to see the world, and to create new social and societal structures (Roy, 2020; Solnit, 2020). Solnit (2020) has argued that disasters such as the powerful earthquakes in California in 1906 and 1989, “shake things loose” and expose the instability and disenchantment hidden below the surface: *“There is a way that the old stabilities break up and that can be terrifying when you see systemic failure, government failure, institutional failure...”* (n.p.). Roy (2020) suggested that pandemics “have forced humans to break with the past and imagine the world anew” (n.p.). Both Solnit and Roy imagine a world that could be *“profoundly different...not just because something terrible has happened”* (Solnit, 2020, n.p.). Roy (2020) emphasized that the pandemic can serve as *“a portal, a gateway between one world and the next. We can choose to walk through it, dragging the carcasses of our prejudice and hatred, our...dead ideas... Or we can walk through lightly, with little luggage, ready to imagine another world”* (n.p.).

We are at a crucial juncture. State education agencies and school districts must navigate how to keep students, families, and communities safe from illness while still providing meaningful educational opportunities for children. Many of the largest districts in the United States opted to move schooling to a fully virtual experience, in an attempt to mimic, as much as possible, the traditional school day in an online environment. Unfortunately, this uncritical approach failed to consider the problems of traditional schooling, nor did it weigh techno-ethical concerns of universal integration of technology. However, as critical educational technology scholars, we argue that we are in a position to evaluate the potential harm that comes from integrating educational technologies for teaching and learning. In this study, we aimed to investigate how the use of Google educational products, specifically, Meet (meet.google.com) and Classroom (classroom.google.com) embeds perspectives on the purpose, dimension, and consequence of learning into their design. Here, we are interested in how the banality of technology carries evidence far broader and more significant than the neutral “affordances and constraints” model of educational technology - that is, our conceptual, philosophical, and methodological interest is in *unpacking* or *uncovering* the often hidden assumptions about the experience, purpose, and meaning of education that are built into the design of educational technologies. In this view, our guiding principle is to conceptualize educational technologies from a justice perspective.

## 2. CONCEPTUAL FRAME

Informed by critical theories of educational technology (Benjamin, 2018; Feenberg, 1991; Morosov, 2013; Selwyn, 2010; Zuboff, 2018), this study investigated how the design of a popular platform of technologies central to emergency remote education (Williamson, Eynon, & Potter, 2020) carries powerful perspectives about the nature and dimensions of learning. We used the conceptual framework of a techno-ethical audit (Krutka, Heath, & Willet, 2019), which asks scholars and practitioners to analyze technologies in order to uncover assumptions of pedagogy, implications for democracy, and complicities in injustice inherent

to the design of the technology. The audit proposes a series of questions designed to uncover the ethics of the technology in relation to legal, economic, democratic, pedagogical, and technological design. These questions help teacher educators and teachers think *about* technology, helping to foreground issues of technological design.

Too often, schools, districts, and teachers adopt technologies without considering the pedagogical and social implications, integrating technologies in a cycle of hype and hope (Cuban, 1986) that results not only in disappointment, but also harm. For instance, the increased prevalence of learning management systems (LMSs) during the pandemic allows for greater data collection; however, the availability of data does not imply that we may ethically collect and analyze it (Author 2b, 2020). Further, data are encoded with racialized meaning (Benjamin, 2019). In a moment in time when government agencies use data for facial and phone recognition to identify and prosecute protestors, what is the ethical obligation of schools to prevent this sort of data from being scraped out of their LMSs?

It is our hope that in foregrounding the techno-ethics of Google Meet and Google Classroom during the pandemic, we can also examine unjust systems of power (e.g. what hooks referred to as “*white supremacist capitalist patriarchy*”, 1995, p. 29) embodied in the technology. It allows us perspective and space to interrogate the systems of oppression suffused throughout and upholding our social structures. The audit allows a bridge between injustices inherent in technological design and larger conversations about the immersive ecology of technology in society. Further, it points to the injustices in society which must be addressed in order to work toward a just implementation of technology.

### 3. METHODOLOGY

To do this work, we used an analytic tool known as a techno-ethical audit (Krutka, Heath, & Willet, 2019) that poses a series of questions designed to illuminate the way that technologies are connected to broader themes of democracy, the legal system, economics, and, of course, pedagogy. In this way, our work aligns with that of interpretative researchers in the social sciences whose work investigates topics related to technology while simultaneously arguing for conceptualization and contextualization of technology in broader social, cultural, political, and economic contexts (Pink et al., 2016; Selwyn, 2010). One benefit of this kind of philosophical, scholarly, and methodological orientation is to both acknowledge the ways that technological practices are central to contemporary daily life while also viewing them from ecological and practice perspectives - that is, they cannot be investigated as technical artifacts without connection to the web of relations from which they originate, are immersed in, and will ultimately influence through their use.

### 4. SETTING AND PARTICIPANTS

We gathered our data from our local contexts. During the pandemic, Ben’s children, a fourth grader and seventh grader, attended school in a region of the United States with a high infection rate. The district offered its 40,000 students the choice to attend school face-to-face or to attend school virtually. They offered no hybrid option, and family decisions were locked in for the quarter. Ben chose online schooling in order to mitigate potential harm to the family and the community. This reality prompted us to consider what vision of education was promoted by the Google LMS system chosen by the district. We also wondered what kind of learning theory underpinned this education. Finally, we wondered how the LMS might support and constrain pedagogies, social interactions, and inclusive education. We decided to complete a techno-ethical audit of the district’s LMS (Google Classroom and Google Meet) to help us answer these questions.

The district aimed to use Google Classroom and Google Meet to simulate the experiences of face-to-face instruction with the online students. A regular day for the fourth grader began at 7:45 a.m., when they signed in to Google Meet, a video conferencing service, to “join” the students and teacher who chose face-to-face learning. After a brief (10-15 minute) welcome with the school principal and the fourth-grade teacher, the students were directed to access their work in Google Classroom (the LMS), complete it, and return to the Google Meet at a set time to review the work. The work was completed independently. The seventh grader rarely logged in through Google Meet; instead they completed most of their work independently through Google Classroom. The teachers pre-loaded the day’s content, including instructional videos and activities, which the seventh grader completed throughout the day. The work was entirely independent and self-directed but not self-paced, as assignments were due at the end of the “period” which mirrored a traditional school day schedule.

As we completed the audit throughout the fall of 2020, it became increasingly obvious to Ben that the online schooling his children were receiving was not high quality. It was not necessarily the audit that caused this shift, but rather, the lived day-to-day experience of his children and his family. By the end of the audit, Ben decided to change his original decision. His children now attend face-to-face schooling, despite the risks of the pandemic. We feel frustrated at this impossible choice: *health or education?* and believe that a third way might have been possible if school districts around the country made different choices.

## 5. FINDINGS

In this section, we report the results of the techno-ethical audit of Google Meet and Classroom. Findings are reported as analysis of the dimensions of the audit - that is, how Google Meet and Classroom afforded (or not) educational justice according to legal, economic, democratic, technological, and pedagogical lines. For each of the above dimensions, we contextualize how the design of educational technologies relates to the experience of online learning and carries broader consequences for society as a whole.

### 5.1. *Legal justice*

Legal justice suggests laws themselves must be just, and when they are not just, people and governments have an obligation to change the laws. For schools implementing technology, and for technology corporations to achieve legal justice, they must do more than follow existing laws. We are writing from a US perspective, where protective privacy legislation is particularly sparse. In the United States, few laws exist to protect users’ privacy, let alone child users’ privacy in spaces that have been “Googlized” - i.e., engineered by companies like Google (Vaidhyanathan, 2012). The Family and Educational Rights and Privacy Act (FERPA), the Children’s Online Privacy and Protection Act (COPPA), and the Student Online Personal Information Protection Act (SOPIPA) all provide minimal protections for student data. We are encouraged by the directives of the EU, in particular the General Data Protection Regulation (GDPR), which enables personal control over private data. The EU leveled record fines against Google for violation of data collection practices, including obscuring the purposes for collection and opting users into data collection by default (Fox, 2019). Unfortunately, in the US, Google continues to violate the minimal privacy laws which exist. In 2019, the US Federal Trade Commission fined Google \$170 million for violating children’s privacy on YouTube (Min, 2019). Google data scrapes children’s data from their educational services, too. New Mexico is currently suing Google for children’s privacy violations, citing the Google Suite of Education tools which extract and monitor children without their knowledge or consent (Singer & Wakabayashi, 2020).

The greater issue with Google's invasive and extractive practices lies in what we term its *ubiquity paradox*, the desire to escape Google's omnipresent gaze, but the inability to live life without the connections and knowledge from Google. It is the Faustian deal we must make in order to use apps and social media spaces despite a clear abuse of user data and privacy rights. As the US and EU struggles to write and enforce laws for privacy, Google continues to embed itself into the lives of families, making itself inescapable while simultaneously making itself necessary for work, play, and learning. From Google Chrome devices, to Google Meet, to Google Classroom, to Android phones, to YouTube, not to mention the search engine itself, Google finds new ways to mine user data in order to sell goods and services back to its users (Zuboff, 2019). Although Google may be following the letter of the privacy laws (though recent lawsuits suggest they are not), the nature of Google's business model demands a fundamentally unjust and profiteering approach to children's data.

## 5.2. *Economic justice*

In thinking about the affordances of student participation with, and through, Google Meet and Google Classroom, it is sensible to consider the relationship between this participation and broader economic outcomes and/or consequences - for example, as students are required to use particular technologies, which students do (and do not) have access as a result of economic barriers? In recent years, school in many, if not most, school districts around the United States proclaimed high rates of access to technologies, namely laptop computers (i.e., the 1:1 ratio indicated one laptop per child), and broadband internet access. However, during the global pandemic, we saw indicators of more sustained challenges, as students, teachers, and families struggled to even log-on to Google Meet (or their local videoconference platform), while some students went to great lengths to access broadband. In one widely shared photograph, students were seen sitting on the sidewalk outside a Taco Bell, within Wi-Fi range, so they could participate in online learning. In some places, lack of consistent access was made explicit as universities offered broadband access at large public spaces such as football stadiums, or through mobile school buses known as Wi-Fi Rangers.

If we only consider access to technology, we fail to tell the entire economic story. Some parents, including those deemed "essential workers," faced the immediate difficulty of supporting their children's online education during their work hours. The economic consequences for many parents placed them in an untenable position - send their kids back to school and risk exposure, or not earn money by staying home to educate their children. Challenges of socioeconomic class, often simmering under the surface in school, were made explicit in the tension between students in face-to-face settings and those who attended online or virtual, and those who chose private pods or homeschool - being given a choice indicated a certain privilege, in this case to limit potential exposure.

## 5.3. *Democratic justice*

While technology has empowered change and movements toward justice (e.g. the Arab Spring, #BLM, and #FlintWaterCrisis), technology can also constrain opportunities for citizenship by sowing misinformation (Tufekci, 2018), increasing social stratification, and mirroring the existing systems of oppression within society (Benjamin, 2019; Noble, 2018). These democratic opportunities and challenges frame our examination of Google Meet and Google Classroom. In other words, how might the use of Google Classroom align with (or threaten) imperatives to support meaningful personal, pedagogical, and societal change?

In Google Classroom, there are relatively few opportunities for justice-oriented, participatory citizenship that empowers ordinary people to make meaningful personal, social, or institutional change (Gleason &

von Gillern, 2018; Heath, 2018). Unlike in social media, for example, where engagement with a particular hashtag may expose users to a range of perspectives (Gleason, 2013), Google Meet and Classroom has neither design features nor social practices enabled that would facilitate this development. Likewise, Google Classroom does little to either promote engagement with democratic aims (i.e., participation in social movements) or with critical actions and activities (i.e., intervention in sexist, racist, or otherwise harmful behavior). This seems like a missed opportunity for students to learn vital media literacy and digital citizenship skills required in a democracy (i.e., not spreading mis- or disinformation) or learning how to intervene in anti-democratic behavior (i.e., stopping racist speech or behavior).

#### **5.4. *Technological justice***

As a free and popular educational platform, Google Classroom is designed to support student learning by offering a simulacrum of course curriculum through its technological dashboard. Upon visual inspection of Google Classroom, it appears to resemble school. Content is organized through courses or classes, and content (i.e., readings, videos, and other materials) is presented alongside assignments (i.e., classwork and homework). Students using Classroom participate in everyday classroom activities through synchronous Google Meet, or by completing asynchronous assignments. Yet, challenges lie beneath the surface.

The seemingly neutral interface of Google Classroom is an educational product linked to broader social, cultural, and political contexts. For example, it is a technology that, by facilitating the reproduction of racist and neoliberal schooling practices (e.g., Eurocentric curricula; standardized classwork; mandatory homework; regimented school days; and grading for compliance, not mastery), is similarly driven by institutional and managerial practices. Google Classroom is designed for teachers, administrators, and district employees for the purposes of content delivery, knowledge acquisition, and formal assessment. Rather than being an educational innovation, it reproduces the traditional practices of neoliberal education. It is designed for efficiency - by conceptualizing education as knowledge acquisition, it puts the emphasis on the individual learning in isolation. This self-guided model of learning is not new in instructional design; rather, it is one of the most enduring models, in which individual learners acquire knowledge through interaction with course content rather than social interaction or participation (Garrison, Anderson, & Archer, 2001).

This individual, self-guided model intersects with the political push to return students to face-to-face instruction. Students who return for face-to-face instruction receive the benefits of social interaction, organized learning, and extracurricular activities not available through online learning (i.e., arts, music, sports, health). On the other hand, students in online learning situations face serious challenges that inhibit full participation. Google Classroom's interface allows for linear movement through lessons, punctuated by preloaded expository video. This design envisions education as curriculum management and learning as an activity to be completed in isolation. At the same time, students in a brick-and-mortar school enjoy the socialization and collaboration of their teachers, classmates, and administrators, while online learners end up in a separate and increasingly unequal school experience. This deprioritization of online learning happens not out of malicious intent, but rather as an unintended consequence of an outdated instructional model nestled in a political context that values traditional, school environments.

Further, Google Meet and Classroom reduce students to an avatar-like state. In Classroom, students become vehicles for standardized content, assessment, and (self) guided knowledge acquisition, flattening the student through a process of technological reductivism. In Google Meet, children's bodies, attitudes, and personalities are muted through a process that valorizes silencing through technological design. Students join, "muted." Often children become like actors in silent films who speak with outsized hand gestures, caricatures of themselves and their ideas.

### **5.5. Pedagogical justice**

Google Meet and Google Classroom afford opportunities for participation in learning during remote online teaching. They offer a space for virtual meeting (Google Meet) and to host virtual lessons (Google Classroom). Although Google Classroom touts its potential for transformative instruction (Google Suite, nd), the technological design of both Google Meet and Google Classroom encourage replication of many pedagogies already used in schools. This is not necessarily problematic if teachers employ pedagogies for social, cultural, and humanizing practices in school-based settings. However, early research suggests that when teachers encounter the overwhelming technological imperatives of emergency remote online teaching, they tend to fall back into behaviorist paradigms of teaching (Heath & Segal, 2020). Moreover, schools are often places of violence and disenfranchisement that perpetuate and uphold oppressive systems of unjust power (Apple, 2004; Dumas, 2014; Ewing, 2018), and the design of Google Meet itself mirrors imbalances of power in classrooms, perpetuating and reinforcing the existing power structures of schools. The technology of Google Meet demands a hierarchical classroom structure, constraining opportunities for culturally relevant and humanizing pedagogies. In Google Meet, the design of the technology gives the teacher more power than the students, and in fact, makes it difficult for teachers to engage in pedagogies that honor the knowledge of all participants in the classroom. For instance, the teacher must start and end the Meet. Small group collaboration is now enabled in Google Meet, though this feature was not available during the time this paper was written. Students may not privately chat with another student, though they may all participate in the group chat. In order to create a space that honors the wisdom and knowledge of all learners, teachers must make intentional pedagogical decisions and incorporate work-arounds to bypass the technological barriers inherent to the design of Google Meet.

Google Classroom also prioritizes the hierarchical nature of school, while privileging behaviorist understandings of knowledge as discrete and quantifiable. Though the software creates opportunities for teachers to communicate with students, for students to communicate with each other, and for caregivers and teachers to communicate, the structure of Google Classrooms presumes a hierarchical and linear way of knowing. Teachers push out assignments for students to work through in order, working toward objective and content mastery. While Google Classrooms allows for app integration, including social learning applications like Jamboard, the majority of work is pushed out to the students as assignments from the teachers, then pushed back to the teachers for feedback and grading.

Because the Google Meet and Google Classrooms are not being introduced into a neutral social space, but rather into a public school setting that historically upholds Whiteness and harms BIPOC, the users wield the technology as tools for upholding oppression. For instance, teachers often insist on a “cameras on” policy in Google Meet, despite the invasive nature of the request. Through Google Meet, teachers invite themselves into the homes of each of their students, recreating the power of the school house in each child’s home. The teacher’s voice, presence, and power sit on a child’s desk, in a child’s lap, and at a child’s kitchen table. In demanding cameras on, the teacher asks each student to share their private space with every other student and the teacher.

## **6. DISCUSSION**

The pandemic, despite its devastation, widened the narrow window of opportunity for educational change. In this moment of crisis, when schools closed and the public grappled with “emergency” learning, education could have been reimagined. The intersection of opportunities through pedagogy, deschooling, and the affordances of technology, might have opened new ways to address the inequities and injustices

of traditional schooling. However, state agencies, districts, and administrative leaders failed to take this opportunity. Instead, they turned to educational technology companies to reproduce, instead of re-imagine, school.

Analyzing the uses of Google Meet and Google Classroom - and the corresponding techno-ethical assumptions built into these products - during emergency remote education suggest that these technologies do what they have been marketed and purchased to do: mimic school. In creating a simulacrum of school, the existing injustices of school are transferred from the schoolhouse to the home. Moreover, the technological constraints of Google lead to pedagogical choices which center the role of the teacher, prioritize behaviorist approaches to knowing, and shift the burden of responsibility and accountability to families at home. Additionally, the technological injustices perpetuated by Google, including surveillance, data mining, and its inescapable ubiquity paradox, layer new complications over existing systems of educational injustice. In addition to reproducing traditional problems associated with public education, the use of Google in public schools introduces new problems, including the twin evils of surveillance and monitoring. Surveillance here means introducing new forms of user observation through technological means, envisioned through the concept of the panopticon which - quoting Foucault - *“is a form of architecture, of course, but it is above all a form of government. It is a way for mind to exercise power”* (Faubion, 2000, p. 437). Foucault’s panopticon argues that surveillance leads to total control over the individual person through constant observation, measurement, and analysis. These new norms of monitoring allow for large scale social control. Set against the backdrop of contemporary events, Foucault seemed prescient in his ability to imagine how ubiquitous surveillance by the state would lead predictably to increases in objectionable offenses.

Since the introduction of widespread videoconferencing as a core component of online schooling, students have faced punishment as a result of increased digital surveillance for their behavior. For instance, a nine-year-old girl lost email and digital platform privileges for purported violations (Klein, 2020). In another example, a sixth-grade boy in New Jersey was suspended after teachers noticed a toy Nerf Gun in his own home (Cattafi, 2020). In the latter example, the sixth-grade boy was subjected to instructional and carceral surveillance, as police were called to handle the alleged misbehavior.

The dangers of increased surveillance - of students, families, communities, and networks - are obvious. Student behavior (i.e., their physical visage) is subject to observation and judgement. In addition, their entire digital presence is watched, including email communication, keystroke activity, digital decision-making, and online navigation. Recent data and ransomware hacks (e.g. Fairfax County Public Schools in Virginia; Baltimore County Public Schools in Maryland) indicate that student data itself is not secure. Further, this accumulated meta-data provides opportunities for school systems, teachers, and researchers to analyze engagement, time-on-task, and other possible hints at learning; however, the mere presence of available data does not imply ethical data collection and analysis (Heath, 2020). In fact, the question of who owns students’ data - the students themselves, Google, or the school system - has not been fully resolved. How frequently does Google gather, analyze, and repackage student data with the end goal of selling the students’ back to themselves in a form of particularly insidious surveillance capitalism (Zuboff, 2019)? How might the Google Meet recordings of black and brown faces be encoded, racialized, and potentially used to develop algorithms to further harm and disenfranchise BIPOC (Benjamin, 2019; Noble, 2018)?

For students faced with near-constant surveillance of their body and digital presence, remote education can feel more like disembodied monitoring than engaged activity. Of course, for students of color, the experiences and outcomes are bound to be worse. Whereas privileged parents are able to advocate for their charges and challenge educational injustices to a degree that provides a measure of insulation from

more serious consequences, students of color will continue to bear the brunt of educational inequity. Historically, students of color have been disproportionately impacted by unjust disciplinary systems, with Black and Latino students receiving more severe punishment than their white peers for similar infractions, and Black students more likely to be referred to the police than white counterparts (Chen, 2019).

With the advent of Google Classrooms, the burden of monitoring shifts from the state to the family. In the example of Google Classroom, while students are faced with unprecedented practices of surveillance, parents and caregivers supporting these students are tasked with monitoring student learning. Far from being an innocuous activity that facilitates parent engagement in education, the task of monitoring has been shifted from the teacher's expert eyes to the caregiver. In the remote educational setting, this means that responsibility for ensuring student progress is now on those in the home. This simple shift has major implications that make it particularly powerful - first, is the all-encompassing power of the state to control through literal surveillance and also through offloading this activity onto its own citizens. Second, the state tasks its own citizens, with their own diminished agency, to assume their own self-management of the state's interests. Finally, parents, and especially mothers, absorb this work as part of the unpaid labor forced upon them as the "shock absorbers" for a neoliberal society which refuses to fund social programs (Grose, 2020).

Caregivers are not empowered with agency to make their own decisions about their children's education, but, perversely, must acquiesce their own control to fulfill the state's decisions. This forced abdication of parental control over their own children's education stands in stark contrast to one of the guiding principles of the Head Start program, an early education program that recently celebrated its fifty-fifth anniversary: "the parents are the child's first teachers." This point coincides with the second implication - the ceding of home life to the watchful eye of the educational panopticon. In this matter, the home ceases to be a private world that is respected and valued, but rather is seen as empty space to be colonized by commercial entities arguing for this educational necessity. The home, formerly with the internal consistency of its own traditions, history, and spatial arrangements, becomes an extension of school. The caregivers act as unpaid interns with little to no control but are accountable to corporate technological giants, and the educational apparatus with its long arm of discipline.

The challenges of emergency remote education are significant. For the first time, large numbers of educators around the world, in K-12 and higher education, are faced with the task of teaching students with almost insurmountable barriers: uneven or unreliable broadband or internet access; lack of computers and other devices; compulsory use of particular learning management systems; inconsistent or non-existent training or professional development in online education. Unsurprisingly, for students, families, caregivers, and communities, the experiences and outcomes of emergency remote education are, to put it diplomatically, less than ideal.

Rather than seeing the pandemic as an opportunity to re-imagine public education, powerful educational stakeholders (i.e., state education associations, administrators, teachers, and corporate regimes like Google) have argued in favor of standardization, efficiency, surveillance, and punishment. This reinforces a perception that public education in the US is about a regime of control and punishment more than a transformation of either individual identity change or societal redefinition. Like many LMSs, Google Classroom offers opportunities for formative assignments. However, aided by the archival nature of digital record keeping, school systems have chosen to connect assignments for learning with bureaucratic systems of control. In Texas, for example, students who do not complete required assignments in Google Classroom are marked as absent; 10 or more absences in a 6-month period can lead to more serious repercussions,

including referring parents to truancy court.

While Texas may be an extreme example, they are not an outlier. In fact, 36 states in total include chronic absence as a key academic indicator as part of the ESSA (Every Child Succeeds Act) the successor to No Child Left Behind; of those, 27 define chronic absence as missing 10 percent of total school days. While chronic absenteeism is undeniably a challenge that has the potential to derail academic achievement, it is equally concerning how severe the penalties are for not submitting coursework. The tension here is between ensuring that systems are in place to offer opportunities for assessment, while still ensuring that students who have not fully satisfied learning objectives do not face unfair consequences for their actions. It is inappropriate and dangerous that unmet learning objectives become an opportunity for integration into other systems of data surveillance, such as that of the truancy court.

## **7. RECOMMENDATIONS**

These challenges of remote education are serious, significant, and severe - they should be concerning not just to parents, but to teachers, administrators, state education agencies, researchers, and technology platforms like Google. In light of the critiques presented in the discussion, we offer recommendations that can facilitate meaningful, authentic, engaging, and non-coercive learning in online settings.

### ***7.1. Recommendation one: teach the crisis***

In 2020, there is no shortage of inspiration for curriculum to discuss. We present three themes related to the broad topic of The world is on fire. First, in the fall of 2020, across a number of states in the Western U.S., wildfires blanketed entire regions, setting off smoke that could be seen from satellites high above the earth. These massive wildfires were widely considered to have become worse as a result of climate change. Second, In the United States, and around the world, the death of George Floyd sparked unprecedented protest about the epidemic of state-sponsored police brutality against Black people. For many Blacks, the death of George Floyd paralleled the brutal murders (by police) of Oscar Grant, Philandro Castile, Mike Brown, Eric Garner, Breonna Taylor, Freddie Gray, and more. Third, the COVID-19 pandemic itself should be taught. The unpredictable nature of the disease and the variegated responses (i.e., across states and countries) coupled with public health experts' dynamic knowledge of COVID-19 make this topic rife for in-depth exploration.

By themselves, each possible topic is rich, generative, and situated in a web of historical, social, political, cultural, and affective dimensions that give the topic an almost limitless complexity. Each one, from wildfires to #BLM to the pandemic, merit in-depth inquiry that bridges science, math, history, social studies and civics, English language and literature, and the visual and performing arts. We envision teachers, administrators, and instructional specialists taking an interest in creating curriculum that is directly related to “real life” events that are happening now. Research suggests that the use of personally relevant materials facilitates student engagement and learning, as well as supports involvement in community and civic-related activities (Cammarota, 2007).

### ***7.2. Recommendation two: design project-based curricula***

Rather than envisioning curricula as a series of discrete, linear, and siloed tasks, schools may be interested in designing curricula that is as complex, authentic, and interdisciplinary as the world in which we live. Recent national surveys (Moeller, Brackett, Ivcevic, & White, 2020) have indicated a high degree of disengagement, stress, and anxiety associated with traditional public education. As a result of the pandemic,

students face even greater challenges while educational offerings face diminishing returns. Through the use of project-based curricula, students investigate relevant problems to be solved through collaborative, authentic activity. One result of this learning process is the creation of learning artifacts that are presented through public demonstrations of student knowledge (Kracijk & Blumenfeld, 2004). Problem-based learning begins with an authentic and engaging driving question that can be aligned with local, state, and federal content standards (Kracijk & Blumenfeld, 2004). While there are a number of exemplar project-based learning models in academia (e.g.: High Tech High, <https://www.hightechhigh.org/student-work/student-projects/>), examples from “real world” justice-driven initiatives continue to inspire. For example, Mari Coppey (“Little Miss Flint”) began her project with the simple question, “What can we do to help?” (Suggs, 2019), sparking national interest into how, and why, the hundreds of thousands of mostly Black residents were not provided with clean drinking water for years.

### ***7.3. Recommendation three: investigate experiences with technology***

The challenges of remote education are real and significant. For teachers, the demands of teaching in multiple modalities (i.e., face-to-face and online) are incongruous to the (often) limited professional development provided to teachers. For students, participating in online learning often means being subjected to pre-packaged curriculum that delivers generic content to students in isolation. For caregivers, as stated above, this means assuming the coercive role of educational monitor, on top of existing responsibilities. For all parties, the experience is likely equally demanding, stressful, and unrewarding - in short, it is inequitable. Current research suggests that, as a result of COVID-19, an above-average number of students will drop out or underperform academically (REL Appalachia, nd).

One actionable step to prevent this negative outcome is to survey student, teacher, and caregiver experiences with technology, focusing on questions like, What is the experience of remote education? What barriers to success exist? What conditions and resources are needed to be successful? How would you design online learning if you were in charge? Investigating experiences with technology will provide useful data about how well (or not) technological platforms are supporting learning and will also offer respondents the opportunity to share their vision for education. In this fashion, educators and administrators are informed of the relationship between educational experience and learning outcomes, and how this is connected to the kind of education we want for all our students. Further, through this survey, schools demonstrate to students that their experience is valid, and is a necessary part of the improvement process. While we acknowledge that surveys require labor by students, parents, and caregivers, we feel that if the results of the survey facilitate student and family agency in the educational process, they may be worth the additional time and labor. It may be the case that this process builds relational trust and demonstrates schools’ commitment to leveraging student expertise in the process of designing their own education.

## **8. CONCLUSION**

Emergency remote education represents a host of new challenges for students, teachers, caregivers, administrators, and broader educational communities, while providing concrete benefit only to technological conglomerates such as Alphabet (i.e., the parent company of Google). Through the use of a techno-ethical audit, this study aimed to investigate the explicit and implicit policies, practices, and experiences made possible through the use of a popular online learning platform, Google Classroom, and its associated videoconferencing software, Google Meets. What we found is a system that limited meaningful interaction, envisioned students as technology users with little agency or control, and predisposed students

to unnecessary practices of surveillance and monitoring with severe consequences, all while subjecting them to regimes of data collection and sharing for corporate profit. In short, not ideal.

Through this study, we presented three recommendations to improve online learning: teach the crisis; implement project-based learning; and investigate experiences with technology. The major through-line for our recommendations is facilitating those who work technology (i.e., students, teachers, caregivers, and communities) as having agency and control to design meaningful, authentic, and engaging educational experiences. In order to do that, we begin with data about the experience of learning in the current system, so that we can understand how well (or not) traditional practices are supporting education in a time of great uncertainty and challenge. However, we also ask respondents to indicate their visions for education, as we see this moment of profound uncertainty as an opportunity to re-think education - what do we want online learning to look, feel, and be like? How can we use this calamitous moment (i.e., when the world is on fire) to spur meaningful change?

As we have argued, meaningful change is necessary. The current system of remote education gives students, caregivers, and families an uncomfortable choice - be subjected to a less-than-engaging educational experience or return to school and risk being exposed to COVID-19. Parents, caregivers, and students should not have to make this choice in order to receive a high-quality education during a global pandemic.

## 9. REFERENCES

- Apple, M. W. (2004). Creating difference: Neo-liberalism, neo-conservatism and the politics of educational reform. *Educational Policy*, 18(1), 12-44.
- Benjamin, R. (2019). *Race after technology: Abolitionist tools for the new JIM code*. Hoboken, NJ, US: John Wiley & Sons.
- Cammarota, J. (2007). A social justice approach to achievement: Guiding latina/o students toward educational attainment with a challenging, socially relevant curriculum. *Equity & Excellence in Education*, 40(1), 87-96.
- Cattafi, K. (2020, September 11). *Edgewater school called police after sixth-grader had Nerf gun during Zoom class*. NorthJersey.com [blog]. Retrieved from <https://www.northjersey.com/story/news/bergen/edgewater/2020/09/11/edgewater-nj-police-called-after-student-had-nerf-gun-during-zoom-class/3468499001/>
- Center for Disease Control and Prevention (2020, October 13). Daily updates of totals by week and state provisional death counts for coronavirus disease 2019 (COVID-19). [Report]. Retrieved from <https://www.cdc.gov/nchs/nvss/vsrr/covid19/index.htm>
- Chen, G. (2020, August 13). *Students of color disproportionately disciplined in schools*. *Public College Press. COVID-19*. [blog]. Retrieved from [https://ies.ed.gov/ncee/edlabs/regions/appalachia/blogs/blog29\\_dropout-prevention-in-COVID-19.asp](https://ies.ed.gov/ncee/edlabs/regions/appalachia/blogs/blog29_dropout-prevention-in-COVID-19.asp)
- Cuban, L. (1986). *Teachers and machines: The classroom use of technology since 1920*. New York, NY, US: Teachers College Press.
- della Cava, M. (2020, April 18). Latinos disproportionately dying, losing jobs because of the coronavirus: 'Something has to change'. *USA Today*. Retrieved from <https://www.usatoday.com/story/news/nation/2020/04/18/coronavirus-latinos-disproportionately-dying-losing-jobs/5149044002/>

- Dumas, M. J. (2014). 'Losing an arm': Schooling as a site of black suffering. *Race Ethnicity and Education*, 17(1), 1-29.
- Evelyn, K. (2020, April 8). 'It's a racial justice issue': Black Americans are dying in greater numbers from Covid-19. *The Guardian*. Retrieved from: <https://www.theguardian.com/world/2020/apr/08/its-a-racial-justice-issue-black-americans-are-dying-in-greater-numbers-from-covid-19>
- Ewing, E. L. (2018). *Ghosts in the schoolyard: Racism and school closings on Chicago's South Side*. Chicago, IL, US: University of Chicago Press.
- Feenberg, A. (1991). *Critical theory of technology*. New York, NY, US: Oxford University Press.
- Faubion, J. D. (Ed.). (2000). *Essential works of Foucault 1954–1984. Vol. 3. Power*. New York, NY, US: The New Press.
- Fox, C. (21 January 2019). Google hit with £44m GDPR fine. *BBC News*. Retrieved from <https://www.bbc.com/news/technology-46944696>
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7-23.
- Gleason, B., & Von Gillern, S. (2018). Digital citizenship with social media: Participatory practices of teaching and learning in secondary education. *Journal of Educational Technology & Society*, 21(1), 200-212.
- Gleason, B. (2013). #Occupy Wall Street: Exploring informal learning about a social movement on Twitter. *American Behavioral Scientist*, 57(7), 966-982.
- Grose, J. (2020, October 14). Mothers are the shock absorbers of our society: The pandemic is forcing moms out of work at great financial, societal and marital costs. *The New York Times*. Retrieved from: <https://www.nytimes.com/2020/10/14/parenting/working-moms-job-loss-coronavirus.html>
- Google Suite (nd). Retrieved from <https://edu.google.com/products/gsuite-for-education>
- Healy, J. (2020, April 12). It's "People people people" as lines stretch across America. *The New York Times*. Retrieved from: <https://www.nytimes.com/2020/04/12/us/coronavirus-long-lines-america.htm>
- Heath, M. K., & Segal, P. (2020). The trap of technocentrism: (Re)Centering pedagogy for emergency remote teaching. In R. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza (Eds.), *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field*. Waynesville, NC, USA: Association for the Advancement of Computing in Education (AACE)
- Heath, M. K. (2020). Buried treasure or Ill-gotten spoils: the ethics of data mining and learning analytics in online instruction. *Educational Technology Research and Development*, 1-4.
- hooks, b. (1995). *Killing rage: Ending racism*. New York, NY, US: Henry Holt.
- Klein, R. (2020, August 11). *The new school suspension: blocked from online classrooms*. Huffpost. [blog] Retrieved from [https://www.huffpost.com/entry/school-discipline-remote-learning\\_n\\_5f329829c5b64cc99fde4d64](https://www.huffpost.com/entry/school-discipline-remote-learning_n_5f329829c5b64cc99fde4d64)
- Krajcik, J. S., & Blumenfeld, P. C. (2006). In R. K. Sawyer (Ed.), *Handbook of the Learning Sciences*. Project-based learning. p. 317-341. Cambridge, UK: Cambridge University Press.

Krutka, D. G., Heath, M. K., & Mason, L. E. (2020). Editorial: Technology won't save us - A call for technoskepticism in social studies. *Contemporary Issues in Technology and Teacher Education*, 20(1), 108-120.

Krutka, D. G., Heath, M. K., & Willet, K. B. S. (2019). Foregrounding technoethics: Toward critical perspectives in technology and teacher education. *Journal of Technology and Teacher Education*, 27(4), 555-574. Retrieved from <https://citejournal.org/volume-20/issue-1-20/social-studies/editorial-technology-wont-save-us-a-call-for-technoskepticism-in-social-studies>

Min, H. (2019, September 5,). Google to pay \$170 million for violating kids' privacy on YouTube. *CBS News*. Retrieved from <https://www.cbsnews.com/news/ftc-fines-google-170-million-for-violating-childrens-privacy-on-youtube/>

Moeller, J., Brackett, M. A., Ivcevic, Z., & White, A. E. (2020). High school students' feelings: Discoveries from a large national survey and an experience sampling study. *Learning and Instruction*, 66, 101301.

Morozov, E. (2013). *To save everything, click here: The folly of technological solutionism*. New York, NY, US: Public Affairs.

Noble, S. U. (2018). *Algorithms of oppression: How search engines reinforce racism*. New York, NY, US: NYU Press.

Pickert, R. (2020, April 23). U.S. jobless claims at 4.43 million in rout's fifth week. *Bloomberg*. Retrieved from: <https://www.bloomberg.com/news/articles/2020-04-23/u-s-jobless-claims-at-4-43-million-in-labor-rout-s-fifth-week?sref=vuYGisLZ>

Pink, S., Horst, H., Postill, J., Hjorth, L., Lewis, T., & Tacchi, J. (2016). *Digital ethnography: Principles and practices*. London, UK: Sage.

Regional Educational Laboratory Appalachia (nd). *Dropout Prevention in the Time of Covid-19*. [report] Retrieved from [https://ies.ed.gov/ncee/edlabs/regions/appalachia/blogs/blog29\\_dropout-prevention-in-COVID-19.asp](https://ies.ed.gov/ncee/edlabs/regions/appalachia/blogs/blog29_dropout-prevention-in-COVID-19.asp)

Romm, T. (2020, March 16). 'It shouldn't take a pandemic': Coronavirus exposes Internet inequality among U.S. students as schools close their doors. *The Washington Post*. Retrieved from: <https://www.washingtonpost.com/technology/2020/03/16/schools-internet-inequality-coronavirus/>

Selwyn, N. (2010). Looking beyond learning: Notes towards the critical study of educational technology. *Journal of Computer Assisted Learning*, 26(1), 65-73.

Singer, N., & Wakabayashi, D. (February 20, 2020). New Mexico Sues Google Over Children's Privacy Violations. *The New York Times*. <https://www.nytimes.com/2020/02/20/technology/new-mexico-google-lawsuit.html>

Solnit, R. (2020, April 2). What disasters reveal about hope and humanity. WAMU.org [blog]. Retrieved from <https://wamu.org/story/20/04/02/rebecca-solnit-on-what-disasters-reveal-about-hope-and-humanity/>

Suggs, E. (2019, March 11). Mari Copeny: Activist, 11, is face, voice of Flint water crisis. *Atlanta Journal Constitution*. (A3). Retrieved from <https://www.ajc.com/lifestyles/mari-copeny-activist-face-voice-flint-water-crisis/lBhSYnuS7ViDK6W8DHeeP/>

Taub, A. (2020, April 6). A new Covid-19 crisis: Domestic abuse rises worldwide. *The New York Times*. Retrieved from: <https://www.nytimes.com/2020/04/06/world/coronavirus-domestic-violence.html>

Tufekci, Z. (2018). How social media took us from Tahrir Square to Donald Trump. *MIT Technology Review*. Retrieved from <https://www.technologyreview.com/2018/08/14/240325/how-social-media-took-us-from-tahrir-square-to-donald-trump/>

Vaidhyanathan, S. (2012). *The googlization of everything: (and why we should worry)*. Berkley, CA, US: University of California Press.

VanAsdalan, L.C. (2020, September 25). More students ditch York County public schools for charters. *The York Daily Record*. Retrieved from <https://www.yorkdispatch.com/story/news/education/2020/09/25/more-students-ditch-york-county-public-schools-charters/3510941001/>

Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: digital technologies and distance education during the coronavirus emergency. *Learning, Media, Technology*, 45(2), 107-114.

Zuboff, S. (2019). *The age of surveillance capitalism: The Fight for a Human Future at the New Frontier of Power*. London, UK: Profile Books.