High School Students' Experiences in March During the Coronavirus Pandemic

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CONCLUSIONS

At least 55 million students ended the school year learning at home after approximately 124,000 public and private schools closed their doors due to the coronavirus pandemic. This "new normal" created uncertainty among high school students about their futures as many struggled with the pandemic's compounding effects as they also worried about basic needs such as food and housing. This brief summarizes students' responses to survey questions that asked them to document their experiences during the pandemic. Students provided information related to the technological devices and quality of the internet they could access at home for school-related activities, learning at home and online compared to their in-school experiences, and whether their basic needs were being met during the pandemic.

SO WHAT?

Students are resilient but were struggling (as most people are) to adapt to their dramatically changed circumstances. Most, but not all, students had access to the technology needed for online learning; however, many found it difficult to adapt. The pandemic impacted not only students' learning experiences but also their basic and mental health needs.

NOW WHAT?

There is still uncertainty about what a reopening of schools will look like for teachers and students this fall. As states contemplate the future of reopening schools, we offer recommendations for policymakers and educators:

- **Resolve inequities in access to technological devices and the internet:** Policies and programs must be adopted that close the digital divide for all students.

- **Scale up and improve online education instruction and materials:** Funding professional development and support for educators to teach effectively online is a critical investment both now and in the future.

- **Consider the whole learner:** Increasing access to tutoring; supplemental nutrition; social and emotional development; and school-based mentoring, counseling, or mental health care will help all students, particularly those from underserved backgrounds, more effectively cope with the impact of the pandemic.

- **Address food insecurity:** Many school districts innovatively ensured that students learning at home received food they would typically have received at school. The federal government has given approved states flexibility to apply Supplemental Nutrition Assistance Program (SNAP) funds to address citizens' food needs due to the pandemic; states that have not yet applied for this flexibility should do so.

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Introduction

At least 55 million students ended the school year learning at home after approximately 124,000 public and private schools closed their doors due to the coronavirus.[1] This resulted in uncertainty among many high school students about how the "new normal" would impact their learning and growing worries about how to navigate the college-going process in the new environment. Concerns spread beyond learning as students had to face the new reality not only of learning from home but potentially impacts to their family's employment and ability to provide basic needs. Students' entire school, learning, and potentially home experience was altered.

ACT wanted to hear from students about their experiences during the pandemic. Between March 26 and April 1, 2020, we invited 130,000 college-bound high school students who had registered to participate in the April or June 2020 national administration of the ACT® test to respond to an online survey. A total of 13,000 students did so.[2] While we have previously administered surveys both online and through mail, in order to turn around results as quickly as possible, we administered this survey online only.

From April 20 to May 12, 2020, ACT published the results of the survey on its website in five blog posts focused on the following topics:

1. Students' access to a technological device at home for school-related activities and the quality of their internet service

2. How well students were learning at home and online compared to in school

3. The context in which students were trying to learn (e.g., caregiving responsibilities)

4. Whether students were facing food insecurity during the pandemic

5. Students' mental health and the types of health-related behaviors (e.g., eating healthy, exercising) that they engaged in during the pandemic

Key findings from the survey discussed in the blog posts include:

- Students missed their teachers and the school environment.

- Students felt that they were not learning as well from home as they did in school.

- Many students—especially those from traditionally underserved backgrounds— reported having difficulty accessing online learning.

- Many students reported facing additional responsibilities and worries at home.

- Many students reported struggling to implement strategies that would be beneficial for their mental health.

- Students—particularly those from traditionally underserved backgrounds—were more likely to report needing help in areas such as learning and addressing their basic needs.

This report brings the content of the blog posts together and concludes with their policy recommendations.

1. Inequities in Access to Technological Devices and the Internet
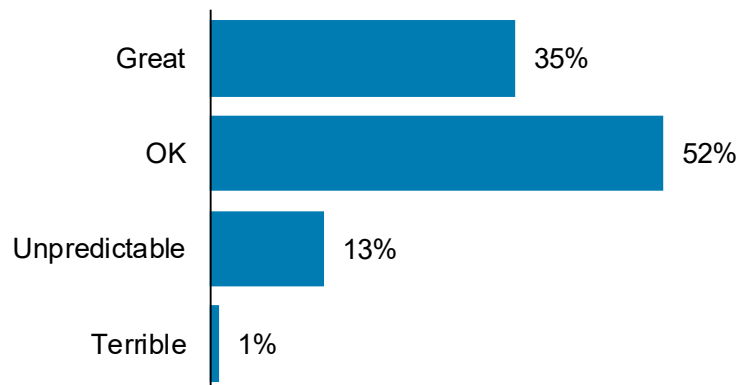
As public and private schools closed for the final months of the 2019–20 school year due to the pandemic, at least 55 million K–12 students were forced to learn from home. Most, if not all, of that learning occurred online, where students needed access to a technological device (e.g., computer, tablet, smartphone) and a stable internet connection to participate. Yet we know that the digital divide—the gap between people who have sufficient knowledge of and access to technology and those who do not—persists.[3] And even though schools tried—and are still trying—to provide their students with the technological resources they needed to learn while at home,[4] millions of students were still left without.

From more than 13,000 survey responses, we found that almost all students (99%) had access to at least one type of technological device at home. Likewise, the same percentage also had some type of access to the internet. However, the type of device and the quality of that internet connection varied, with most students having access to a smartphone (86%) and/or a laptop computer (76%) (Figure 1). Their internet connection was described by most students as either "OK" (52%) or "great" (35%) (Figure 2). However, 14% reported an unpredictable or terrible connection. These results are consistent with the findings in an earlier ACT report, *The Digital Divide and Educational Equity*,[5] which included an administration of a paper survey.

Figure 1. Percentage of Students with Access to a Given Device to Complete School-Related Activities While at Home
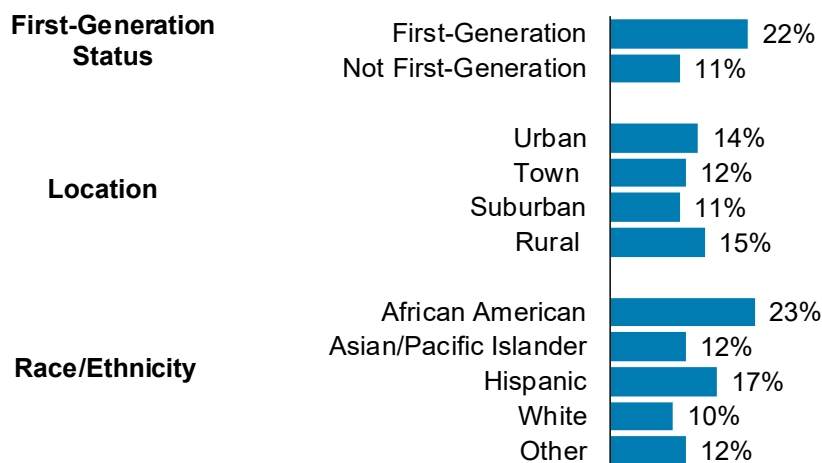
Device	Percentage
Smartphone	86%
Laptop	76%
Tablet	32%
Desktop	32%
Chromebook	30%
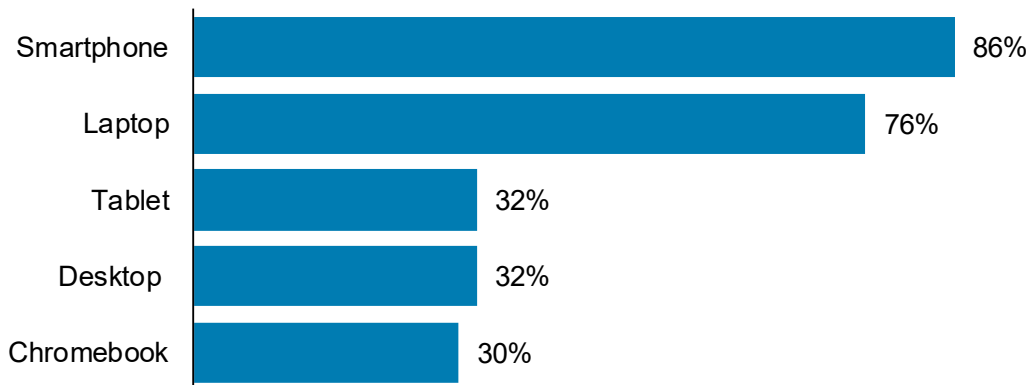
Figure 2. Student-Reported Home Internet Connection Quality

Quality	Percentage
Great	35%
OK	52%
Unpredictable	13%
Terrible	1%

While most students had access to multiple devices at home to complete their school-related work, a meaningful percentage of students (13%) reported having access to only one device (Figure 3). Students with only one device at home were more likely to be African American or Hispanic, in rural or urban areas, or first-generation college-going students—students who are often already marginalized with limited educational resources.

Figure 3. Percentage of Students with Access to Only one Device at Home

First-Generation Status	First-Generation 22%
	Not First-Generation 11%
Location	Urban 14%
	Town 12%
	Suburban 11%
	Rural 15%
Race/Ethnicity	African American 23%
	Asian/Pacific Islander 12%
	Hispanic 17%
	White 10%
	Other 12%

Of those students who had access to only one device, 81% had access to a device that would easily allow them to complete school-related activities—a desktop, laptop, Chromebook, or tablet—given the devices' bigger screens, easy word processing software, and accessible educational apps. The remaining students (19%), however, had access only to a smartphone at home to complete school-related work. We specifically draw attention to students whose sole device is a smartphone—who make up 2% of all students surveyed—because during the pandemic both the school buildings and the libraries that these students rely on for computer access were likely closed. These students were, therefore, left with only a smartphone to complete school-related work such as writing papers, a task that can be difficult to complete on such a small screen.
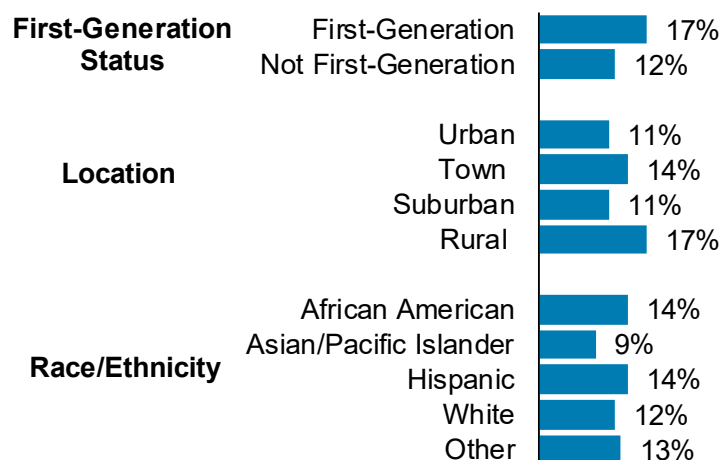
Taking a deeper dive into the responses from students with access to only one device, we also looked to see how many of them had to share their device with someone else in the home. So, even if they had access to the technology, they might have had access during only certain windows of the day, limiting the amount of time they could allocate to completing school-related work on a device. In total, 23% of students who had access to a desktop, laptop, Chromebook, or tablet had to share that device with another person. If students had access only to a smartphone, only 11% shared it with someone else in the house.

It is also important to keep in mind that students were likely to be asked to use these devices in many ways not previously asked of them. For example, students might have been asked to video chat with their teacher or with other students, to audio or video record themselves and upload recordings to a learning management system, or to download an assignment from a website when they would have otherwise received it in class. Among other things, these activities require reliable and consistent internet service.

Recent estimates show that between 9 and 12 million students do not have internet access at home.[6] And while some internet providers offered to provide free access to students during the pandemic, gaining such access can be a challenge.[7]

Most students (79%) reported having access to the internet that was separate from their cell phone; a small minority reported having access only from their phone (4%) or from a hotspot (1%). The remaining percentage of students (16%) weren't sure how they got internet at home, but they did report having access. Not surprisingly, 30% of students who relied on their cell phone for internet service reported that the service was "unpredictable" or "terrible," nearly three times the proportion of those who had access to the internet separate from their cell phone (where 11% reported unpredictable or terrible service). Furthermore, first-generation college students, students from rural communities, and Hispanic and African American students were more likely than their counterparts to report that their internet connection was unpredictable or terrible (Figure 4). For some rural students, access to any internet connection remains scarce, and adapting to the new normal of online learning, even if temporary, posed a huge challenge to rural students and schools as technological infrastructure lags in remote areas.[8]

Figure 4. Percentage of Students Reporting that their Internet Connection was Unpredictable or Terrible

First-Generation Status	First-Generation	17%
	Not First-Generation	12%
Location	Urban	11%
	Town	14%
	Suburban	11%
	Rural	17%
Race/Ethnicity	African American	14%
	Asian/Pacific Islander	9%
	Hispanic	14%
	White	12%
	Other	13%

2. Students' Experiences While Learning at Home

We also asked students how well learning at home was going, online and otherwise, compared to when they attended school. Overall, students expressed concern that their at-home learning experience was not as effective as in classroom settings.

In late March, the majority of students (89%) reported a continuance of class-related work even when their schools were closed. And of those students, 95% reported receiving at least some form of instruction from at least some of their teachers.

However, the format differed depending on where students lived. Rural students, in particular, reported receiving more printed learning materials and less access to online learning than counterparts in urban, suburban, and other communities. In all, 76% of students reported receiving online instruction for classroom materials, while 15% received printed instructional materials.[9]

It was clear from their responses that students missed their access to informal, real-time teacher feedback and interaction with peers. Without this traditional approach, learning new material was difficult, particularly during the sudden shift to an online setting.

Comments from students reflected a range of concerns about learning without the physical presence and support of teachers:

- "It's a little harder to learn the material because the teachers are not actually present, and it's all through the internet."

- "I feel like I'm not learning as efficiently and effectively at home rather than school. It is very hard to learn new topics at home without the instruction of a teacher right in front of you. I prefer learning at school than at home."

- "It is much harder to learn online especially when many teachers are not actually teaching, they are just dropping new materials. I am a person who needs physical interaction to be able to comprehend and learn well."

Students also expressed concern that they were not able to focus as well at home as they were in a classroom and felt less motivated. This created challenges for maintaining academic success, which may impact further educational pursuits.

Thirty-seven percent of students said school closure will affect their academic preparedness "a great deal," and another 51% said "somewhat." Students clearly expressed strong preferences for their traditional classroom setting:

- "I feel more engaged and motivated in school than at home. It is harder to learn new topics at home."

- "Online classes do not take into account the attention span of teenagers and it is sometimes difficult to communicate with teachers outside of class or do online work when the internet cuts out."

- "It was better in school because it was easier to ask questions. Also, the school environment improved focus."

- "I can't concentrate as well as in school because it's a new environment that I am learning in and some assignments are confusing since I am using technology for everything."

3. Disproportionate Effects on Students from Underserved Backgrounds

Though every student experienced the impact of the coronavirus in their own way, the combination of school and extracurricular closures, health threat, social isolation, and economic downturn certainly had some degree of negative impact on just about all of them.

In addition to the direct impact to their learning, we also used the survey results to get a sense of the context of the environments in which students were learning in this new paradigm. Here's a sampling of what they had to say:

- "It's really hard to do everything at home and one of my teachers thinks that just because we are supposed to be in school for 8 hours in a day, he thinks he needs to send me that much work since I'm just sitting at home."

- "My mom and I might need to move because of how her hours got cut down and I lost my job."

- "My only struggle has been with my younger siblings at this time. They are in kindergarten and first grade so they need a teacher. My stepdad works each day and does not get home until around 4, I prefer to have my work finished by then but I usually have to teach the kids from when I wake up to around one."

These were just a few of the challenges students across the country were facing. Below, we take a deeper look into students' reports of their obstacles to learning, which students were particularly vulnerable to these obstacles, and how these challenges may add up.

The Pre-Coronavirus Impact of Being Underserved

We know that in a normal school year, underserved students—defined by ACT as students who would be among the first generation in their families to attend college, come from low-income families, and/or self-identify their race/ethnicity as minority—are less likely to graduate high school prepared for college and career. In 2019, 50% of students meeting zero underserved criteria met three or four of the four ACT College Readiness Benchmarks, while only 9% of students meeting all three criteria did so.[10]
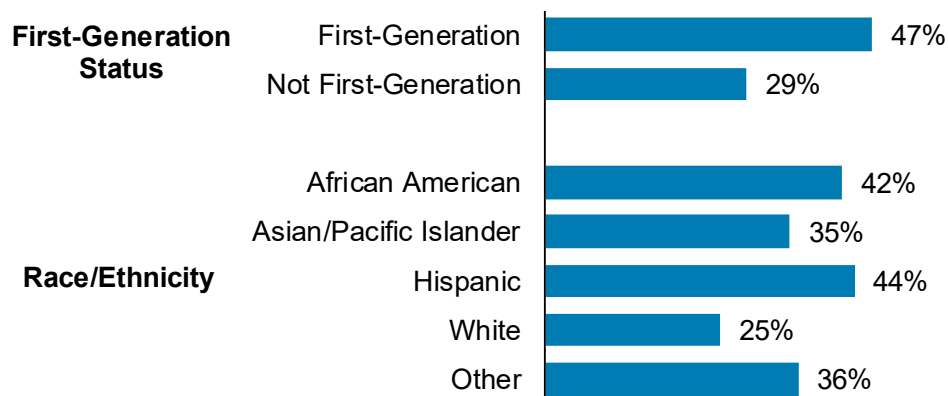
But this is not a normal school year. Underserved students, who already faced many structural barriers to educational success, saw those barriers multiplied by the impacts of the pandemic. Some of these students were worried about access to food and family finances, and some needed to take care of younger siblings. The more these students' needs were not met, the less attention and fewer resources they were able to devote to learning—through no fault of their own.

These students had diverse needs and responsibilities according to their individual situations, and this survey touched on only a few aspects of their lives. Still, a few patterns emerged.

Students of color and first-generation college-going students were more likely to say that they needed some type of help during the pandemic. When asked what they or their family needed help with, including basic needs such as shelter or clothing, ways to learn school content, internet access, access to technology like a computer or tablet, transportation to resources like the grocery store or doctor, childcare, healthcare, fitness and recreational activities, meals, and "other," just under half of first-generation college-going (47%), African American (42%), and Hispanic (44%) students said they currently needed some type of help in any of these areas, while 25% of White students and 29% of students who were not first-generation said the same (figure 5).
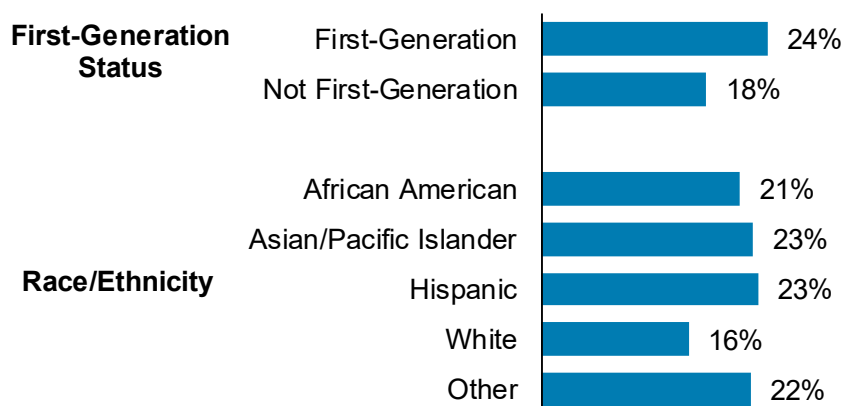
Figure 5. Percentage of Students who Said they Needed Some Type of Help

Students who would be among the first in their families to attend college were almost twice as likely to say that they were responsible for caring for a sibling, grandparent, or someone else while they were home than those who would not be first-generation college students (Figure 7). These first-generation college-going students were also less likely to have a parent at home with them while schools were closed (88% versus 93%). Students who identify as Hispanic or African American were also more likely to say that they had caregiving responsibilities than students of other backgrounds. When students needed to take on additional household responsibilities, they were less able to focus on schoolwork.
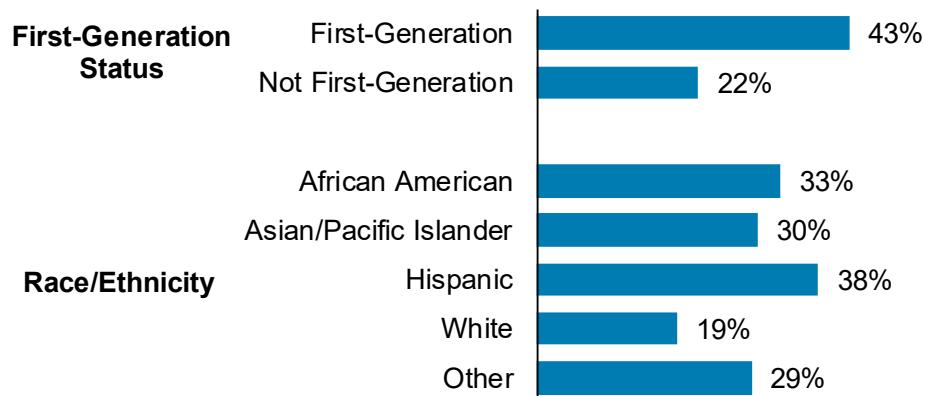
Students of color and students whose parents did not attend college were more likely to say that they needed help learning the content their teachers were asking of them (Figure 6).

Figure 6. Percentage of Students who said they Needed Help Learning Content
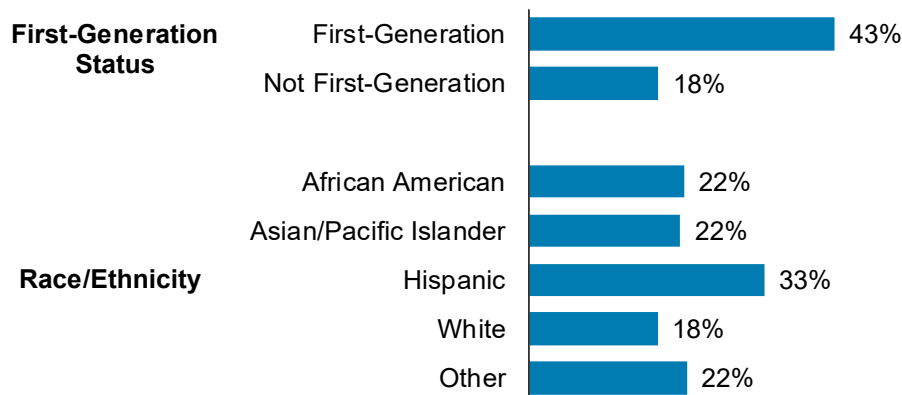
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Figure 7. Percentage of Students who Reported Having Caregiver Duties at Home

First-Generation Status
First-Generation: 43%
Not First-Generation: 22%

Race/Ethnicity
African American: 33%
Asian/Pacific Islander: 30%
Hispanic: 38%
White: 19%
Other: 29%

First-generation college-going students and Hispanic students were more likely to report that their parents had a reduction in employment hours or lost their jobs because of the coronavirus compared to students identifying as White or those whose parents attended college (Figure 8).

Figure 8. Percentage of Students who said their Families were Experiencing an Employment Impact

First-Generation Status
First-Generation: 43%
Not First-Generation: 18%

Race/Ethnicity
African American: 22%
Asian/Pacific Islander: 22%
Hispanic: 33%
White: 18%
Other: 22%

Overall, 10% of students saw their own work hours reduced, while another 10% of students lost their jobs due to the coronavirus.

Stressors and the Need for Help

Some students had more than one issue to contend with. While over half of students surveyed (51%) did not have parent job loss, personal job loss, or any caregiving responsibilities at home, over a third (34%) experienced at least one of these stressors, and 15% experienced two or more. It is not surprising, then, that when students were asked about their needs, those who had these stressors were more likely to report needing help.

As mentioned previously, these student worries did not exist in a vacuum. Each added stressor compounded a student's concerns and made them exponentially less able to concentrate on learning.[11] And, as the previous figures illustrate, these individual stressors fell far more heavily—though not exclusively—on students of color and students who would be among the first in their families to attend college.

4. Food Insecurity

Before the pandemic, the US Department of Agriculture (USDA) reported that six million US children lived in food-insecure households and approximately 30 million children relied on schools for breakfast and/or lunch.[12] Likewise, research has identified food insecurity as a potential factor in student learning,[13] which is why we previously piloted a free breakfast program before national ACT test administrations.[14]
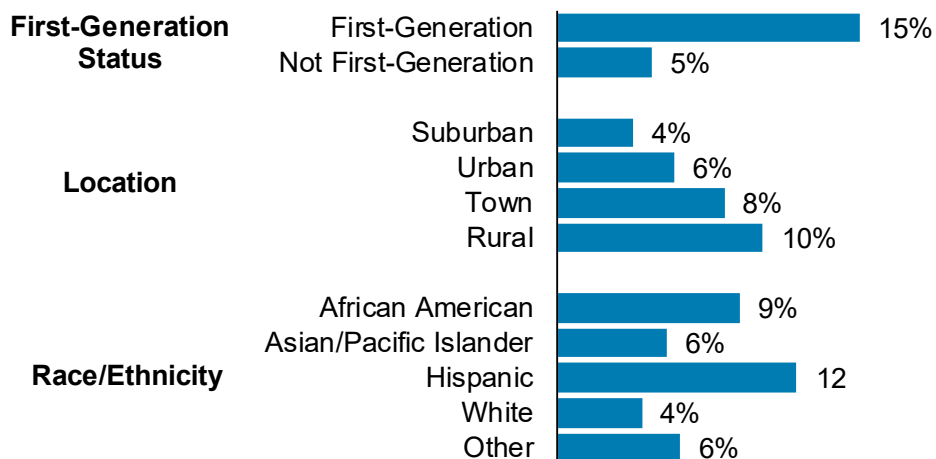
As pandemic-related school closures reduced student access to breakfast and lunch programs, federal legislation eased student access to food in multiple ways.[15] Our recent survey confirmed that these steps were needed.

We found that 4% of students reported needing help accessing meals the week of March 26, 2020, and 18% of students worried that their food would run out before their family had received enough money to buy more.

The federal legislation allowed schools to continue to provide food to their students while school buildings are closed. However, meal distribution is largely a district decision, meaning implementation varied across the country.

At the time of our survey—shortly after the legislation was enacted and while districts may have been finalizing their plans—we found that one in five students were unsure of whether their school or another community organization was providing meals to students while school was closed. Of those students who were aware of this service, students of color, students in rural locations, and first-generation college-going students were more likely to report receiving meals from their school or a community organization than their white, urban, and non-first-generation counterparts (Figure 9).
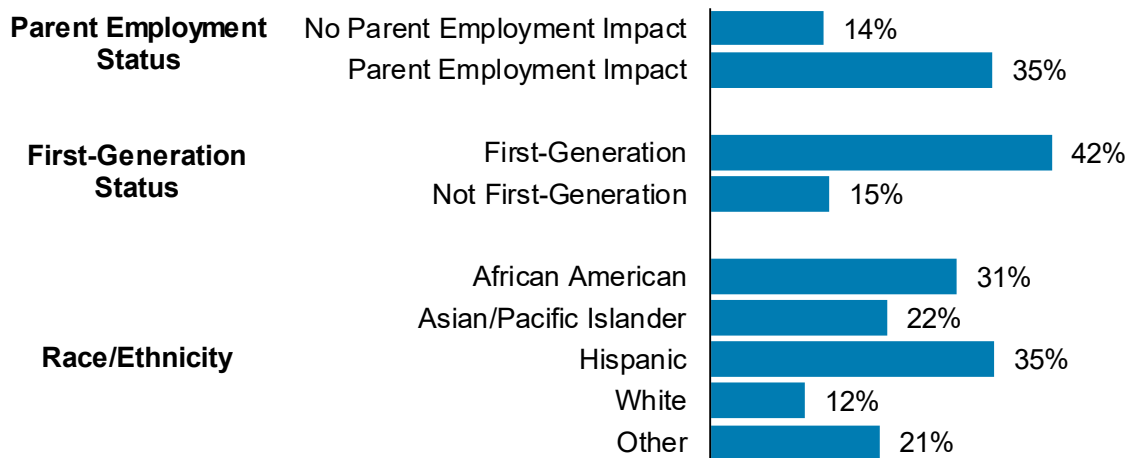
Figure 9. Percentage of Students (of Those who Were Aware of a Meal Service) Reporting Receiving Meals from their School or a Community Organization

First-Generation Status	First-Generation	15%
	Not First-Generation	5%
Location	Suburban	4%
	Urban	6%
	Town	8%
	Rural	10%
Race/Ethnicity	African American	9%
	Asian/Pacific Islander	6%
	Hispanic	12
	White	4%
	Other	6%

With more Americans unemployed due to the coronavirus, including high school students, it's no surprise that Americans worried about having enough money to pay for food.

We looked at students whose parents' employment were impacted by the pandemic (i.e., parents who either lost their job or had their hours reduced) and compared that to whether students were worried about paying for food. A total of 35% of students whose parents' employment was impacted by the pandemic worried about having money to pay for food (Figure 10). Many students (42%) who would be the first in their family to attend college reported worrying about paying for food. Similarly, 35% of Hispanic students and 31% of African American students also had this worry.

Figure 10. Percentage of Students Worried about Having Money to pay for Food

Parent Employment Status	No Parent Employment Impact	14%
	Parent Employment Impact	35%
First-Generation Status	First-Generation	42%
	Not First-Generation	15%
Race/Ethnicity	African American	31%
	Asian/Pacific Islander	22%
	Hispanic	35%
	White	12%
	Other	21%

5. Students' Mental Health

The coronavirus pandemic was a uniquely stressful situation for many students and families. In a Kaiser Family Foundation poll in early April 2020, 45% of Americans—an increase from 32% in early March—reported that the pandemic was having a negative effect on their mental health.[16] This is particularly concerning because, prior to the pandemic, students responding to an ACT survey had reported that their school's mental health services were insufficient.[17]

In the survey, approximately 5% of students stated that they or their family needed help with access to healthcare, including mental health care; in open-ended responses, students mentioned increased anxiety related to a range of issues—from concerns that parents may get sick, to difficulty with coursework, to general concerns about the state of the world. For instance, one student stated:

"I feel like life is in chaos at the moment. I am worried and anxious about how this will end."

Given the importance of mental health, we asked students about the various measures they were taking to promote and maintain their mental health during this time.[18] Below, we highlight the areas in which students were doing well and those in which they could have benefited from more support.

Areas of Strength: Getting Adequate Sleep and Maintaining Social Contact

More than three out of four students (77%) were getting at least seven hours of sleep per night. And an even greater percentage (88%) were keeping in contact with friends and family through phone or video chatting.

Areas Where Students Could use Additional Support: Creating a Schedule, Exercising, and Eating Healthy Foods

Students could have used additional support in creating a daily schedule. Only about one out of three students (37%) had created a schedule for themselves. Since regular routines can help to manage stress, this lack of a schedule may have been problematic for many reasons.[19] For instance, high school students are still learning how to juggle multiple courses, which may be more of a challenge in an online school environment than in person, where there is a bell schedule and daily in-person reminders from teachers.[20]

Students could also have used support in maintaining physical activity. Only a little over half (55%) said that they were consistently exercising (Figure 11). Fifteen percent stated that they needed help with fitness or recreational activities, with students of color more likely than other students to respond that they needed help in this area.

Figure 11. Percentage of Students Needing Help with Fitness or Recreational Activities

15%	23%	18%	20%	12%	17%
Overall	African American	Asian/Pacific Islander	Hispanic	White	Other
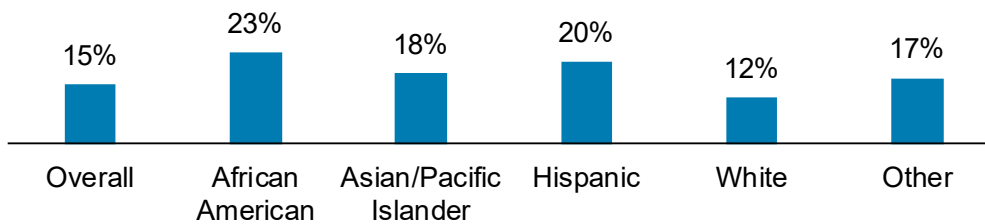
A third challenging area for students is having a healthy diet. Approximately two out of three students (64%) reported eating healthy food; among food-insecure students (those who had been worried in the last two weeks that they may not have money for food), the percentage was only 54% (Figure 12). Only about one out of three (37%) in both groups had limited the amount of junk food they ate.

Figure 12. Percentage of Students Reporting Eating Healthy Food and Limiting Intake of Junk Food

Healthy Food			Limited Junk Food		
64%	66%	54%	37%	37%	37%

■ Overall ■ Food Secure ■ Food Insecure
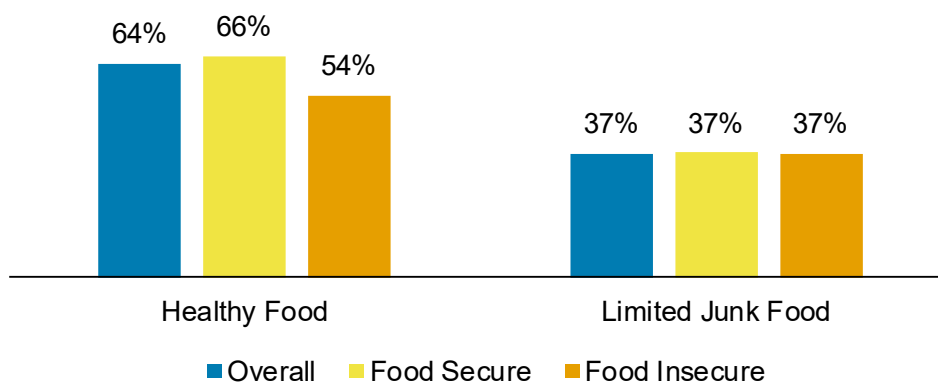
Policy Recommendations

Even in the first weeks of school closures and the transition to home schooling, the pandemic impacted not only students' learning experiences but also their basic and mental health needs. As students return to learning in the fall, policymakers will continue to need to plan for how to support students' basic needs: food assistance, the appropriate devices and internet quality to enable them to do schoolwork at home, and access to ways of supporting their mental health. All of these needs must be met if students are to avoid additional barriers to learning.

Looking ahead, even with much uncertainty on the horizon, ACT urges policymakers and educators to focus on the needs students expressed in our survey and concentrate on meeting them. Following are some recommendations for doing so.

1. **Resolve inequities in access to technological devices and the internet:** Policies and programs must be adopted that close the digital divide for all students. We recommend that device access and internet access be expanded and made reliable for those who lack them. Leveraging the Community Reinvestment Act[21] can address potential equity issues by helping students who would otherwise lack access take advantage of digital learning tools. Programs that help to rectify device and internet access can help improve educational opportunities for those in need.

2. **Scale up and improve online education instruction and materials:** Technology in and of itself will not wholly fulfill students' academic needs. Our survey results highlight the importance of instruction and the significant role that teachers play in students' ability and willingness to learn new materials. Exploring ways to improve the delivery of online education—for example, funding professional development and support for educators to teach effectively online—must be a critical investment both now and in the future.

3. **Consider the whole learner, including students' academic, social-emotional, and physical needs:** We know that the pandemic disproportionally affected students from underserved backgrounds. Increasing access to tutoring; supplemental nutrition; social and emotional development; and school-based mentoring, counseling, or mental health care will help all students, particularly those from underserved backgrounds, more effectively cope with the impact of the pandemic.

4. **Address food insecurity:** Many school districts innovated ways to ensure that students learning at home received food they would typically only had access to at school.[22] For example, in some New Hampshire districts, school bus drivers delivered meals to students at bus stops—including new stops created for students who normally walk to school.[23] Other districts provided grab-and-go meals on weekends at mobile meal sites and recreation centers, not just for students but for all members of the students' families.[24] These programs can serve as models for other districts to follow.

At the federal level, the Families First Coronavirus Response Act gave approved states flexibility to apply Supplemental Nutrition Assistance Program (SNAP) funds to address citizens' food needs due to the pandemic;[25] states that have not yet applied for this flexibility should do so.

5. **Support students' mental health needs:** In a previous report,[26] we highlighted telehealth care as a promising practice for improving access to mental health services. With students unable to be at school, the availability of remote mental health options was even more important. At the state level, Illinois's Call4Calm text line connects individuals with a nearby counselor for coronavirus-related stress management and emotional support;[27] locally, schools can provide virtual counseling services,[28] have regular check-ins with students and their families, and give parents and students information about maintaining mental health. Schools should also consider helping students learn how to manage their study time within particular family circumstances (e.g., while providing care for another family member or sharing a technology device). Finally, schools should consider providing ideas for indoor recreation activities[29] and general nutrition resources, including information on where food-insecure students and their families may obtain free meals.[30]
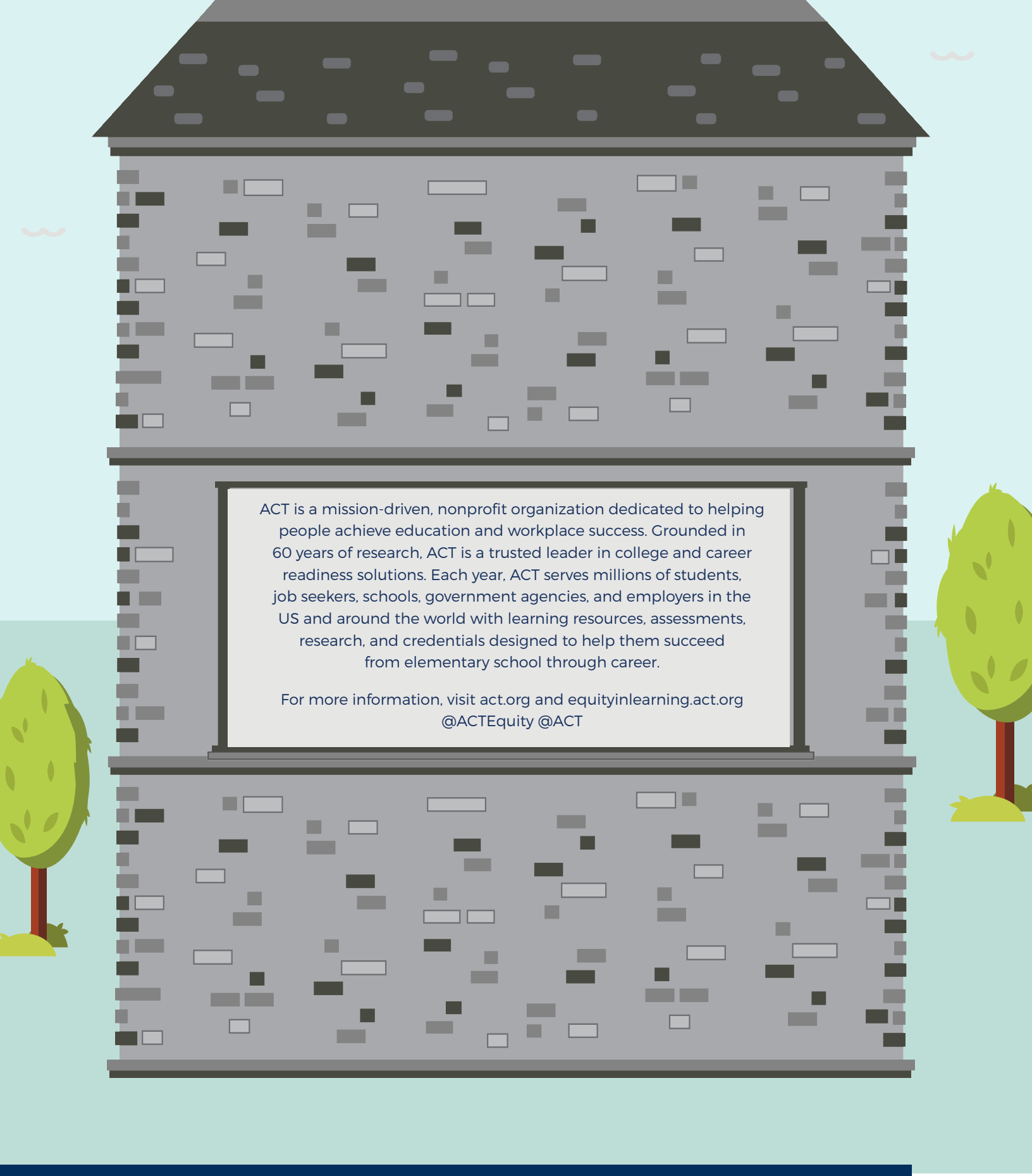
Notes

1. As of April 20, 2020; see "Map: Coronavirus and School Closures," Education Week, March 6, 2020, https://www.edweek.org/ew/section/multimedia/map-coronavirus-and-school-closures.html.

2. The response rate was approximately 10%.

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