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Complexities with Bridging the Digital Divide

Michelle Ciccone

University of Massachusetts Amherst, mmciccone@umass.edu

Spencer Brayton

Waubonsee Community College

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CHAPTER 8 REFLECTION

COMPLEXITIES WITH BRIDGING THE DIGITAL DIVIDE

by Michelle Ciccone and Spencer Brayton

INTRODUCTION

In our work—Michelle as a technology integration specialist at a suburban high school in Massachusetts, and Spencer at a community college library in Illinois—we have seen the digital divide impact students, faculty, and staff in intersecting and distinct ways. We understand that the digital divide in our communities stems from and reinforces entrenched inequities, and so it is of paramount importance that we work to bridge these gaps. Our backgrounds in critical media, information, and digital literacies also alert us to the ways in which “bridging the digital divide” can lead to practices that may be coercive, overly expose users to surveillance technologies, and result in information overload for students and employees. As we reflect on evolving understandings of the digital divide and the complexities uncovered when working to bridge these gaps, we acknowledge our own privileges and opportunities to learn more about this vast and important topic.

WHAT IS THE DIGITAL DIVIDE?

The “digital divide” has been cause for concern since the mid-1990s, when the term came into use to describe inequalities in access to computers and the internet. Robinson et al. (2020) trace the evolution of the term over the last twenty-five years. During this time, the field has shifted its focus from inequality in basic access to inequality in digital skills mastered and deployed by users in digital settings, and now to a “third-level digital divide” (para. 10). This third level describes the unequal usage of digital technologies, and gestures at a hierarchy that sees certain digital activities as more valuable or value-enhancing than others. The digital divide manifests

along historically rooted lines of socioeconomic and racial inequality, with low-income communities and communities of color disproportionately negatively impacted by an inadequate digital infrastructure that results in too expensive or no broadband internet access at all—patterns of disinvestment sometimes termed “digital redlining,” evoking the discriminatory housing policy and practice of the twentieth century (Falcon 2021). As essential educational, economic, civic, and social services have moved to the internet, it is well understood that a lack of access to digital resources, skills, and literacies can limit access to opportunities for individuals and communities. A lack of access can ultimately become a barrier to full participation in society. For these reasons, closing the digital divide is defined as a social justice issue (Sanders and Scanlon 2021).

The digital divide manifests in educational settings in a variety of ways. There is a wide range of educational communities in terms of what digital resources and services are available via their educational institutions. Some schools provide a digital device for every student, some offer computer science coursework, some schools are staffed by library employees and other support personnel to help advance digital and information literacy integration across the curriculum, and some schools have none of these tools. Even within a given educational community a digital divide can exist, which we note within our own communities given the wide range of access, skills, and usage among our students and colleagues. A lack of an internet connection or a reliable device at home can hinder some students’ ability to keep up with school work, leading to the so-called “homework gap” (Reisdorf et al. 2019). Schools vary in their ability to provide access to robust academic databases, and this access may also be limited by the content filtering systems put in place, which filter out both supposedly unsafe but potentially also entire, particularly contested, domains of knowledge (Gilliard & Culik, 2016). In these ways,

schools can both mitigate the impact of the digital divide as well as re-entrench its multifaceted impact.

Remote education during the COVID-19 pandemic certainly drew widespread attention to the digital divide. Media reports spotlighted students accessing the internet from the parking lots of fast food restaurants and libraries so that they could participate in online learning (Kang 2020). In addition to issues of access, keeping up with course work during remote education drew on a constellation of digital skills, including digital organization and task management, successful navigation of various digital interfaces, problem-solving to navigate roadblocks encountered in digital spaces, and effective online communication with instructors and classmates—skills that are not always explicitly taught in educational settings. And yet the lack of explicit instruction and guidance in these digital skills can be unevenly mitigated via the digital skills and experiences of family members at home. The difficulties of online learning for some students no doubt contributed to the steep drop in enrollment in higher education during the 2020–21 school year (Nadworny 2020), most significantly among low-income, Black, and community college students (Long and Douglas-Gabriel 2021). We saw in real time the impact that the digital divide can have on participation and access to educational opportunities, and given the patterns entrenched via digital redlining policies and practices, the voices that will be missing from our classrooms will mirror those voices that are unequally marginalized in our society.

The renewed attention to the digital divide during remote education may also have accelerated progress to close the access, skills, and usage gaps. The unavoidable and real-time impact of lack of access led to an unprecedented number of purchases of devices for students, faculty, and staff across the United States (Rauf 2020). What's more, some students thrived

during remote education, whether due to fewer distractions at home, more opportunity for self-direction, the greater inclusion of students with disabilities (Gilman 2020), or reduced exposure to school-based bias and bigotry (Anderson 2021). The shifts not only in access but also in autonomy and student voice will no doubt impact our understanding of the digital divide in the future. Furthermore, Robinson et al. (2020) encourage a “fresh examination of the [digital divide] field” (para. 7) as technologies themselves evolve and the opportunities generated through particular uses emerge, and so we take this opportunity now to reflect on how our work continues to change to meet the evolving challenges of a multifaceted digital divide.

CLOSING THE DIGITAL DIVIDE: SOLUTIONS AND COMPLEXITIES

On the surface, increasing access to the internet appears to be the most straightforward solution, because it is the most tangible one. We can take stock of who in our learning communities needs a device and then, assuming we have the resources, we can provide access to a device. We can also provide access to the internet via hotspots, or facilitate the purchase of low-cost or subsidized broadband access for students’ homes. Remote education also highlighted gaps in home access to the internet and high-quality devices among employees, making it difficult for some teachers to engage in online teaching. After many years of debate, remote education served as the catalyst for Michelle’s district to “go 1-to-1,” with the school providing a laptop for every student and faculty member. Of course, this type of access requires significant funding, and it is not just the initial cost of purchasing the devices, but also the cost of the ongoing maintenance and care of them, in addition to life-cycle refresh purchases. It will be important to observe whether educational institutions continue this increase in purchasing devices after this moment of widespread remote learning has passed.

We know that providing access is not enough. As Robinson et al. (2020) point out, “it is a grave error to believe that universal access and mobility automatically or organically obviate higher-level divides such as skills and literacies” (para. 7). With increased access must also come a scaling up of educational efforts to fill the gaps, for both teachers and students, in how to effectively utilize not just the newly acquired devices but also the learning software that can now be deployed. From word processing to spreadsheets to digital calendars to skill-building software to content creation apps, access does not necessarily mean the skillful use of any or all of these digital tools. The question of whose job it is in the educational community to teach and reinforce these skills is often debated and contested. Ultimately, we observe too often that this results in no one teaching these skills beyond decontextualized point-and-click instruction earlier in a student’s career.

Increased connectivity can also lead to unanticipated complications. Like many school communities, Michelle’s district saw an uptick in attempted cybersecurity breaches during remote schooling, and a successful phishing attempt in spring 2020 necessitated temporarily shutting down student and staff access to digital accounts. To guard against a potentially highly disruptive experience during the 2020–21 school year, when access to digital accounts was of paramount importance, it was decided that student accounts would no longer be able to e-mail other student accounts, so that phishing e-mails could not be passed from student to student. Though this proved to be an effective, if not drastic, cybersecurity strategy, it did mean that an important digital tool—student e-mail—became partly unavailable to students, a decision with far-reaching digital skill-building implications.

The increasing use of digital technologies in education also increases the use of surveillance and predictive technologies, which is problematic for all populations—including the

very populations that we are hoping to get connected. The learning analytics embedded in much of the learning software that schools use build wide-ranging data profiles of students, which can lead to “statistical profiling” (Selwyn 2019) that may extend and deepen the sorting and tracking of students. These data are often combined with other data points, such as attendance and social-emotional risk factors, as part of “early warning systems” intended to identify students at risk of failing or dropping out. These systems are surely well-intentioned, but investigations have revealed that in one instance they have been used by law enforcement to label students as “potential criminals” (Bedi and McGrory 2020), and in another instance disciplinary data has been shared with U.S. Immigration and Customs Enforcement, ultimately impacting the immigration status of students (Bedford 2020). Both of these instances represent unethical and uneven impacts of increased exposure for already vulnerable students. The increasing use of technologies has also made technology use itself the site of surveillance of student behaviors, and schools are increasingly using software to monitor students’ digital activity. Students can in some cases avoid this surveillance, but only if they use a personal device and not their school-issued device, effectively creating a two-tiered experience that increases surveillance for some students and not others (Sawchuk 2021), once again representing uneven impact.

This evolution in the digital divide, which sees different usage of technologies being foisted on different populations of students, is indicative of the phenomenon that sees the most invasive and least desirable technologies being tested first on the most vulnerable populations (Eubanks 2018; Doctorow 2019). This new manifestation of the digital divide also sees vulnerable students spending more time using digital devices than their more privileged counterparts, and engaged in skill-building via learning software which has, at best, shaky evidence of efficacy (Wexler 2019). This certainly represents the least empowering or creative

use of digital technologies in schools. Adoption of some of the most egregious technologies tends to be coercive, leaving very little room for student choice in utilizing these technologies, with these coercive practices effectively “grooming students for a lifetime of surveillance” (Irwin 2014).

CRITICAL QUESTIONING WHILE BRIDGING THE DIGITAL DIVIDE

Given these complex implications around privacy and maintaining autonomy in an increasingly connected world—and going beyond the “third-level digital divide” of usage—the need for ongoing education, training, and awareness-building with staff, faculty, and students is only growing in importance, so that all understand what is at stake when certain tools, systems, and devices are used in educational settings in certain ways. Educational communities must balance what may feel at times like competing but are ultimately supportive priorities. They must find solutions to the digital divide as it is manifested in our particular communities while maintaining a critical perspective that uncovers the hidden implications of certain solutions.

We know that we play important roles in our communities in maintaining this balanced focus, though it is not always a straightforward task. In our positions we are the problem-solvers, and during the tumultuous time of the COVID-19 pandemic we carried out important, collaborative work in a short amount of time. We provided support to students and employees so they could be successful in uncharted waters, getting students the technology they needed and creating programming to navigate online or hybrid courses. We worked closely with faculty so that they felt confident about using digital tools in ways that were empowering for both them and their students. We acknowledge all the great work that has been done in education to help support students and employees during this time. Surely our communities have moved forward

from this moment with a different base level of access, skills, and usage from which we can continue to grow and expand.

In the midst of these rapid responses, we also deepened our understanding of the importance of modeling an everyday critical stance as we problem-solved with colleagues and students. This doesn't mean that we will be able to enact our philosophies in every decision made to address the digital divide. As such, refusal is an important option, in order to keep predatory technologies out of our school environments (Logan 2020). Still, we inevitably find ourselves tasked with implementing a technology solution to a problem we may have had no say in defining. Our critical questioning can plant seeds and in small ways resist what Morozov (2013) wrote about as a "technosolutionist" perspective, which is at risk of taking root during times of great change. Importantly, though, it is not just about being the most critical voice in the room, but helping to develop a critical consciousness, as well as critical media and information literacy skills, in our colleagues, so that they are able to engage in this work as well and do not unknowingly exacerbate these issues. This is no small thing, particularly if stakeholders are just gaining basic access and developing basic digital skills themselves; there is the very real risk of information overload and a feeling of defeat before we begin. It is also important that our efforts to raise a critical awareness of these issues does not become coercive itself (Ellsworth 1989; Brayton and Casey 2019).

We now realize that there are more allies than not in this work against technosolutionism in our communities, and that all come to these discussions with important concerns and a care for the success and well-being of students, faculty, and staff. In fact, we see how students are leading the charge in pushing back against certain coercive technology implementations. Opposition to a personalized learning platform developed with the help of Facebook engineers led to student

protests in Kansas and New York City, among other locations, over concerns about data privacy and lack of human interaction as a result of their schools using the platform (Bowles 2019; Strauss 2018); and more recently the significant growth in the use of remote proctoring software during remote education, particularly in higher education, has inspired growing student protest (Harwell 2020). We acknowledge that sometimes our job is to simply get out of the way.

Perhaps most important, conversations about technology adoption and implementation ask us to collectively articulate what we want our learning communities to look and feel like, and even what we believe to be the very purposes of education. These conversations call for supportive partnerships and collaborations between students, faculty, and staff. During remote education, institutions have been tasked with solving problems that derive from generations of disinvestment, and this is not the first or last time that educational institutions will be asked to solve societal problems. We hope that this remote educational experience continues to sustain attention on the important advocacy that will be needed to ensure that all in our society are able to participate equitably, safely, and with dignity.

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