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## Bridging the Education Gap for Latine Students: AI's Role and COVID-19 Lessons on Technology

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### Executive Summary

This issue brief delves into the impact of Artificial Intelligence (“AI”) on the education gap, examining its potential to both exacerbate existing inequalities and bridge the divide. It discusses the impact of socioeconomic status (“SES”) on the achievement gap, the benefits and challenges of implementing AI in education, and the impact of the COVID-19 pandemic using Los Angeles as a case study to inform the national debate. Given that Latine students make up a significant portion of enrollment in public schools, particularly in low-income communities, this brief explores how AI can either deepen educational disparities or serve as a tool to strengthen accessibility to resources that underfunded schools often lack. Recommendations include regulations in the public and private sector to ensure equitable access to AI tools, targeted funding for under-resourced schools, and digital literacy programs that empower students to use AI effectively and ethically. These measures aim to create a more inclusive educational landscape where AI serves as a bridge to opportunity rather than a barrier, particularly for Latine students and other historically marginalized communities.

### Introduction

Just as social media has connected people across the world while also having unintended consequences like addiction and disconnection from the real world,[1] AI in education can similarly be a double-edged sword. If implemented equitably, the rapid advancement of AI has the potential to open doors to underserved low-income students who are at a disadvantage in educational attainment.[2] However, if implemented without addressing the systemic inequalities that exist, AI may inadvertently deepen the educational achievement gap, disproportionately affecting disadvantaged low SES students.

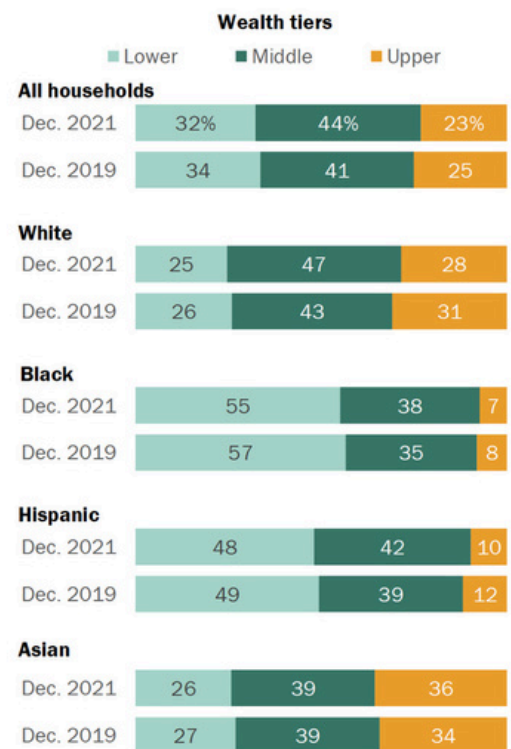
### Socioeconomic Achievement Gap and Impact on Social Mobility

The achievement gap refers to the statistically significant unequal output of educational results between different groups, such as those defined by race and SES, where the difference exceeds the margin of error.[3] Systemic inequities disproportionately place people of color in low-income brackets. For example, Black households are overrepresented in the lowest wealth category, being twice as likely as White and Asian households to fall into this group, with similar inequities affecting Latine households (see Figure 1). [4] These economic disparities

translate into significant differences in access to quality education.

### Black households are twice as likely as White and Asian households to be in the lowest wealth tier

% of U.S. households in each wealth tier



Note: Households in the middle tier have wealth between one-quarter to four times the median U.S. wealth. Households are grouped by the race and ethnicity of the survey reference person. White, Black and Asian include those who report being only one race and are not Hispanic. Hispanics are of any race. American Indian or Pacific Islander and multiracial not shown because of small sample sizes. Shares may not total 100% due to rounding.

Source: Pew Research Center tabulations of the U.S. Census Bureau's 2020 and 2022 Surveys of Income and Program Participation (SIPP).

"Wealth Surged in the Pandemic, but Debt Endures for Poorer Black and Hispanic Families"

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Low-income students face a deficit in access to essential educational resources, often attending underfunded schools with inexperienced teachers, outdated materials, and limited academic and extracurricular opportunities.[5] In contrast, wealthier students benefit from well-funded schools, smaller classroom sizes, experienced teachers, state-of-the-art technology, and private tutoring, further enhancing their performance and college readiness. [6] For example, in 2019, only 25% of Latine students met or exceeded standards on the National Assessment of Educational Progress (NAEP), compared to 47% of White students.[7] Furthermore, school districts with the highest concentrations of students of color, including many Latine students, receive 16% less funding than districts with the fewest students of color, while high-poverty districts receive 5% less than wealthier counterparts.[8]

This persistent achievement gap perpetuates poverty cycles and limits social mobility. Studies from organizations like EdNC and Fordham demonstrate the strong correlation between SES and educational outcomes, with low-SES students facing significant educational disadvantages.[9] In underfunded schools where low SES students are often concentrated, limited resources lead to overcrowded classrooms, outdated materials, and limited technology, hindering students' full academic potential.[10] Education is a fundamental driver for social mobility by enabling individuals to improve their lives and overcome socio economic challenges. As a result, it is imperative to create an even playing field where all students have an equal opportunity to reach their full potential, succeed, and improve their lives.

### Lessons Learned from COVID-19 Pandemic

Unequal resource distribution widens the achievement gap, depriving low-income students of opportunities while wealthier students receive an abundance, creating an unequal playing field. The COVID-19 pandemic highlighted the urgency of addressing these inequities. As schools transitioned to online learning, limited access to reliable internet and computers further hindered low-income students' ability to keep up academically. According to the United States Census Bureau, by October 2020, almost one in every ten Black and Latine households lacked consistent computer access, compared to only 6.7% of White households.[11] This divide reflects wealth inequality, as wealthier households are more likely to own homes with stable internet, while Black and Hispanic/Latine families often rent and experience housing instability (see Figure 2). [12]

For many students, remote learning challenges went beyond lacking devices and internet. In low-income households, students often struggled with finding quiet spaces for learning, as families lived in

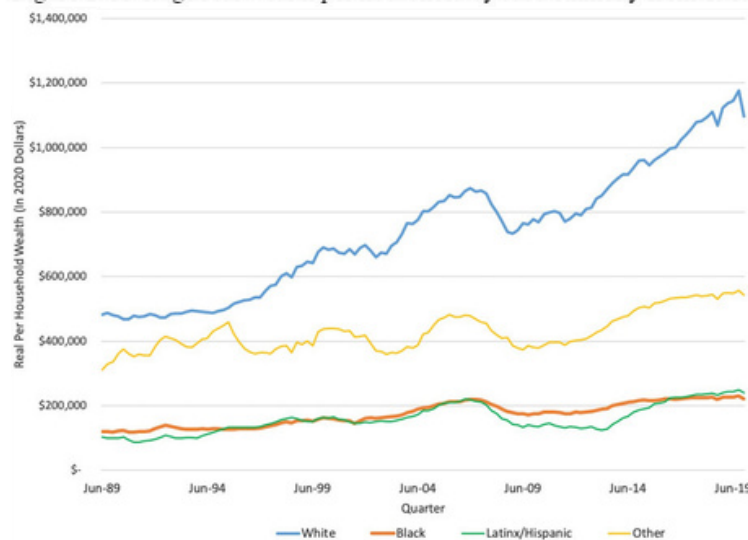
close quarters and competed for limited digital resources.[13] According to the Household Pulse Survey, Black and Hispanic/Latine children spent fewer hours on remote learning compared to their peers, correlating with reduced access to reliable technology.

The pandemic also underscored the critical importance of digital literacy for both students and teachers.[14] Even when schools provided devices, many students lacked the skills needed to navigate online learning platforms, communicate effectively with teachers, and utilize digital tools for their studies. Basic tasks, like sending emails or submitting assignments, posed challenges for students who hadn't received prior training in digital skills. The COVID-19 pandemic demonstrated that digital literacy is essential not only for remote learning but for effective use of technology, including AI, in education more broadly.

### Los Angeles as a Case Study

Los Angeles County exemplifies how structural inequities impact educational outcomes with funding disparities, high housing costs and income inequality creating a

Figure 2: Average real wealth per household by race/ethnicity from 1989 to 2020



Source: National Institute of Health (NIH), "Economic Inequality, the Digital Divide, and Remote Learning During COVID-19," March 2022

Figure 3: School-Provided Devices and Internet and Reliable Device Availability by Race/ Ethnicity

School Provided Devices and Internet and Reliable Device Availability by Race and Ethnicity.

	School provided device (%)	School provided internet (%)	Lacks reliable availability of devices	
			Without school-provided device (%)	With school-provided device (%)
Asian	31.7	2.0	7.7	4.5
Black	41.7	4.0	20.9	13.4
Hispanic/Latinx	43.9	3.1	15.3	13.0
White	36.0	1.2	9.7	7.4
Multiple races	38.0	2.9	15.1	11.7

Source: National Institute of Health (NIH), "Economic Inequality, the Digital Divide, and Remote Learning During COVID-19," March 2022

widened achievement gap between low-income students and their more affluent counterparts. As journalist Jeremy Divinity wrote describing the history of segregation and inequality in LA schools, "You see the differences in schools that are just freeway exits apart." [15] A key factor in these disparities is the uneven distribution of school funding, which for a long time was closely tied to housing costs and property tax revenue. [16] Schools in wealthier neighborhoods, supported by higher property taxes, were able to invest in advanced facilities, updated technology, and experienced teachers, providing students with a more enriched educational learning environment. In contrast, schools in lower-income neighborhoods, where property values were lower, received significantly less funding, resulting in fewer resources, larger class sizes, and limited academic support.

Furthermore, the lasting impacts of mid-20th-century residential segregation, redlining, and busing further shaped these inequities by concentrating BIPOC communities in underfunded neighborhoods lacking quality education. [17] The COVID-19 pandemic only exacerbated these existing

inequities as low SES students often lacked reliable internet, technology, and often had family members who were essential workers unavailable to support their children's learning at home. Together with issues such as housing instability and food insecurity, these challenges deepened the disparities in educational outcomes during the pandemic. Post-pandemic it is clear that addressing these inequities through AI and digital equity is essential. However, for AI to truly benefit disadvantaged students, it must be implemented equitably with a focus on expanding access to technology and improving digital literacy.

### AI Implementation in Education

As AI technologies increasingly become integrated in different sectors, one major concern is the potential to digitize jobs away. However, as Christopher McCarney, Senior Account Executive of SAP, stated in a Congressional Briefing in October 2024, "you'll never replace a teacher, everyone has a teacher that impacted their life and no technology can replace that human connection." [18] In educational settings, AI has primarily been applied in two manners, pedagogical and administrative.

Pedagogically, AI supports personalized learning by adapting content to student's individual needs and learning speeds, streamlining individualized education plans ("IEPs"). For example, Intelligent Tutoring Systems ("ITS") are AI-powered programs that deliver personalized learning and individualized feedback. [19] Administratively, AI automates tasks like lesson planning, attendance tracking, grading, and resource management, freeing teachers to dedicate more time to classroom instruction and direct student engagement. [20] This is particularly valuable as teachers currently spend less than half their time interacting directly with students (see Figure 4). With the recovered time from AI-enabled technology, teachers can redirect more attention to effective instruction and building relationships, fostering stronger connections and more impactful learning experiences.

The implementation of AI in education holds significant potential to advance educational equity, especially in under-resourced schools. For example, adaptive learning technologies can provide personalized support to students who may lack access to traditional resources such as private tutoring, helping them learn at their own pace. Additionally, AI can relieve teachers at under-resourced schools from time-consuming administrative tasks, allowing them to spend more direct time with their students, especially given that the teacher is the most valuable resource they have. Furthermore, AI offers an opportunity for teachers to model responsible and ethical technology use. [21] When teachers use AI ethically as a support tool rather than to replace critical thinking, students observe and learn to leverage AI

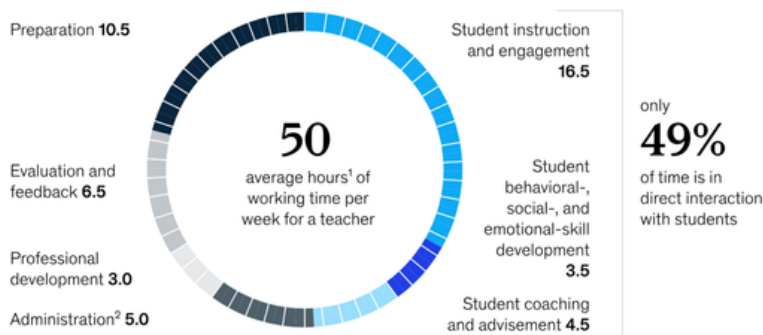
constructively. This modeling helps students understand the appropriate role of AI in their learning process, using it to build skills rather than relying on it for answers. For underserved communities, these tools can offer high-quality learning previously limited to wealthier students while promoting independent learning.

While AI has the potential for addressing educational equity, its implementation poses challenges and risks. A primary concern is that, without equitable distribution, AI tools could deepen the digital divide, giving affluent schools an advantage over low-income schools without proper technology infrastructure. According to the Brookings Institute, there are three phases to the evolution of the “digital divide” and we are currently potentially facing the third where affluent students have access to both technology and support networks to help them use it, while low-income students have access to technology and limited support (see Figure 5).[22]

The challenge with implementing AI in education is that students and teachers need both the physical hardware and digital literacy to use AI tools effectively.[23] Without proper training, these technologies may not be utilized to their full potential, limiting their impact on learning

Figure 4: Activity Composition of Teacher Working Hours

Activity composition of teacher working hours, number of hours



<sup>1</sup> Average for respondents in Canada, Singapore, United Kingdom, and United States.  
<sup>2</sup> Includes a small “other” category.  
 Source: McKinsey Global Teacher and Student Survey

Figure 5: The Evolution of the “Digital Divide”

**The evolution of the “digital divide”:**

**The first digital divide:** The rich have technology, while the poor do not.

**The second digital divide:** The rich have technology and the skills to use it effectively, while the poor have technology but lack skills to use it effectively.

**The third digital divide?:** The rich have access to both technology and people to help them use it, while the poor have access to technology only.

Source: Brookings Institute, “AI and the next digital divide in education,” July 2023

outcomes. Furthermore, there’s a risk that students may misuse AI by relying on it solely for answers instead of a tool to develop critical thinking and problem-solving skills. [24] Responsible AI usage ensures that students leverage AI as a complement to human critical thinking, rather than replacement and view it as an aid to learning rather than a shortcut to solutions. Addressing these challenges is a fundamental part to creating an inclusive AI-driven educational system that supports all students regardless of their background.

**Conclusion**

As AI usage in education increases, stakeholders and policy makers must seize the opportunity for growth while taking responsibility in equitable regulation. AI has the potential to bridge the achievement gap by offering personalized learning, supporting teachers, and improving access to quality education for underserved students. However, AI is not the only solution to address all the issues facing education. It can also be a double-edged sword, with the risk of exacerbating disparities if systemic inequities are not addressed. The COVID-19 pandemic highlighted the urgency of this issue, revealing how unequal access to technology and resources disproportionately affected

fundamental part to creating an inclusive AI-driven educational system that supports all students regardless of their background. low-income and minority students, widening the educational gap. Los Angeles County serves as a powerful case study, demonstrating how factors like funding disparities, housing costs, and the lingering impacts of redlining have contributed to these inequities.

To ensure AI promotes educational equity, a comprehensive approach is necessary, centered on four key recommendations of accessibility, computing power, familial support, and digital literacy. First, accessibility refers to all students having access to reliable wifi, technology, and devices. Second, computing power involves regulating AI markets and addressing environmental concerns, with the government centering educators' and stakeholders' voices in AI for education. Third, SES and background directly impact achievement, therefore supporting families by ensuring that students and parents understand and can effectively use technology and AI tools is essential for impactful integration. Lastly, digital literacy is the most important as tools alone are no good if you are not using them effectively. Educators play a pivotal role in teaching students to use AI ethically and responsibly as a tool, not a replacement. To address the harms of a system with lingering effects of racism, both the public and private sectors have a role in supporting policies that promote digital equity to bridge the education achievement gap.

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