

ISSUE BRIEF : Q1 2021

# THE HOMEWORK GAP

THE DISTANCE LEARNING INFRASTRUCTURE WE BUILD FOR COVID-19 COULD HELP LOW-INCOME STUDENTS FOR YEARS TO COME

 **BUSINESSFORWARD**  
FOUNDATION

$a(b+c) = ab+ac$   
 $a(b-c) = ab-ac$

$x+1 = x-10$   
 $5x-x = -10-1$   
 $2x = -11$   
 $x = -11/2$   
 $x = -5\frac{1}{2}$   
 $a+B=?$   
 $100-x=70$   
x

## INTRODUCTION

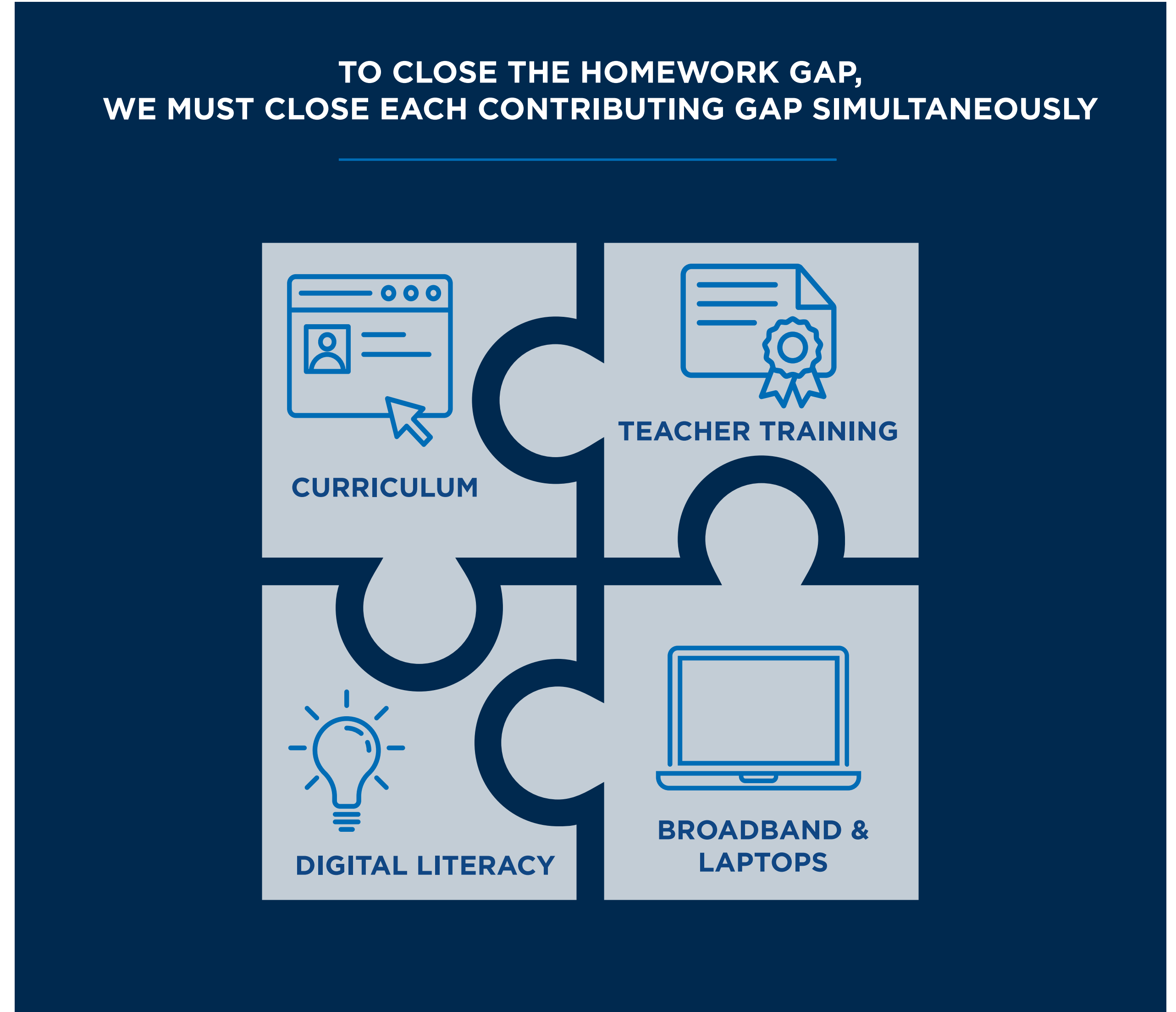
Business Forward works with more than 100,000 business leaders across the U.S. We cover a range of issues, including education reform, health care, tax reform, trade, infrastructure, clean energy, intellectual property, and immigration. We organize local round-tables, Washington fly-ins, national conference calls, and training webinars. We also help business leaders work with local media, publish op-eds, and submit testimony to government agencies.

For the past two years, we've worked with mayors, school boards, and state and local officials on education reform, with particular emphasis on how to prepare graduates for the "future of work." Nearly 10,000 business leaders participated in this programming.

As the COVID-19 pandemic emerged, we shifted to distance learning, with particular emphasis on how to ensure that students from low-income households have adequate access to laptops, a broadband connection, online classes, and digital training to make the most of them. Experts refer to this challenge as the "homework gap." To help communities close the homework gap, we produced this issue brief on potential solutions and conducted briefings with policymakers on funding options.

## TOPLINE

1. America's K-12 schools performed poorly before COVID-19. The pandemic just made it worse.
2. To learn from home, a student needs a laptop, broadband, digital literacy, parental assistance, a school offering online curriculum, and teachers who know how to use it. To close the homework gap, we must address each of its underlying "gaps" simultaneously: affordable laptops and broadband, curriculum designed for distance learning (and the future of work), and digital training for students, parents, and teachers.
3. It's a massive undertaking that will require significant investment and coordination, but the tools we build and deliver in response to COVID-19 could level the playing field for students from low-income families, improve our workforce, and grow our economy.
4. On the other hand, if we address only broadband (as most proposals do) and ignore devices, curriculum, and training, we could waste billions of dollars.



# THINGS WERE BAD BEFORE COVID-19

## ATTENDANCE

**1 IN 7 STUDENTS ARE CHRONICALLY ABSENT\***

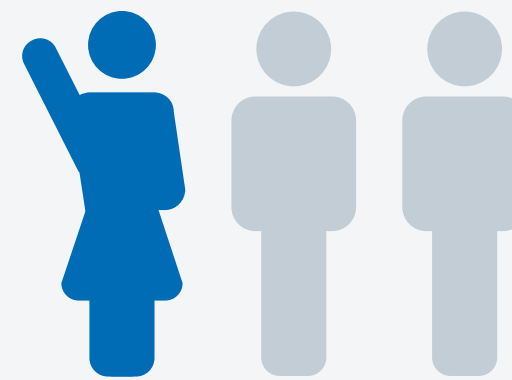


Nationwide, Native Americans (1 in 4), Hispanics (1 in 5), and African Americans (1 in 5) are even more likely to be chronically absent.<sup>1</sup>

\*GOVERNMENT DEFINES CHRONIC ABSENTEEISM AS MISSING 15+ DAYS.

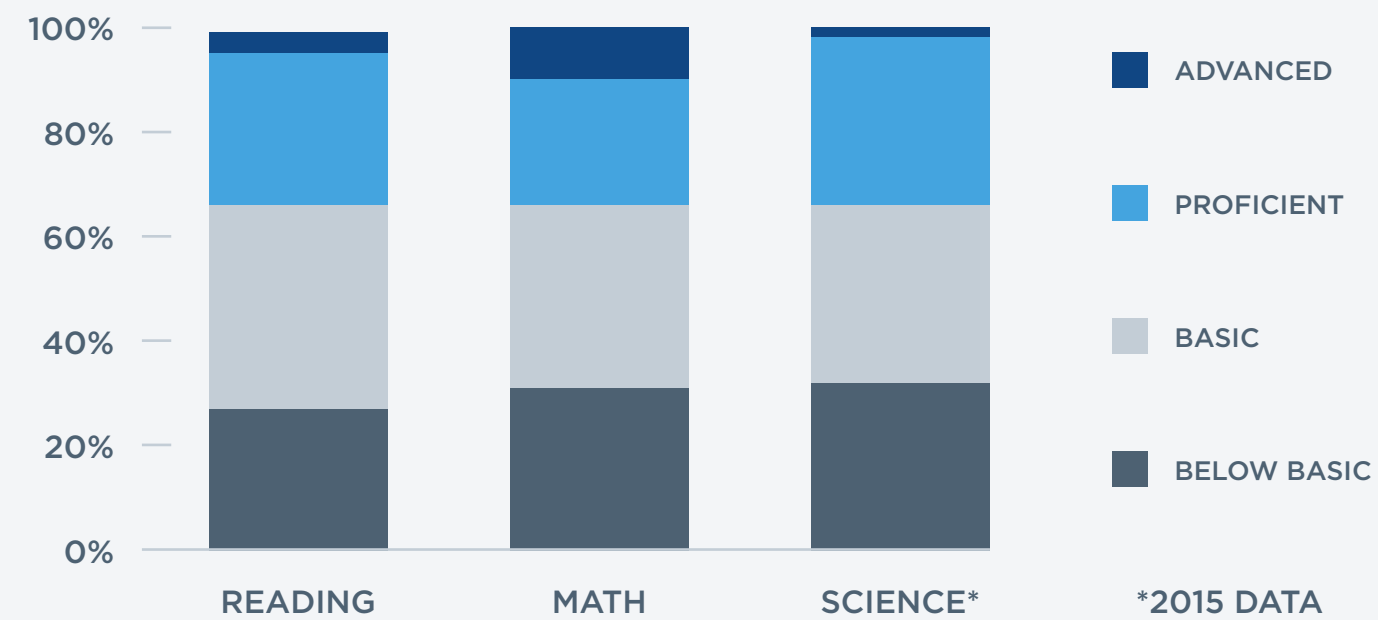
## ACHIEVEMENT

**ONLY 1 IN 3 EIGHTH GRADERS IS PROFICIENT OR ABOVE IN MATH, SCIENCE, OR READING.**



African American 8th grade students are 3x less likely to be proficient in reading or math as white students.<sup>2</sup>

PERCENTAGE DISTRIBUTION OF 8TH GRADE STUDENTS, BY NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS (NAEP) READING ACHIEVEMENT LEVEL (2019)<sup>3</sup>



## ACCESS TO COLLEGE



BY THE TIME THEY ARE 24, STUDENTS FROM AFFLUENT HOUSEHOLDS ARE:

**5X MORE LIKELY TO GRADUATE FROM A FOUR-YEAR COLLEGE**

THAN STUDENTS FROM LOW-INCOME HOUSEHOLDS<sup>4</sup>

# COVID-19 MADE THINGS WORSE

## ATTENDANCE DOWN

Although comprehensive national data isn't available yet, media reports show attendance dropped this fall in school districts across the country<sup>5</sup>:

- Miami-Dade County public schools reported **16,000** fewer students than last year
- Los Angeles Unified reported **11,000** fewer students
- Charlotte-Mecklenburg in North Carolina reported **5,000** fewer students
- Kindergarten enrollment is down an average of **16 percent** this year

“ENROLLMENT IS DROPPING IN PUBLIC SCHOOLS AROUND THE COUNTRY”

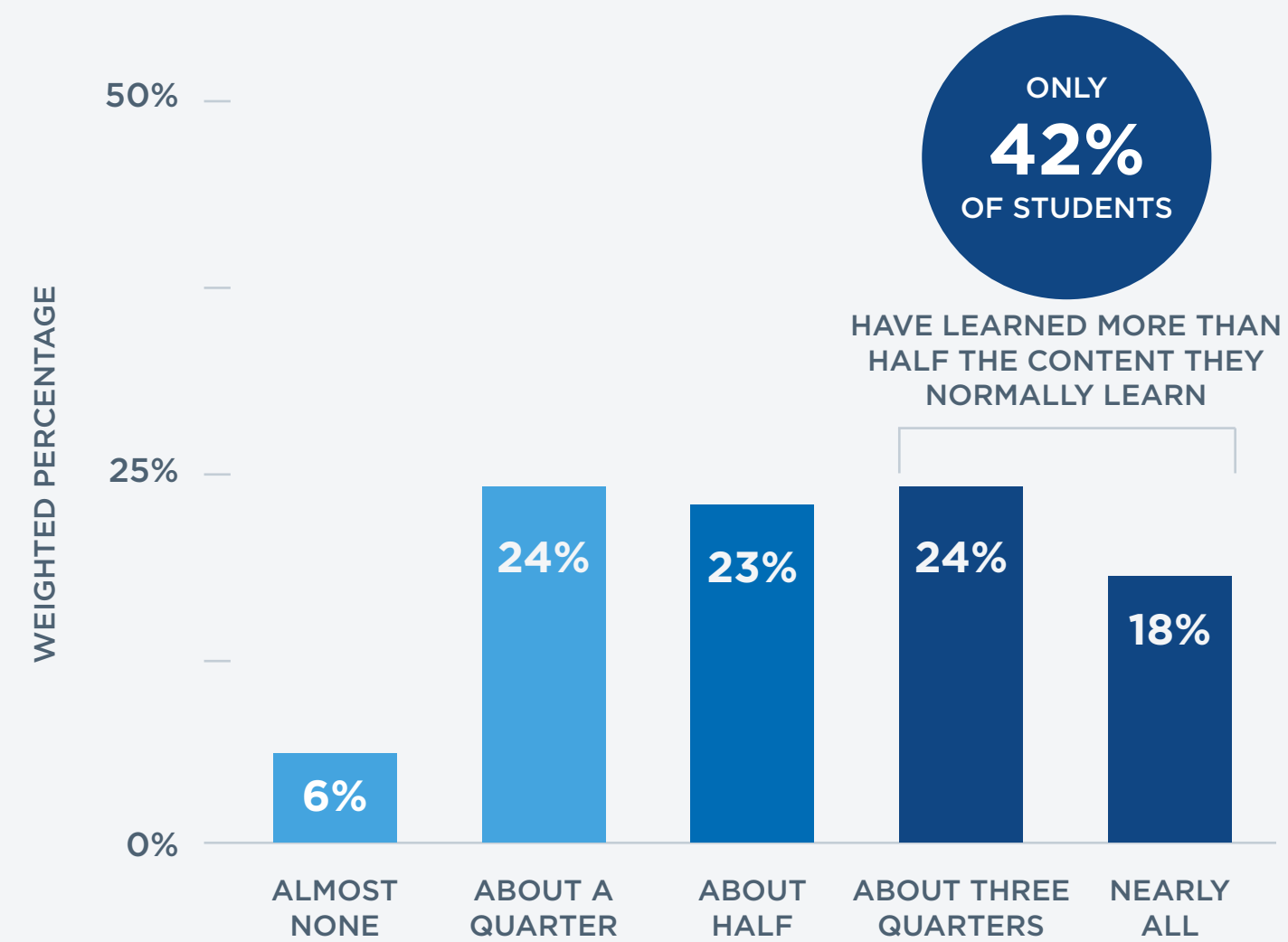
OCTOBER 9, 2020



## LEARNING COMPROMISED

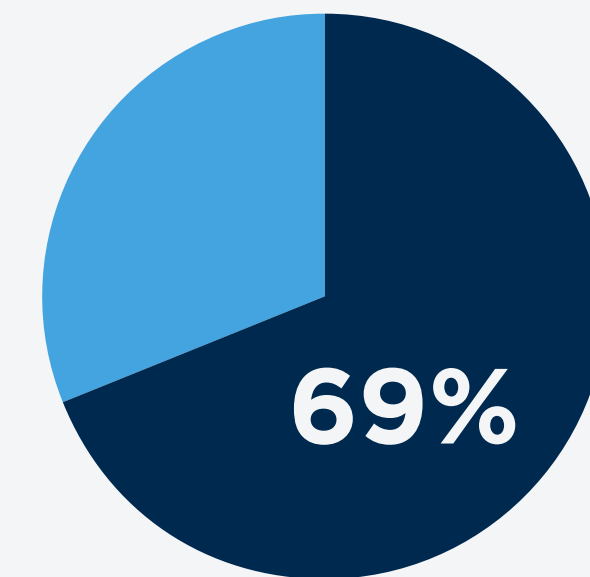
Remote learning presents challenges to teachers who are struggling to catch up and keep pace compared to a normal school year.

WHAT PROPORTION OF CONTENT HAVE YOU COVERED THIS SCHOOL YEAR (2020-2021) COMPARED TO LAST YEAR (2019-2020)?<sup>6</sup>

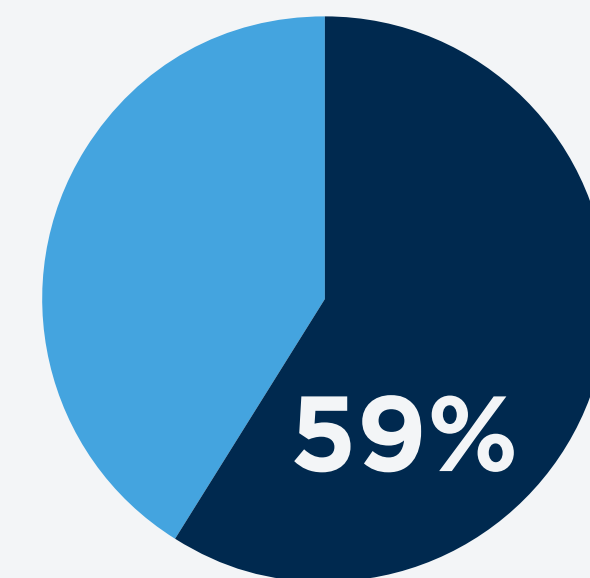


## UNINTENDED CONSEQUENCES OF RELAXING EXPECTATIONS

PERCENT OF STUDENTS THAT HAVE COMPLETED MOST OR ALL OF THEIR ASSIGNMENTS<sup>7</sup>



PERCENT OF TEACHERS REPORTED ASSIGNING LETTER GRADES DURING FALL 2020<sup>8</sup>

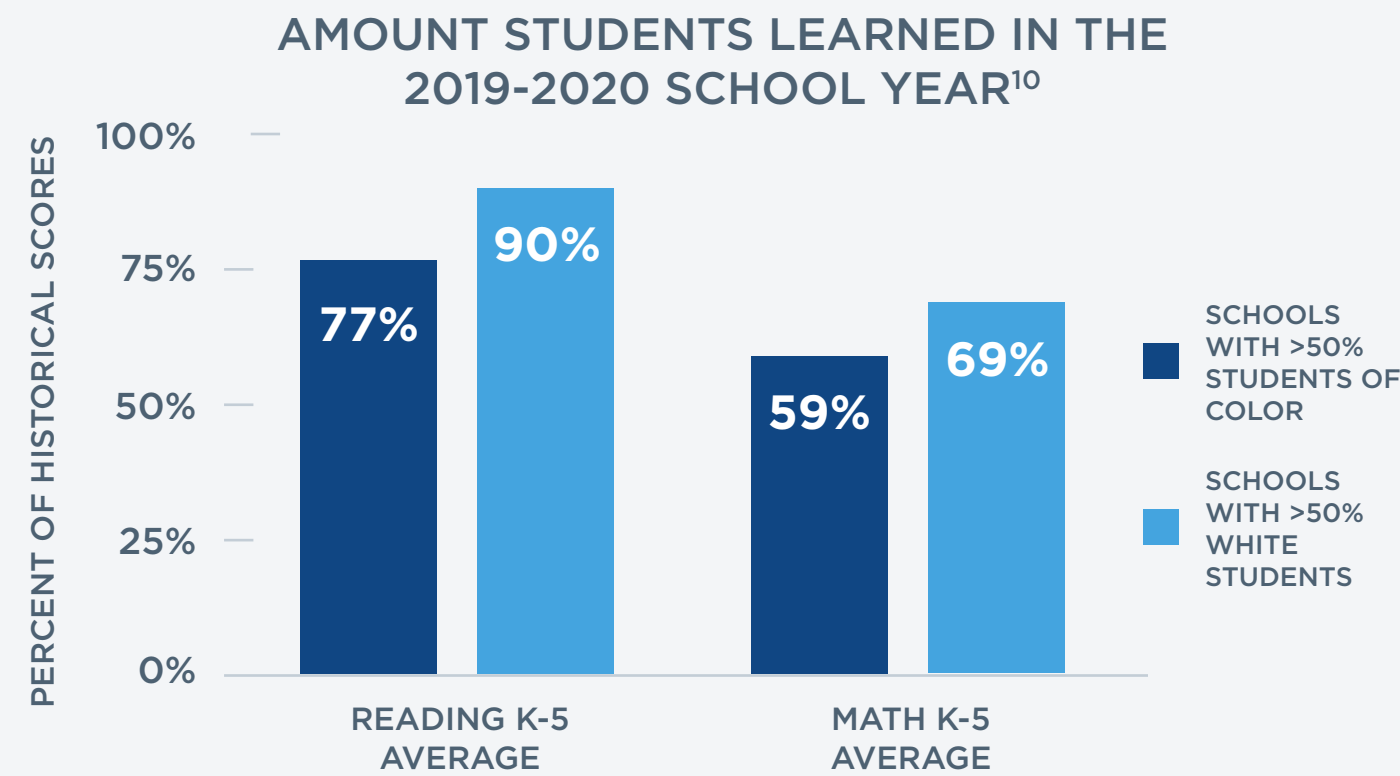


# BLACK AND HISPANIC STUDENTS ARE FARING WORSE

Since last spring, schools have adapted their curricula and instituted teacher training to make it easier for students to learn remotely. However, gaps still remain between students of color and their white counterparts.

## THE COVID SLIDE

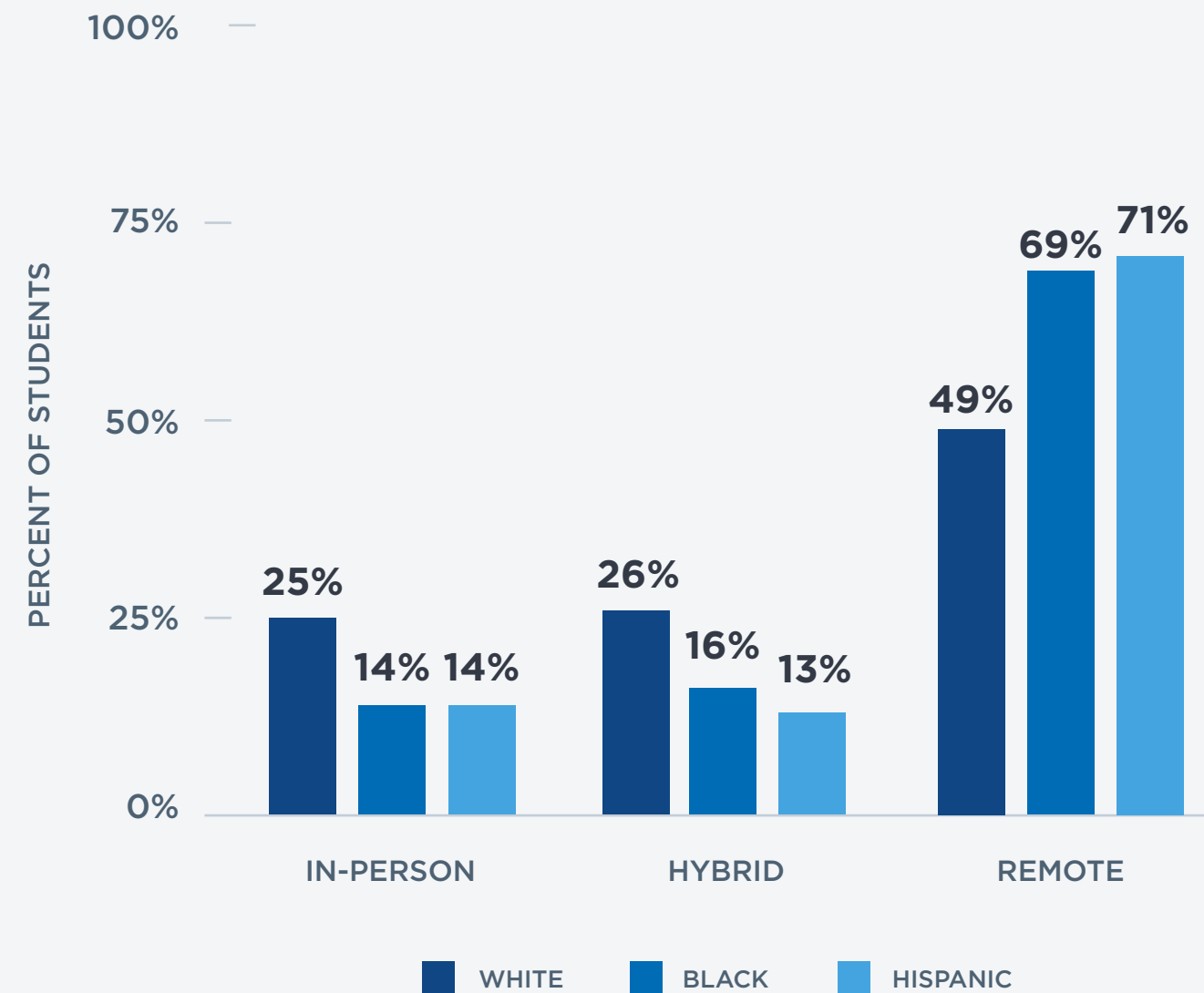
The “COVID slide” - the loss of learning that typically happens over summer break - was worse than previous years due to schools’ early closures. Students lost greater ground in math than in reading; experts suggest that this is because it is more difficult to engage students online and parents are less equipped to help their children in math.<sup>9</sup>



Students of color started school three to five months behind in math. White students started one to three months behind.<sup>11</sup>

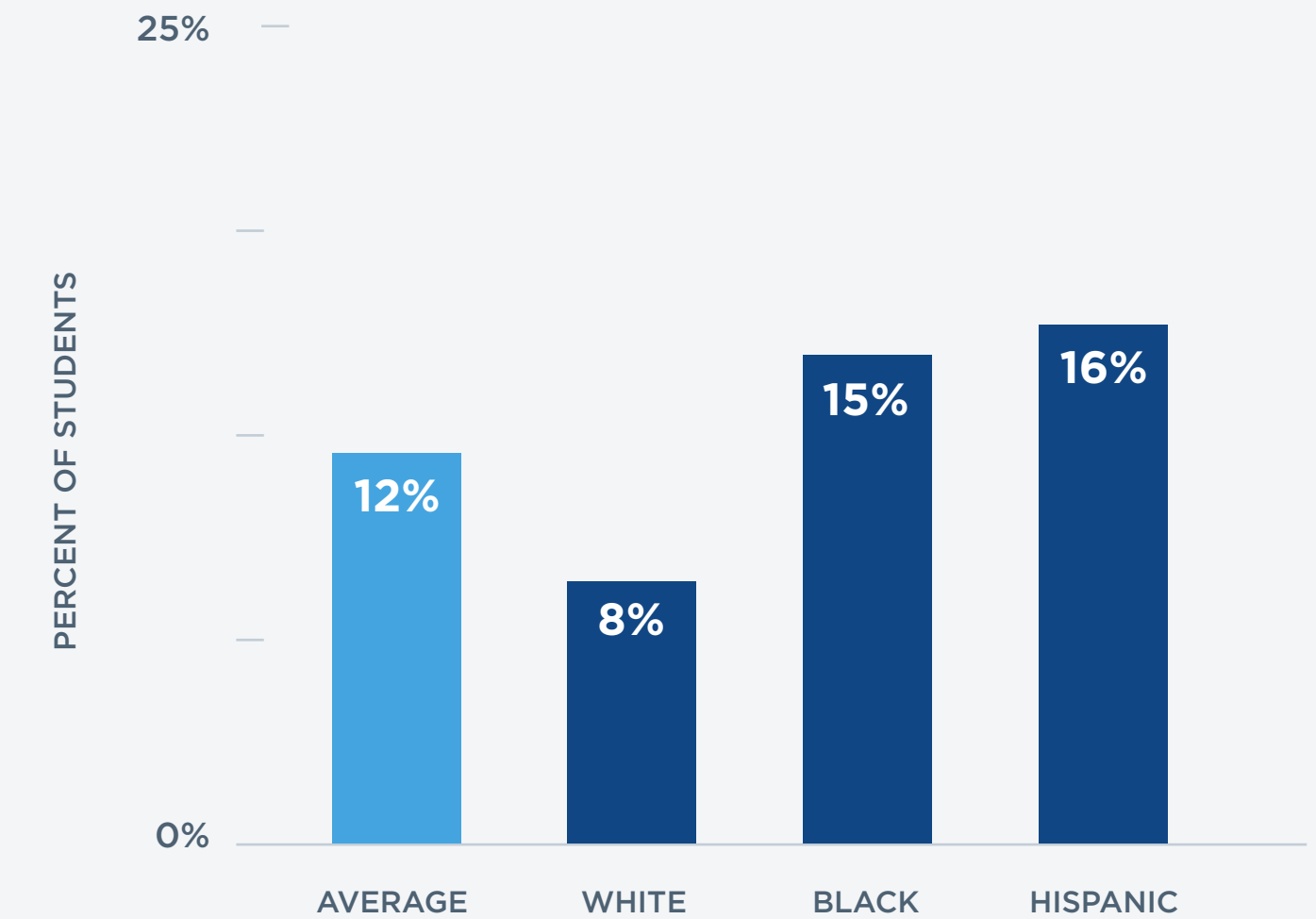
## BLACK AND HISPANIC STUDENTS ARE MORE LIKELY TO BE LEARNING REMOTELY

STUDENTS RECEIVING EACH TYPE OF INSTRUCTION (ESTIMATE)<sup>12</sup>

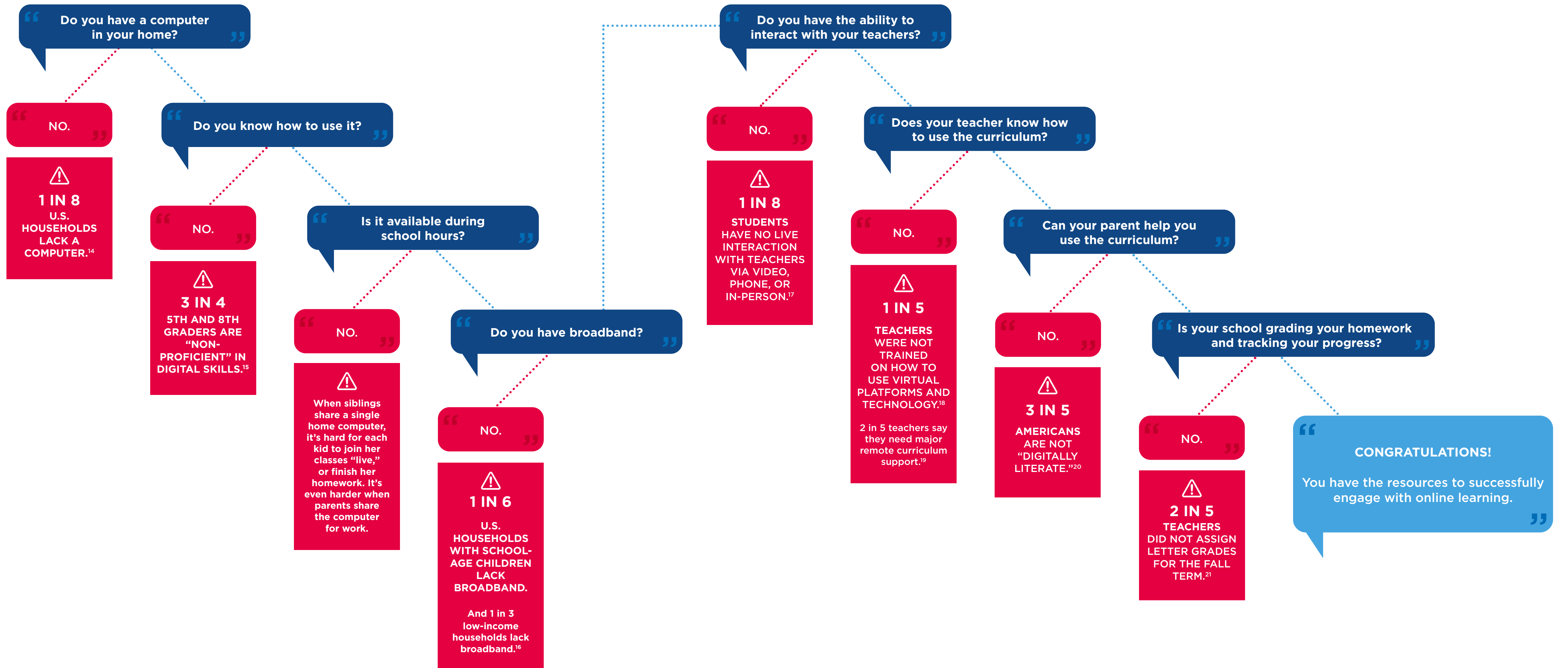


## BLACK AND HISPANIC STUDENTS ARE LESS LIKELY TO INTERACT WITH TEACHERS

STUDENTS WHO HAVE NO LIVE INTERACTION WITH TEACHERS FALL 2020 (IN PERSON, BY PHONE, OR BY VIDEO)<sup>13</sup>



# THE HOMEWORK GAP, EXPLAINED IN 8 QUESTIONS

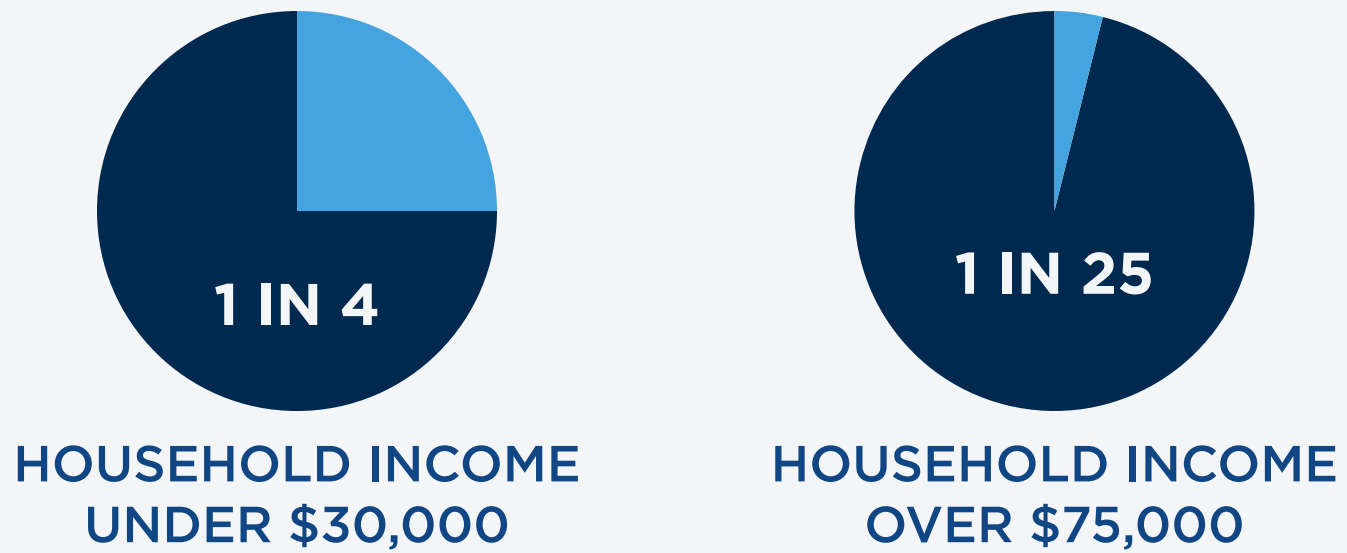


# THE TECHNOLOGY GAP

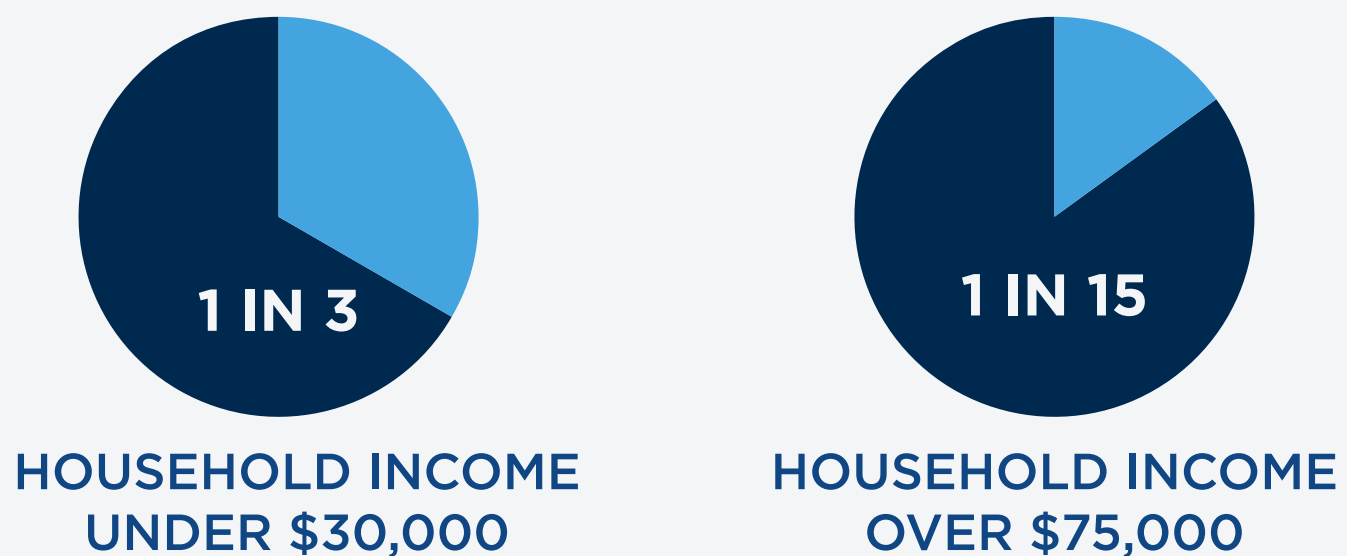
The Pew Research Center reports that nearly one in four U.S. teenagers living in households earning less than \$30,000/year is “often or sometimes unable to complete homework due to a lack of a reliable internet connection or computer.”<sup>22</sup>

## ACCESS TO COMPUTERS AND BROADBAND VARIES ACROSS INCOME LEVELS

CHILDREN (AGES 6-17) WHO LACK ACCESS TO A COMPUTER AT HOME<sup>23</sup>

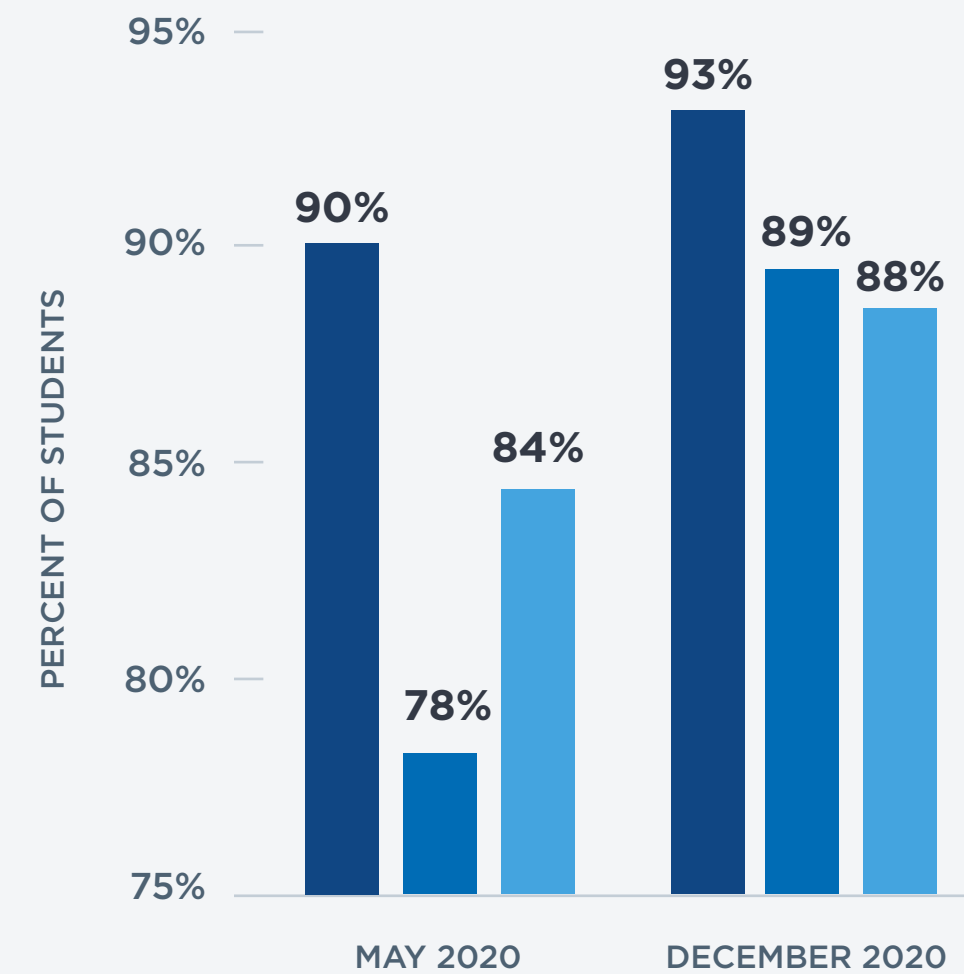


CHILDREN (AGES 6-17) WHO LACK A HIGH-SPEED INTERNET CONNECTION AT HOME<sup>24</sup>

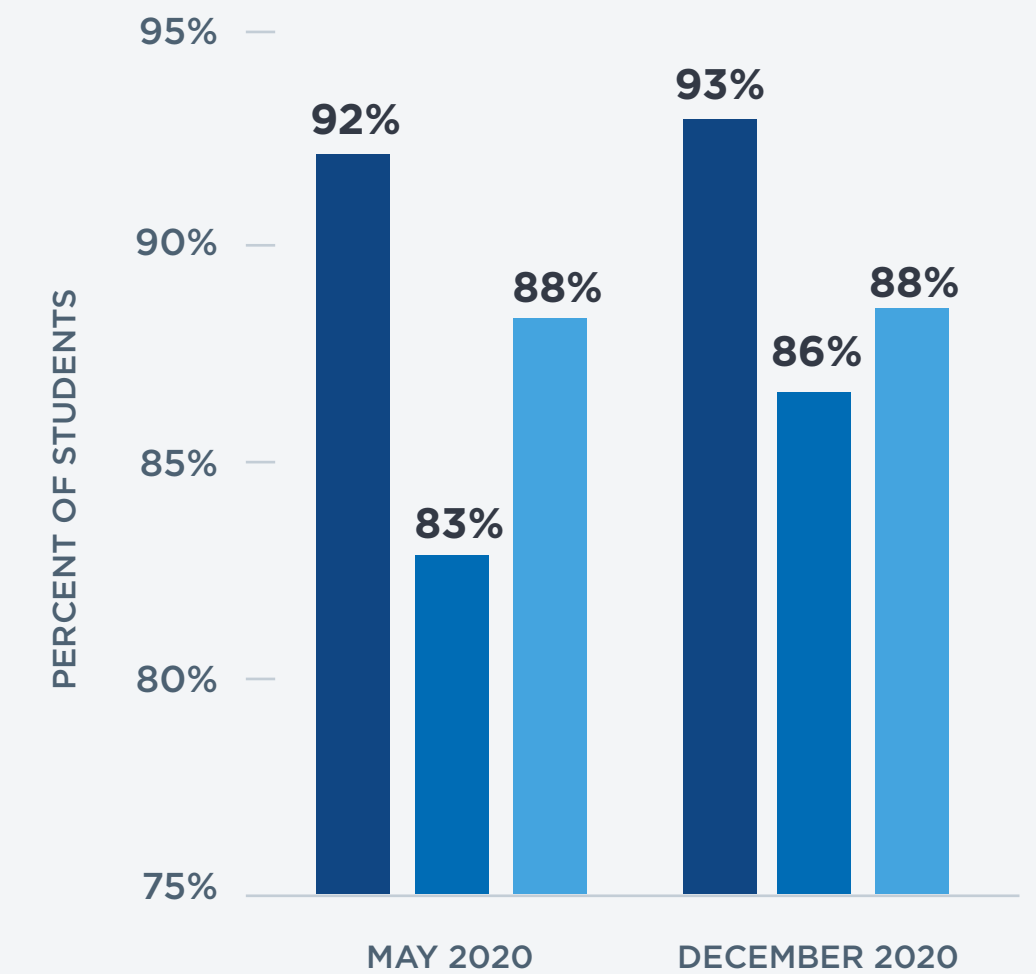


## WE'VE MADE PROGRESS, BUT GAPS STILL REMAIN

STUDENTS WHO ALWAYS OR USUALLY HAVE ACCESS TO DEVICES FOR LEARNING<sup>25</sup>



STUDENTS WHO ALWAYS OR USUALLY HAVE ACCESS TO THE INTERNET<sup>26</sup>



WHITE BLACK HISPANIC



# THE DIGITAL LITERACY GAP

## STUDENTS

Many students and parents lack the digital skills necessary to navigate remote learning.



**ONLY 1 IN 4 FIFTH AND EIGHTH GRADERS IS PROFICIENT IN DIGITAL SKILLS<sup>27</sup>**

“Some education experts say there is a huge gap between what students can do for fun on their cellphones and gaming systems and how good they are at using a device for educational tasks such as reading a document, answering a question or figuring out a problem.”<sup>28</sup>

THE WALL STREET JOURNAL.

## PARENTS

**ONLY 2 IN 5 ADULTS ARE PROFICIENT IN DIGITAL SKILLS<sup>29</sup>**



For context, only one in two adults reads at above a 5th grade level or above.<sup>30</sup>

This includes “using digital technology, communication tools, and networks to acquire and evaluate information, communicate with others, and perform practical tasks.”

**FEWER THAN 1 IN 4 TEACHERS RECEIVED TRAINING ON HOW TO ENGAGE PARENTS IN HOME LEARNING FOR THE 2020-2021 SCHOOL YEAR.<sup>31</sup>**

## TEACHERS

Teachers, like other adults, struggle with digital literacy.



**THE WASHINGTON POST REPORTS THAT 3 IN 5 TEACHERS SAY THEY FEEL “OVERWHELMED” BY DISTANCE LEARNING INSTRUCTION.<sup>32</sup>**

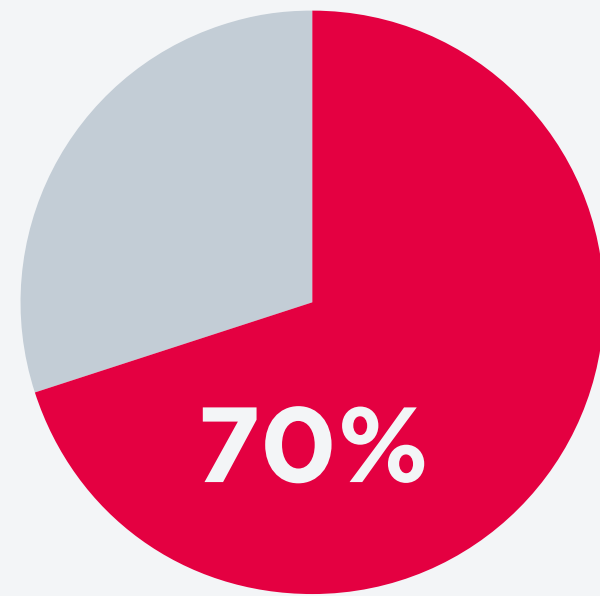
“Returning from a chaotic summer, teachers had to create new classes for virtual learning with almost no time to plan, while instructing kids in person and online at the same time. ... A simple task like taking attendance now lasts more than twice the usual time, as teachers hunt for evidence that a student reached out or completed an assignment.”<sup>33</sup>

★ THE TEXAS TRIBUNE

# THE CURRICULUM GAP

## SCHOOLS AND TEACHERS CAUGHT UNPREPARED (UNDERSTANDABLY)

Few schools prepared for distance learning, purchased curriculum for it, or trained their teachers on it. Ad hoc curriculum hurts student engagement.



**OF TEACHERS REPORT THEY WERE NOT PREPARED FOR VIRTUAL LEARNING<sup>34</sup>**



**ONLY 1 IN 4 TEACHERS RECEIVED INSTRUCTION ON HOW TO MAKE CURRICULUM CULTURALLY RELEVANT TO STUDENTS.<sup>35</sup>**

## LOW STUDENT ENGAGEMENT



**ON AVERAGE, TEACHERS REPORTED BEING ABLE TO CONTACT ONLY FOUR OUT OF EVERY FIVE STUDENTS.<sup>36</sup>**

**“FOR MANY TEACHERS, DISTANCE LEARNING IS A CONSTANT FIGHT TO GET STUDENTS TO ENGAGE”**

“Because distance learning takes away nearly all the social aspects of school, boredom, lack of motivation, Zoom fatigue, and even anxiety and depression are likely playing a role, teachers and experts said.”<sup>37</sup>

The San Diego  
**Union-Tribune**

## FEW GRADUATES PREPARED FOR THE “FUTURE OF WORK”

Seven million job openings in 2015 were in occupations that required coding skills.<sup>38</sup>

But only 35% of U.S. high schools offer computer science classes.<sup>39</sup>



**85%  
OF JOBS**

**THAT TODAY’S LEARNERS WILL BE DOING IN 2030 DON’T EXIST YET.<sup>40</sup>**

# GOVERNMENT ACTIONS TO CLOSE THE HOMEWORK GAP MAKE THE INVESTMENTS WE NEED - BUT THEY'RE JUST A START

## CONGRESS' SECOND STIMULUS PACKAGE

Before the end of 2020, Congress passed a \$900 billion stimulus package. It included<sup>41</sup>:

**\$54  
BILLION**

IN FUNDS FOR K-12 SCHOOLS TO HELP WITH REMOTE LEARNING.

**\$7  
BILLION**

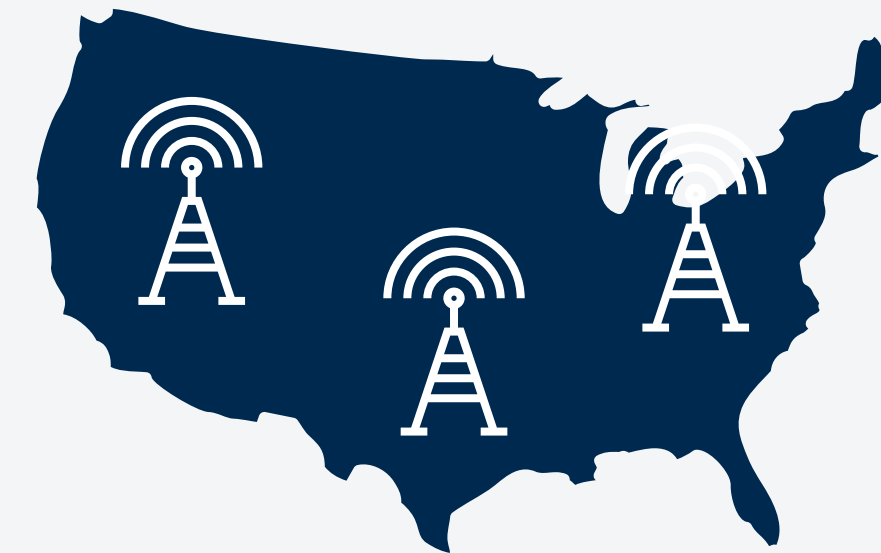
FOR EXPANDING BROADBAND ACCESS. NEARLY HALF WILL HELP SUBSIDIZE THE INTERNET FOR LOW-INCOME FAMILIES.

## FCC ACTION

In December 2020, the FCC auctioned the funds to build out rural broadband across more than five million homes and businesses in 49 states. Providers have 10 years to build the networks, which will deliver “gigabit” speeds.<sup>42</sup>

**\$9.2  
BILLION**

FOR CONSTRUCTION OF RURAL BROADBAND NETWORKS

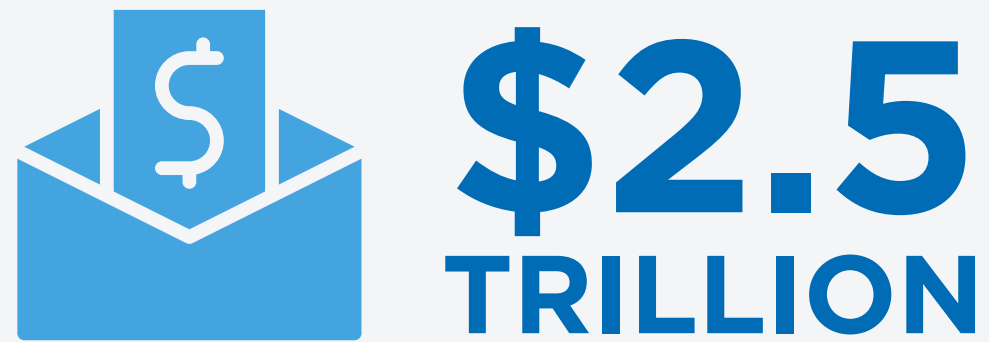


# RETURN ON INVESTMENT

Investments in distance learning this fall could provide homework support for low-income students in future years -- and that could improve school attendance, achievement, and college opportunity. It could also improve our workforce and grow our economy.

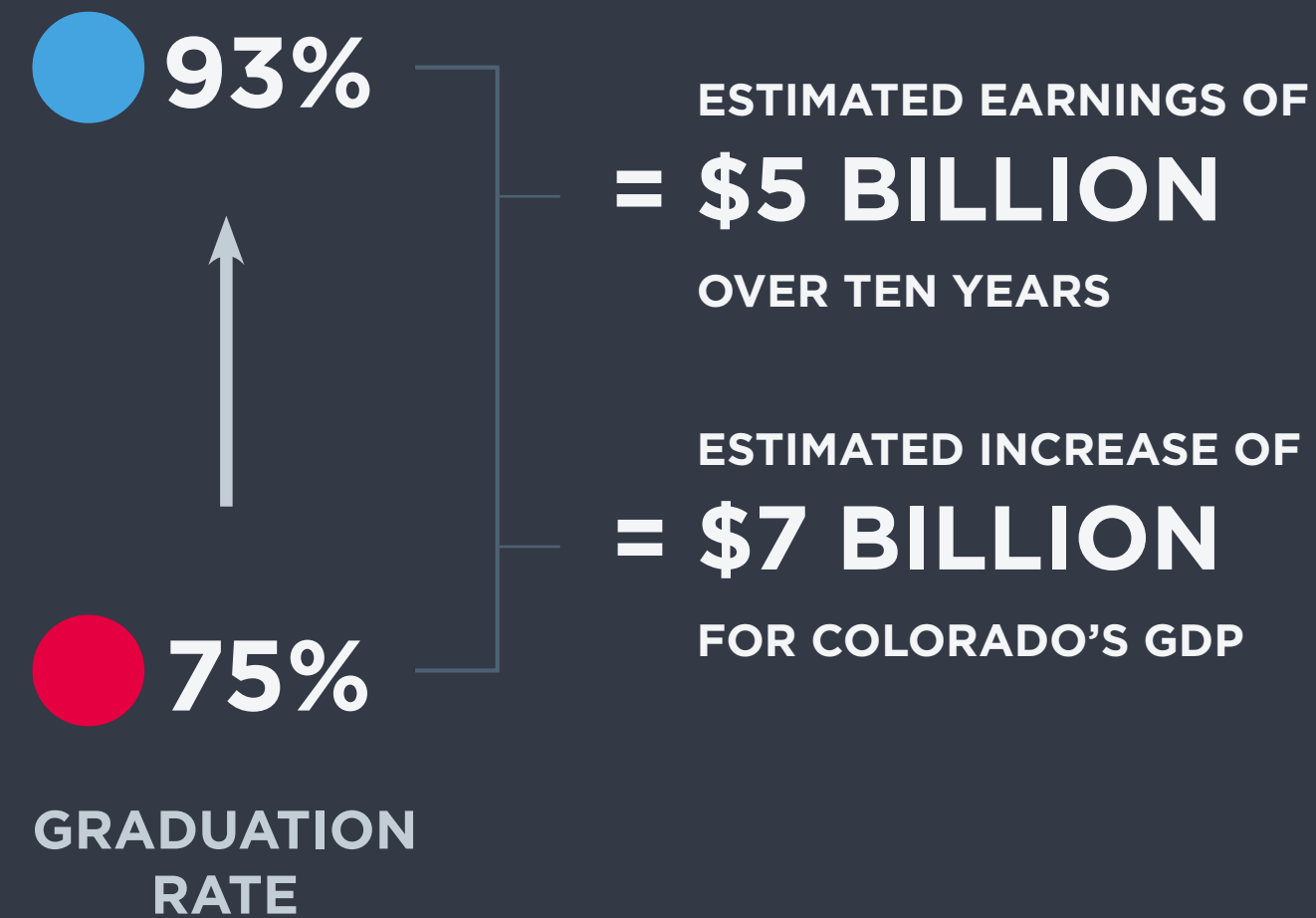
## THE COST OF LOST LEARNING

THE COST, IN FUTURE WAGES,  
OF MISSING FOUR MONTHS  
OF EDUCATION<sup>43</sup>:



## CASE STUDY: COLORADO PUBLIC SCHOOLS "PIPELINE"

Colorado business leaders' effort to increase high school graduation rates for poor students from 75% to 93% could help those students earn \$5 billion more over ten years - and increase Colorado's 10 year GDP by \$7 billion.<sup>44</sup>

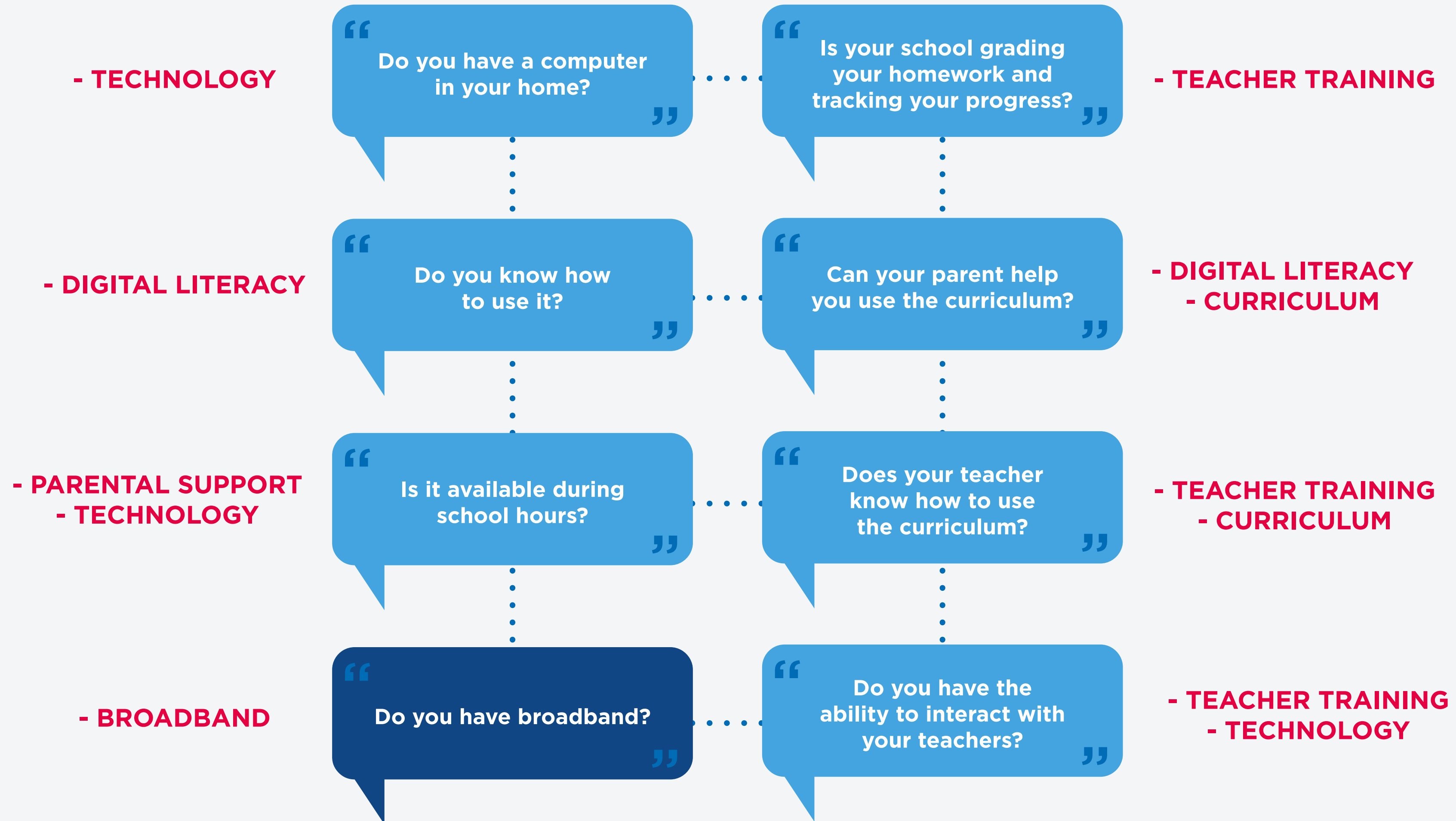


Districts have an opportunity to do better by students, teachers, and parents this fall...School districts now have several months to plan ahead to align the resources, create teacher professional development, and assess community priorities to design plans for the fall that have high expectations for each student's learning and are responsive to each student's needs.<sup>45</sup>



- BETHENY GROSS & ALICE OPALKA  
"TOO MANY SCHOOLS LEAVE LEARNING  
TO CHANCE DURING THE PANDEMIC"  
CENTER ON REINVENTING PUBLIC EDUCATION

# IF WE ADDRESS ONLY BROADBAND AND IGNORE DEVICES, CURRICULUM, AND TRAINING, WE COULD WASTE BILLIONS OF DOLLARS



# REFERENCES

1. Chang, Hedy N., Lauren Bauer, and Vaughan Byrnes. "Data Matters Using Chronic Absence to Accelerate Action for Student Success." December 2018. [https://www.attendanceworks.org/wp-content/uploads/2019/01/Attendance-Works-Data-Matters\\_010919.pdf](https://www.attendanceworks.org/wp-content/uploads/2019/01/Attendance-Works-Data-Matters_010919.pdf)
2. National Assessment of Educational Progress. "NAEP Report Card: Reading. National Achievement-Level Results." The Nation's Report Card. 2019. <https://www.nationsreportcard.gov/reading/nation/achievement?grade=8>
3. Ibid.
4. The Pell Institute. "Indicators of Higher Education Equity in the United States." 2019. [http://pellinstitute.org/indicators/reports\\_2019.shtml](http://pellinstitute.org/indicators/reports_2019.shtml)
5. Kamenetz, Anya. "Enrollment Is Dropping In Public Schools Around the Country." October 9, 2020 <https://www.npr.org/2020/10/09/920316481/enrollment-is-dropping-in-public-schools-around-the-country>
6. Kaufman, Julia H., Melissa Diliberti, Gerald P. Hunter, David Grant, Laura S. Hamilton, Heather L. Schwartz, Claude Messan Setodji, Joshua Snoke, and Christopher J. Young, "COVID-19 and the State of K-12 Schools: Results and Technical Documentation from the Fall 2020 American Educator Panels COVID-19 Surveys." Creative Commons Attribution 4.0 International Public License, 2020. [https://www.rand.org/pubs/research\\_reports/RRA168-5.html](https://www.rand.org/pubs/research_reports/RRA168-5.html)
7. Ibid.
8. Ibid.
9. Sawchuk, Stephen, Sarah D. Sparks. "Kids Are Behind in Math Because of COVID-19. Here's What Research Says Could Help." December 2, 2020. <https://www.edweek.org/teaching-learning/kids-are-behind-in-math-because-of-covid-19-heres-what-research-says-could-help/2020/12>
10. Dorn, Emma, Bryan Hancock, Jimmy Sarakatsannis, and Ellen Viruleg. "COVID-19 and learning loss—disparities grow and students need help." December 8, 2020. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/covid-19-and-learning-loss-disparities-grow-and-students-need-help>
11. Ibid.
12. Ibid.
13. Ibid.
14. Auxier, Brooke and Monica Anderson. "As Schools Close Due to the Coronavirus, Some U.S. Students Face a Digital 'Homework Gap.'" March 16, 2020. <https://www.pewresearch.org/fact-tank/2020/03/16/as-schools-close-due-to-the-coronavirus-some-u-s-students-face-a-digital-homework-gap/>
15. BlackwellHeather. "More Than 75 percent of Fifth and Eighth Graders are Non-Proficient in 21st Century Skills, According to Learning.com Study." Aug 22, 2017. <https://www.learning.com/blog/2017/08/22/75-percent-fifth-eighth-graders-non-proficient-21st-century-skills-according-learning-com-study/>
16. Anderson, Monica and Andrew Perrin. "Nearly One-in-Five Teens can't Always Finish their Homework Because of the Digital Divide." October 26, 2018. <https://www.pewresearch.org/fact-tank/2018/10/26/nearly-one-in-five-teens-cant-always-finish-their-homework-because-of-the-digital-divide/>
17. Kaufman, Julia H., Melissa Diliberti, Gerald P. Hunter, David Grant, Laura S. Hamilton, Heather L. Schwartz, Claude Messan Setodji, Joshua Snoke, and Christopher J. Young, "COVID-19 and the State of K-12 Schools: Results and Technical Documentation from the Fall 2020 American Educator Panels COVID-19 Surveys." Creative Commons Attribution 4.0 International Public License, 2020. [https://www.rand.org/pubs/research\\_reports/RRA168-5.html](https://www.rand.org/pubs/research_reports/RRA168-5.html)
18. Ibid.
19. Ibid.
20. National Center for Education Statistics. "Skills of U.S. Unemployed, Young, and Older Adults in Sharper Focus." March 2016. <https://nces.ed.gov/pubs2016/2016039rev.pdf>
21. Kaufman, Julia H., Melissa Diliberti, Gerald P. Hunter, David Grant, Laura S. Hamilton, Heather L. Schwartz, Claude Messan Setodji, Joshua Snoke, and Christopher J. Young, "COVID-19 and the State of K-12 Schools: Results and Technical Documentation from the Fall 2020 American Educator Panels COVID-19 Surveys." Creative Commons Attribution 4.0 International Public License, 2020. [https://www.rand.org/pubs/research\\_reports/RRA168-5.html](https://www.rand.org/pubs/research_reports/RRA168-5.html)
22. Auxier, Brooke and Monica Anderson. "As Schools Close Due to the Coronavirus, Some U.S. Students Face a Digital 'Homework Gap.'" March 16, 2020. <https://www.pewresearch.org/fact-tank/2020/03/16/as-schools-close-due-to-the-coronavirus-some-u-s-students-face-a-digital-homework-gap/>
23. Ibid.
24. Auxier, Brooke and Monica Anderson. "As Schools Close Due to the Coronavirus, Some U.S. Students Face a Digital 'Homework Gap.'" March 16, 2020. <https://www.pewresearch.org/fact-tank/2020/03/16/as-schools-close-due-to-the-coronavirus-some-u-s-students-face-a-digital-homework-gap/>
25. US Census Bureau. Household Pulse Survey, "Education Table 3. Computer and Internet Availability in Households with Children in Public or Private School, by Select Characteristics: United States." <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>
26. Ibid.
27. Blackwell, Heather. "More Than 75 percent of Fifth and Eighth Graders are Non-Proficient in 21st Century Skills, According to Learning.com Study." Aug 22, 2017. <https://www.learning.com/blog/2017/08/22/75-percent-fifth-eighth-graders-non-proficient-21st-century-skills-according-learning-com-study/>
28. Hobbs, Tawnell D. and Lee Hawkins. "The Results Are In for Remote Learning: It Didn't Work." June 5, 2020. <https://www.wsj.com/articles/schools-coronavirus-remote-learning-lockdown-tech-11591375078>
29. National Center for Education Statistics. "Skills of U.S. Unemployed, Young, and Older Adults in Sharper Focus." March 2016. <https://nces.ed.gov/pubs2016/2016039rev.pdf>
30. Ibid.

# REFERENCES

31. Kaufman, Julia H., Melissa Diliberti, Gerald P. Hunter, David Grant, Laura S. Hamilton, Heather L. Schwartz, Claude Messan Setodji, Joshua Snoke, and Christopher J. Young, "COVID-19 and the State of K-12 Schools: Results and Technical Documentation from the Fall 2020 American Educator Panels COVID-19 Surveys." Creative Commons Attribution 4.0 International Public License, 2020. [https://www.rand.org/pubs/research\\_reports/RRA168-5.html](https://www.rand.org/pubs/research_reports/RRA168-5.html)
32. Strauss, Valerie. "Teachers, Parents and Principals Tell their Stories about Remote Learning." April 27, 2020. <https://www.washingtonpost.com/education/2020/04/27/teachers-parents-principals-tell-their-stories-about-remote-learning/>
33. Swaby, Aliyya. "Many Texas families say remote learning isn't working and they want it fixed." November 20, 2020. <https://www.texastribune.org/2020/11/20/texas-schools-remote-learning/>
34. DeWitt, Peter. "This Is What Teachers Want Us to Know About Pandemic Learning." May 10, 2020. [http://blogs.edweek.org/edweek/finding\\_common\\_ground/2020/05/teacher\\_surveys\\_provide\\_vital\\_feedback\\_on\\_pandemic\\_learning.html](http://blogs.edweek.org/edweek/finding_common_ground/2020/05/teacher_surveys_provide_vital_feedback_on_pandemic_learning.html)
35. Kaufman, Julia H., Melissa Diliberti, Gerald P. Hunter, David Grant, Laura S. Hamilton, Heather L. Schwartz, Claude Messan Setodji, Joshua Snoke, and Christopher J. Young, "COVID-19 and the State of K-12 Schools: Results and Technical Documentation from the Fall 2020 American Educator Panels COVID-19 Surveys." Creative Commons Attribution 4.0 International Public License, 2020. [https://www.rand.org/pubs/research\\_reports/RRA168-5.html](https://www.rand.org/pubs/research_reports/RRA168-5.html)
36. Ibid.
37. Taketa, Kristen. "For many teachers, distance learning is a constant fight to get students to engage." December 6, 2020. <https://www.sandiegouniontribune.com/news/education/story/2020-12-06/for-many-teachers-distance-learning-is-a-constant-fight-to-get-students-to-participate>
38. Lydia Dishman. "Why Coding Is Still The Most Important Job Skill Of The Future." Fast Company. June 14, 2016. <https://www.fastcompany.com/3060883/why-coding-is-the-job-skill-of-the-future-for-everyone>
39. Code.org & CSTA. "2018 State of Computer Science Education." 2018. [https://code.org/files/2018\\_state\\_of\\_cs.pdf](https://code.org/files/2018_state_of_cs.pdf)
40. Dell Technologies. "Realizing 2030: A Divided Vision of the Future." Dell Technologies and Institute for the Future. Accessed February 19, 2020. <https://www.delltechnologies.com/content/dam/delltechnologies/assets/perspectives/2030/pdf/Realizing-2030-A-Divided-Vision-of-the-Future-Summary.pdf>
41. Montague, Zach. "A Look at What's in the Stimulus Package Trump Signed." December 29, 2020. <https://www.nytimes.com/2020/12/28/business/economy/second-stimulus-package.html>
42. Tracy, Ryan. "FCC Awards \$9.2 Billion for Construction of Rural Broadband Networks." December 7, 2020. [https://www.wsj.com/articles/fcc-awards-9-2-billion-for-construction-of-rural-broadband-networks-11607377472?page=1&mod=article\\_inline](https://www.wsj.com/articles/fcc-awards-9-2-billion-for-construction-of-rural-broadband-networks-11607377472?page=1&mod=article_inline)
43. Psacharopoulos, George and Harry Patrinos, Victoria Collis, and Emiliana Vegas. "The COVID-19 cost of school closures." The Brookings Institution. April 29, 2020. <https://www.brookings.edu/blog/education-plus-development/2020/04/29/the-covid-19-cost-of-school-closures/>
44. Colorado Succeeds. "The Business Case for Education Reform." Retrieved from America Succeeds. Accessed June 29, 2020. <https://americasucceeds.org/wp-content/uploads/2019/02/Business-Case-for-Education-Reform.pdf>
45. Gross, Betheny and Alice Opalka. "Too Many Schools Leave Learning to Chance During the Pandemic." May 2020. [https://www.crpe.org/sites/default/files/final\\_national\\_sample\\_brief\\_2020.pdf](https://www.crpe.org/sites/default/files/final_national_sample_brief_2020.pdf)

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