

Closing the Opportunity Gap: Bridging the Digital Divide in the U.S. Schools

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Abstract

In a world that is becoming increasingly digital, access to technology and the internet has transformed from a luxury to a necessity, especially in the realm of education. However, the harsh reality is that not all students have an equal footing in this digital age. The digital divide, characterized by disparities in access to essential hardware and reliable internet connectivity, has been laid bare by the COVID-19 pandemic. This paper, “Closing the Opportunity Gap: Bridging the Digital Divide in U.S. Schools” delved into the heart of this issue and presented a compelling argument for equitable access to digital resources in American schools. The digital divide issue lies at the intersection of equity, social justice, and education. The problem stemmed from a stark discrepancy in access to critical tools such as laptops or tablets and reliable internet connectivity. Using Intersectionality and Critical Policy Analysis as theoretical framework, this paper explored the critical impact of lack of access to technology and the Internet in schools and how that can widen the opportunity gap. The paper offered several recommendations to bridge the digital divide in U.S. schools, emphasizing that investment in education and digital literacy programs is an investment in the future. The paper underscored that a collective effort from policymakers, educators, and communities is imperative to make education more equitable and accessible.

Keywords

Opportunity Gap, Digital Divide, Equitable, Access, Digital Skills Gap, Homework Gap

1. Introduction

The digital divide became bare when COVID-19 struck in 2020, forcing schools to do online teaching and learning. The term “Digital Divide” in schools refers to

the gap between students with access to modern information and communication technology and those without, which can affect their ability to succeed academically. This divide can exist due to differences in access to devices, internet connectivity, technological skills, and digital resources. It became apparent that many students could not be reached during COVID-19 because of the absence of online access (Hoofman & Secord, 2021). The news of these access challenges prompted AECOM, an international civil infrastructure research and planning company, to research the landscape of broadband access in Columbus, Ohio, in the U.S., to address gaps in broadband access. The study compiled a comprehensive analysis of numerous data sources and sets, mainly from the Mid-Ohio Regional Planning Commission (MORPC), American Community Survey, census, and private industry data, to provide a clear picture of the state of Columbus' broadband infrastructure. AECOM study found that gaps in access were mainly due to a variety of barriers across different demographics, such as economic challenges, technological literacy, and computers or other technological hardware (AECOM, 2020).

Every year, the Mid-Ohio Regional Planning Commission (MORPC) puts on an event called the "State of the Ohio Region," in which local officials, state politicians, business, and civic leaders attend and hear about progress and plans that have been made to address issues in the region. At the 2017 State of the Region, Aaron Schill, MORPC Director of Data and Mapping, was sandwiched between Angela Seifer, Executive Director at the National Digital Inclusion Alliance, and Anne Schwieger, Broadband and Digital Equity Advocate for the City of Boston. The main topic of the event that year was broadband and digital equity. Broadband and digital equity took center stage of the deliberation with the Franklin County School District, located in a rural area in Ohio State of the United States, representing a tangible example of the challenges posed by the digital divide. This district encompasses a mix of suburban and rural schools, and it has struggled with disparities in digital access among its student population. According to the Report of Franklin County Digital Equity Coalition (2021), over 80,000 households across Franklin County lack home internet access, and inequities in access, affordability, and reliability continue to grow. According to the report, in 2019, approximately 108,000 of Franklin County's 522,000 households—about one in five—did not have a cable modem, digital subscriber line, or fiber internet account. The report further indicates that around 50,000 households, nearly 10% of all households in the county, had internet access only through a cellular data plan. More than 48,000 households had no home broadband subscriptions in 2019, including a cellular data plan. These statistics highlight significant disparities in internet access within the U.S., which calls for targeted initiatives to address these inequities, especially in schools.

In a recent survey of Franklin County Department of Job and Family Services (JFS) (2023), over three-quarters of respondents believed that home internet is as vital as rent, food, and transportation. The JFS survey indicates that within Franklin County School District, a microcosm of the nationwide digital divide, educa-

tors are witnessing firsthand the stark inequalities in students' access to digital resources. This disparity in technology access will complicate the delivery of quality education, ultimately affecting students' learning outcomes. Insufficient technology and internet access in a part of the U.S. will prevent those students from those parts from keeping pace with remote learning. It is important to mention that for people to participate in society fully, Internet access is crucial from economic (business, trade, and commerce) and social (job access, medical care, and wellness because of telehealth's presence) perspectives.

An equitable policy is imperative to ensure that every student, regardless of background, race, gender, or socioeconomic status, has equal access to digital resources and educational opportunities (Tang & Estrada-Reveles, 2021). Equitable policies are designed to provide fair access to opportunities and resources, especially for marginalized and disadvantaged groups, to reduce disparities and promote social justice. Equitable education policies focus on equalizing opportunities, removing barriers, and ensuring all students have the support they need to succeed. Equitable policy aims to rectify the glaring disparities in access to digital tools and resources. It recognizes that students in underserved communities, which often lack the technological infrastructure needed for a quality education, should be catered for. Examples of equitable policies that have been effective or feasible in addressing disparities include the universal access to early childhood education policy, which provides access to quality education for all children, particularly those from low-income backgrounds. This free early education significantly improves academic outcomes, especially for children from disadvantaged families, by preparing them for school and reducing the achievement gap. Secondly, affirmative action policies implemented in college admissions to ensure that students from marginalized racial, ethnic, and socioeconomic backgrounds have greater access to higher education is an example of equitable policy. U.S. and Ghana, among other countries' affirmative action policies, have increased diversity in higher education institutions, providing more opportunities for underrepresented students while enhancing learning environments for all. Thirdly, providing targeted scholarships, grants, and financial aid packages for students from low-income families, first-generation students, and students of color to help reduce financial barriers to higher education is an equitable practice. For instance, most U.S. higher learning institutions provide graduate assistantships to international students to help them pay their tuition fees and living expenses. In the study by Hossler (2000), financial aid policies have been shown to increase college enrollment and retention rates for low-income students. This aid aims to ensure that financial constraints do not hinder academic success. Lastly, access to health and well-being support services in many schools across the globe is part of equitable educational policies. For instance, Miami University in Ohio State, USA, provides students with access to healthcare, mental health services, nutrition programs, and social support services to address the barriers to learning that arise from poor health, stress, or family instability. By addressing students' physical and emotional

well-being, schools can improve their ability to focus on learning and academic achievement, especially for disadvantaged students.

To add to the digital divide literature in U.S. schools, this study tailors its message to two distinct yet interrelated educational stakeholders: policymakers and educational activists, including the community. These two groups play pivotal roles in bridging the digital divide and ensuring equitable access to digital resources in the education system. To truly understand the magnitude of the digital divide in American schools, we need to consider technology's pivotal role in contemporary education. In the past few decades, classrooms have been transformed by integrating computers, internet access, and digital educational tools. While these innovations offer vast potential for improving learning outcomes, they also introduce a fundamental question: Who benefits from these advances, and who is left behind?

According to the [U.S. Census Bureau \(2013\)](#), roughly one-third (31.4%) of households whose incomes fall below \$50,000 and with children ages 6 to 17 do not have a high-speed internet connection at home. This low-income group makes up about 40% of all families with school-age children in the United States. Again, the report of [Federal Communications Commission \(FCC\) \(2021\)](#) indicates that, as of 2021, approximately 15% of U.S. households with school-age children still lack access to high-speed internet at home, a deficiency known as the *homework gap* (the disparities in access to technology and internet connectivity that prevent some students from completing their homework or engaging in learning activities at home). This homework gap often arises from socioeconomic inequalities, where students in lower-income households or rural areas do not have the necessary digital tools such as laptops, tablets, or reliable internet access to fully participate in remote learning, research, or other homework assignments that require internet access. The homework gap highlights the digital divide that impacts students' ability to access education fully, and addressing this gap is crucial for achieving educational equity. It can be inferred from the FCC report that approximately 85% of U.S. households have access to high-speed internet at their homes. This aligns with Critical Policy Analysis (CPA) ideology, which focuses on understanding how policies influence society, who benefits from them, who is marginalized, and how power dynamics are reproduced or challenged through policy processes.

The COVID-19 pandemic, which forced a massive shift to online learning, exacerbated disparities, highlighting the urgent need to address the digital divide in our educational system. Pre-COVID-19 pandemic data show that around age 10, boys were 7% less likely than girls to be able to read a simple text. However, the gender gap varies considerably across countries. For example, the [UNICEF & Education Commission \(2022\)](#) report indicated that in Cambodia and South Africa, boys were about 40% less likely to have the skills to read a simple text, while in Chad and the Democratic Republic of the Congo, girls were about 20% less likely to attain the same. The COVID-19 pandemic worsened these dynamics, widening

the equity gap. According to [Alejo, Jenkins, & Yao \(2024\)](#), during the pandemic, learning disparities widened due to six potential reasons related to marginalized children, who 1) were already behind even before the pandemic, 2) were more likely to experience longer school closures, 3) had limited access to and support on remote learning, 4) were less likely to receive supervision and learning support at home, 5) face greater obstacles to return to school, and 6) return to school systems that are less able to provide for their needs. The effects of the pandemic on learning disparities were glaring across the globe. In Ethiopia, while learning among students in urban areas progressed at less than half the speed of what would have been expected, students in rural areas progressed by only a third of the normal rate ([Kim et al., 2021](#)). In Kenya, larger losses were observed among participants of an online tutoring platform for students in hardship areas and those in rural schools ([Whizz Education, 2021](#)). According to [Uwezo Uganda \(2021\)](#), while older children aged 12 - 14 years showed some improvement in basic skills, the share of 8-year-old children who were non-readers increased from 33% in 2018 to 51% in 2021, and the share who were non-numerate increased from 22% to 31%. Other studies that found larger losses among students in earlier grades than in later grades include rural Karnataka in India ([Annual Status of Education Report, 2021](#)) and São Paulo, Brazil ([Lichand et al., 2021](#)).

The implications of the digital divide are far-reaching. Access to technology is not just about providing students with a means to complete their homework; it is about preparing them for the demands of the modern workforce, where digital literacy and technology skills are increasingly essential. A lack of access to digital resources can lead to students falling behind academically, limiting their opportunities for higher education and future career prospects. Furthermore, the digital divide perpetuates existing inequalities, disproportionately affecting students from marginalized communities, making it a matter of social justice as well.

2. Objectives

In this exploration of “Closing the Opportunity Gap: Bridging the Digital Divide in the U.S. Schools,” this paper adds to the literature on promoting equity in access to digital resources in education. The paper uses evidence from data and literature to argue for bridging the digital divide gap in U.S. Schools. The study, therefore, seeks to identify the critical impact of lack of access to technology and the Internet in some schools in the U.S. and how that can widen the opportunity gap. This will uncover disadvantaged students’ challenges and the innovative strategies and policies to develop to address this issue. Also, this study recognizes the importance of preparing students for the digital age and, therefore, suggests recommendations for educators and policymakers. It is believed that collective effort involving policymakers, educators, and communities can improve access by ensuring that every student, regardless of their geographical location and background, can thrive in the digital age. This can mark a level playing field in education and provide all students with the tools they need to succeed in an increasingly digital world.

3. The Issue of Digital Divide in Schools

At the heart of the digital divide problem lies a stark discrepancy in access to essential hardware, such as laptops or tablets, and reliable internet connectivity. The National Center for Education Statistics (NCES) underscores the gravity of this issue by emphasizing that access to technology and the internet has become increasingly important for students, and the digital divide can exacerbate educational inequalities (NCES, 2020). In a rapidly digitalizing world, the absence of these fundamental tools disrupts the learning journey for countless students, particularly those from disadvantaged backgrounds. Socioeconomic disparities are inexorably tied to the digital divide. Low-income students are disproportionately affected by the lack of access to digital resources and internet connectivity. The report of U.S. Department of Education (2020) highlights that addressing the digital divide is vital in mitigating socioeconomic disparities. This issue is not merely educational but deeply rooted in economic and social inequality.

Again, the digital divide is not solely an equity issue but also a matter of national competitiveness. The World Economic Forum (2016) stresses that digital skills are paramount in the global economy. Because of that, neglecting the issue of digital disparity in some of our communities could see the United States falling behind in technology accessibility coverage and equity on the international stage. The COVID-19 pandemic exacerbated the digital divide and intensified the loss of learning opportunities. As education transitioned online, students without access to the necessary technology and internet connections faced critical setbacks. The report of U.S. Department of Education (2020) further notes that this loss of learning opportunities during the pandemic has the potential to cause long-term educational repercussions, further widening the gap between students.

According to Vogels (2021), with fewer online access options, Americans with lower incomes rely more on smartphones. Vogels contends that as of early 2021, 27% of adults living in households earning less than \$30,000 a year are smartphone-only internet users—meaning they own a smartphone but do not have broadband internet at home. It could be said that if adults struggle to access the internet at home, it is obvious that students in such homes will suffer to do homework. Also, roughly a quarter of adults with household incomes below \$30,000 yearly (24%) don't own a smartphone. Vogels' study says most lower-income Americans are not tablet owners. By comparison, these technologies are nearly ubiquitous among adults in households earning \$100,000 or more a year. On the contrary, Vogels' study further revealed that Americans with higher household incomes are also more likely to have multiple devices that enable them to go online. Again, roughly six in ten adults earning \$100,000 or more a year (63%) report having home broadband services, a smartphone, a desktop or laptop computer, and a tablet, compared with 23% of those living in lower-income households (Vogels, 2021). It could, therefore, be argued that the digital lives of Americans with lower and higher incomes remain markedly different.

It is important to emphasize that closing the digital divide can foster economic

opportunities. The report of [U.S. Department of Education \(2020\)](#) emphasizes that expanding access to digital resources can improve economic opportunities for students and communities. As more jobs require digital skills, ensuring that students are technologically literate can improve their employment prospects and build their financial wellness. It must be emphasized that it is not an employer who will take one's job, but one's inadequate knowledge of technology and the Internet will do that. The National Center for Education Statistics (NCES) rightly points out that access to technology is crucial. The internet has become paramount for students, and the digital divide can exacerbate educational inequalities ([NCES, 2020](#)), which widen the opportunity gap.

Education, often seen as the great equalizer, must be accessible to all students regardless of socioeconomic background and geographical location. This study pushes for equitable access to educational resources by addressing the digital divide challenge. [Paul, Casey, Spires, and Kerkhoff \(2017\)](#) have argued that digital literacy has become a fundamental 21st-century skill. In a world driven by technology and digital innovation, students must be proficient in using digital tools and resources to succeed in education and the workforce.

4. Methodology and Theoretical Framework

This study relied on secondary data sources to establish the authenticity and trustworthiness of its argument on the need to bridge the gap in the digital divide in U.S. schools. These secondary data include the Annual State of the Ohio Region Reports, The U.S. Department of Education 2020 report, The National Center for Education Statistics, empirical data from the Pew Research Center led by Emily Vogel, and other relevant literature. This wide range of reliable data sources gave the study local, regional, and global information dimensions. This data supports the study's two theoretical frameworks of intersectionality and critical policy analysis. The digital divide in U.S. schools remains a pressing issue with far-reaching implications for students' educational opportunities and outcomes. Approaching this problem requires a robust theoretical grounding, considering the issue's complexities while advocating for equity and social justice. Therefore, this study is grounded on "Intersectionality" and "Critical Policy Analysis," which integrate various interdisciplinary perspectives to comprehensively understand and address the digital divide.

Intersectionality, as introduced by [Crenshaw \(1991\)](#), is a pivotal concept within the study's theoretical framework. It recognizes that a single factor does not shape students' experiences and social positions but results from the intersection of multiple dimensions, including race, class, gender, and more. In the context of the digital divide, this perspective highlights the nuanced nature of disparities in technology access. It acknowledges that these disparities vary based on the unique combination of students' identities and social locations. By recognizing the interplay of various factors, policies can be designed to address the specific challenges faced by diverse student populations to see where equality, quality education, and

technology in education intersect among urban and rural students. Support for this perspective can be found in various academic works and studies. For instance, research by [Houghton \(2019\)](#) has shown that the digital divide is not a uniform phenomenon but varies based on the intersection of factors such as race, income, and geographic location. Houghton's study highlights how different students, depending on their unique combinations of social identities, experience disparities in technology access and digital literacy. Furthermore, the work of [Collins \(2000\)](#) has underscored the importance of intersectionality in understanding the experiences of marginalized groups. Collins argues that intersectionality allows for a more comprehensive understanding of power dynamics and social inequalities, emphasizing the need to consider how various forms of oppression intersect and compound one another. This perspective can be applied to the digital divide to recognize that disparities in technology access are not isolated issues but are connected to broader systems of inequality and discrimination.

Critical Policy Analysis (CPA) is an approach used to examine and critique public policies, practices, and the underlying ideologies that shape them. CPA focuses on understanding how policies influence society, who benefits from them, who is marginalized, and how power dynamics are reproduced or challenged through policy processes. Critical Policy Analysis is a powerful tool for understanding the complexities of policymaking and its impact on society. By adopting CPA, this study focuses on power, inequality, and historical context to help identify policies' broader social, political, and economic implications on individuals and groups. Through the CPA approach, researchers and practitioners can advocate for more just, equitable, and inclusive policies that work toward social transformation. Critical Policy Analysis draws on the work of several intellectual traditions, most notably critical theory, and post-structuralism, to analyze how policies influence society. Influential figures include [Horkheimer \(1972\)](#), [Foucault \(1977\)](#), [Bourdieu \(1990\)](#), [Giroux \(1983\)](#), and [Ladson-Billings \(1994\)](#), who have each contributed to understanding how power, ideology, and social inequality are embedded in policies.

CPA aims to expose how policies reinforce inequalities, perpetuate social injustices, and maintain existing power structures. CPA is the foundational aspect of this study's framework that explores the interplay between power, ideology, and social structures. It is instrumental in understanding how unequal power relations, driven by various interests, contribute to and perpetuate the digital divide. This perspective emphasizes the role of power dynamics in shaping policies related to technology access, and it underlines the need for policies that challenge existing power structures to ensure equitable access for all students. This dynamic can be seen in governments' and corporations' digital infrastructure deployment decisions. These decisions are often driven by economic interests and political agendas, which can lead to the neglect of underserved communities. As [Sadowski and Pasquale \(2015\)](#) describe, these power-driven decisions can result in the concentration of digital resources and opportunities in privileged areas, exacerbating

the digital divide. This study will help recognize how such choices are shaped by the interests of those in power and how they contribute to inequality in schools in the U.S. By questioning existing power structures and advocating for more equitable policies, creating a more inclusive digital landscape becomes possible. Fraser (2008) has argued the need to reconfigure power relations and redistribute resources to ensure social justice and equal technological access.

5. Discussion of Impacts of Lack of Access to Technology and the Internet in Schools

The lack of access to technology and the Internet in some schools in the USA has significant and far-reaching impacts on students, educators, and educational outcomes. This became especially evident during the COVID-19 pandemic when many schools switched to remote or hybrid learning models. Without reliable internet access or devices, students could not fully participate in online learning opportunities (Hoofman & Secord, 2021). As education increasingly shifts to digital platforms, students without access to technology will miss important resources such as digital textbooks and materials, limiting their educational experience. Recently, many schools have been using digital textbooks, interactive resources, and multimedia content to enhance learning (Haleem, Javaid, Qadri, & Suman, 2022). The internet has become an essential tool for students to research, access current information, and engage in self-directed learning. This section evaluates the short- and long-term impact of the lack of school access to technology and the Internet.

In the short term, lack of access to technology and the internet in schools can decrease engagement and motivation for both students and teachers. The absence of engaging, interactive digital tools can make learning feel boring, disconnected, and less stimulating for students, leading to lower motivation and interest in learning. In the same way, teachers who cannot access online resources for their lessons may feel frustrated, embarrassed, and discouraged by their inability to make their lessons engaging and understandable. It is important to mention that when teachers are frustrated due to a lack of teaching-learning resources, students become confused and discouraged from learning. This can affect their overall well-being and emotional connection to school.

Lack of access to technology and the internet in schools widens opportunity gaps. The term “Opportunity Gap” in education refers to the disparity in access to quality educational resources, opportunities, and outcomes for different groups of students, particularly those from disadvantaged backgrounds. The opportunity gap focuses on the unequal distribution of resources, support, and opportunities, contributing to academic failure. Students from underprivileged backgrounds often lack access to essential resources such as experienced teachers, advanced coursework, specialized programs, and technology (Silverman, Hernandez, & Destin, 2023). These disparities can result in unequal educational experiences and hinder academic progress. Students without adequate technology or internet access are more likely to struggle academically because they may struggle to complete as-

signments, participate in online discussions, or access supplementary learning tools that enhance understanding. Haleem, Javaid, Qadri, and Suman (2022) have argued that students in lower-income or rural areas face the challenge of attending school with fewer technological resources, contributing to a widening opportunity gap between affluent and disadvantaged students. The public policies and practices have concentrated learning infrastructure in wealthier districts and high-income groups. Similarly, schools in wealthier districts are more likely to have the funds to provide students with laptops, tablets, and high-speed internet to help them progress their assignments and coursework. In the short term, without the internet, students are disadvantaged in completing assignments and projects that require Internet-based research. This gives students low marks/points in class, interim assessments, and end-of-semester examinations

Furthermore, a short-term lack of technology and the Internet can also affect how parents communicate with the school, access their child's grades, or participate in online parent-teacher meetings. This can lead to reduced parental involvement, which is crucial for student success academically. Nowadays, schools mostly send important updates about reports, academic deadlines, events, and emergency situations through digital communication platforms. Students without internet access may miss these critical notifications, affecting their academic performance and involvement in school activities.

Students deprived of access to technology and the Internet will have unequal academic opportunities for learning and growth. Such students may not have access to advanced courses, such as Advanced Placement or International Baccalaureate programs, which rely heavily on online resources for learning and assessments. This can impact their ability to gain college credits or compete for scholarships and admissions to higher institutions, which has a long-term effect on their academics. In support of technology in education, Lewin et al. (2019) aver that many enrichment programs, tutoring services, and extracurricular activities are now offered online, especially in response to the COVID-19 pandemic. Notwithstanding, students who lack internet access miss out on these opportunities, limiting their ability to engage in creative, academic, and extracurricular growth.

In an increasingly digital world, technology proficiency is a critical skill. A lack of it creates a digital skills gap in the long run. The digital skills gap refers to the disparity between people's digital skills and the general skills required by employers or society. It also means the difference between what individuals can do with technology and what is needed to thrive in a digitally driven world. Students who do not have access to technology risk falling behind in developing essential digital literacy skills crucial for future education advancement and employment opportunities. As many future jobs in the workforce require advanced technological skills, Hoofman and Secord (2021) contend that without exposure to technology in students' education, they are less likely to be adequately prepared for the job market, contributing to long-term economic disparities and joblessness.

Inaccessible technology and the internet in schools in the U.S. not only widen

opportunity gaps but also impact educational equity. Vogels's study in 2021 has confirmed this assertion that the digital divide disproportionately affects marginalized groups, including low-income students, students of color, and rural students. Inaccessible technology and the internet make it impossible for students to do online academic work. This exacerbates existing educational inequalities, leaving disadvantaged students with fewer opportunities for academic success. Again, many modern learning environments encourage group work and collaboration via digital platforms such as WhatsApp, Zoom, Team Meet, etc. Students without access to technology may struggle to participate in collaborative projects, leading to social exclusion and disengagement from group learning experiences. As a philosophy of CPA, researchers and practitioners should advocate for more just, equitable, and inclusive policies that work toward social transformation. In addition, many special education students in areas with no access to the internet and technology will lose resources and interventions as most of such resources are now provided online. For example, students with disabilities who lack access to technology may not receive the support they need, further compounding educational inequities and their plight. This will have both short- and long-term impacts on the underprivileged students in society. The intersectionality theory for this study is appropriate because it allows for a more comprehensive understanding of power dynamics and social inequalities in education, emphasizing the need to consider how various forms of oppression intersect and compound others' situations, especially people living with disabilities. Such minoritized groups should be factored into policies and practices.

The lack of access to technology and the Internet in schools creates a digital divide that affects students' academic achievement, opportunities for growth, and overall well-being. Addressing this divide by policymakers and educational activists must ensure that all students, regardless of socioeconomic background, ability, or geographical location, have equal access to the tools and resources needed to succeed academically and in future careers. Providing equitable access to technology, supporting digital literacy, and closing the opportunity gap are essential to achieving educational equity.

6. Recommendations

The digital divide in U.S. schools has become a critical issue, with disparities in access to technology and internet connectivity creating substantial barriers to quality education. To address this challenge and close the opportunity gap, it is essential to implement a combination of strategies that ensure equitable access to devices and connectivity and foster digital literacy and support programs in line with CPA. One fundamental recommendation to bridge the digital divide is to ensure equitable access to devices and internet connectivity for all students. This can be achieved through various means. First, government subsidies and grants should be expanded to provide low-income families and schools with affordable devices and broadband internet access. Initiatives such as the Federal Communi-

cations Commission's (FCC) E-Rate program can be further developed to encompass home internet access, ensuring students can connect from home.

In addition, schools can initiate device distribution programs, providing students with laptops or tablets on a long-term loan. These programs should be coupled with comprehensive digital literacy training for students and parents to maximize the benefit of these devices. Moreover, establishing community Wi-Fi zones in underserved areas, like public libraries, community centers, or school parking lots, would further expand access to high-speed internet, making it accessible to students even outside of school hours.

Public-private partnerships between technology companies and school districts can also be encouraged to provide low-cost or subsidized devices and internet services, making the effort to bridge the digital divide more sustainable. While providing access to technology is crucial, ensuring that students and their families are equipped with the necessary digital literacy skills to leverage technology effectively for educational purposes is equally important. Therefore, another recommendation is to implement comprehensive digital literacy and support programs. Schools can integrate digital literacy into the standard curriculum as a core subject, teaching students how to use technology, evaluate online information, and practice responsible digital citizenship critically, rather than assuming that we are in a digital and computer age and students are expected to be familiarized with their applications.

The first recommendation centers on providing equitable access to devices and internet connectivity. Critics of such an approach may argue that it is financially burdensome, particularly for an already stretched education budget. However, such critics overlook the long-term benefits of investing in education. An educated populace is essential for economic growth and a thriving society. Bridging the digital divide ensures all students have an equal chance to succeed in an increasingly digital world. Critics may also be concerned about potential bureaucratic inefficiencies in government programs that provide devices and connectivity. To address this, it is essential to implement well-structured, efficiently managed initiatives, learn from past experiences, and adopt best practices. Public-private partnerships can further mitigate these concerns by introducing innovation and private-sector expertise.

The second recommendation involves implementing digital literacy and support programs, which include teaching digital skills in the curriculum, organizing family digital literacy workshops and mentorship programs, and providing 24/7 technical support. Critics may question the necessity of standalone digital literacy programs, suggesting that these skills can be integrated into regular classes. However, it is essential to acknowledge that many teachers may lack the expertise to teach digital literacy comprehensively. Standalone programs are necessary to ensure comprehensive coverage and provide specialized training. Mentorship programs, a key component of digital literacy initiatives, may face criticism due to concerns about time and resource constraints. To address this, mentorship pro-

grams can be designed efficiently, requiring minimal time commitment from mentors and mentees. The benefits of peer-to-peer learning and the sense of community fostered can outweigh the resource investment.

7. Conclusion

“Closing the Opportunity Gap: Bridging the Digital Divide in U.S. Schools” significantly contributes to knowledge in several key areas. First, by exploring the intersection of technology access, educational equity, and policy, this paper expands the understanding of how digital disparities impact students’ educational outcomes supported by available data and how these gaps can be addressed. The paper adds to the conversation on how access to technology can hinder students’ preparedness for higher education and career readiness, potentially perpetuating broader social and economic inequalities.

Again, the paper contributes to discussions about equitable access to education by proposing actionable strategies to bridge the digital divide and ensure that all students have equal opportunities to succeed. This paper adds to knowledge by providing concrete recommendations for how schools, governments, and communities can address digital inequalities by discussing solutions such as policy reforms, public-private partnerships, or community-driven initiatives.

By framing the digital divide as a critical issue in achieving educational equity, this paper adds to the policy debate about how to create fair and inclusive education systems in the U.S. This involves exploring policies at the local, state, and federal levels, such as funding for technology in schools, broadband expansion in rural areas, or digital inclusion initiatives. It, therefore, pushes for policies that focus on providing access to devices and ensuring that students from underserved communities have the support they need to succeed academically, both inside and outside the classroom.

The paper contributes to the more extensive discussion about the long-term societal impacts of bridging the digital divide. It argues that closing the digital divide is not just about education in the present but about investing in future generations equipped to thrive in a digital economy. Moreover, the paper brings together perspectives from education, technology, and social justice to explore how digital access intersects with broader issues of inequality, discrimination, and exclusion. By linking digital equity to other areas of social justice, the study broadens the scope to reach a wider audience interested in education reform, policy, and technology access. By so doing, it empowers educators, school leaders, and community members by providing them with tools and knowledge to advocate for digital equity in their schools and communities.

The digital divide is not just a matter of educational inequality but is deeply intertwined with economic and social disparities. This paper, “Closing the Opportunity Gap: Bridging the Digital Divide in U.S. Schools,” contributes to knowledge by advancing the understanding of how the digital divide affects educational equity and student success. By proposing actionable solutions, examining the inter-

section of technology, equity, and policy, and emphasizing the impacts of digital literacy, this work offers new insights and solutions that contribute to closing the digital divide and ensuring that all students have equal access to the opportunities that technology can provide. This contribution is vital in advancing social justice and promoting equitable student education. This paper emphasizes that there are students in some parts of the U.S. where access to the Internet and technology has not been fully operationalized and effort must be made to connect them.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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