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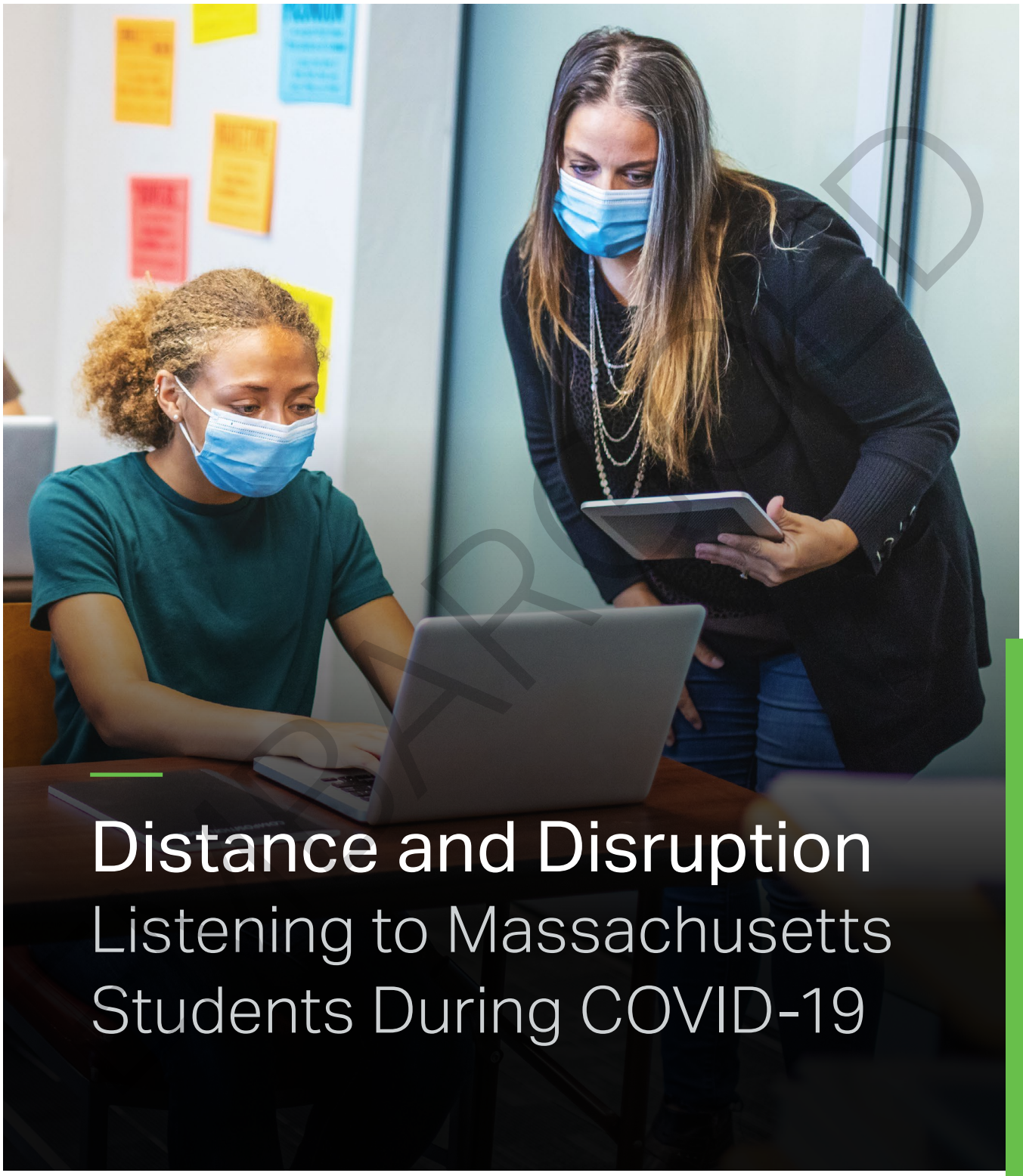


Distance and Disruption

Listening to Massachusetts Students During COVID-19

FEBRUARY 2021

Background

The coronavirus pandemic's disruption of K-12 education is likely to be one of its most enduring effects. Gallup data find that just under half of K-12 students in the U.S. were learning in fully remote settings in September and October 2020. This sudden transition raised many challenges for students, teachers, parents and administrators.

Analyses of testing data from fall 2020 indicate the transition to remote learning has resulted in significant learning loss, particularly among low-income and minority students. Using data from the online learning platform Zearn, economists at the Harvard Opportunity Insights project found large losses in math learning for low-income students, whereas students from affluent backgrounds saw gains. This has exacerbated fears that the pandemic is widening the already large achievement gap between students from different income and racial/ethnic groups. The COVID-19 crisis has also had a worrisome impact on students' emotional health — particularly among full-time remote learners, for whom supportive networks of teachers and friends have been disrupted.

Findings from the Distance and Disruption study correspond with those of a separate survey of 1,549 Massachusetts parents with school-aged children conducted in October and November 2020. That study found significant gaps by income and racial/ethnic group in access to in-person schooling, and parents of children in remote-learning situations — particularly hybrid in-person/remote arrangements — were more likely to feel their child was falling behind grade level.

The Distance and Disruption study further adds to our understanding of the transfer to remote learning by exploring students' perspectives on specific differences in the quality of learning experiences between the in-school and at-home environments. Such differences are a critical link in explaining why remote-learning students are more likely to experience negative outcomes.

The Barr Foundation commissioned Gallup to survey 1,000 students aged 14 to 18 in Massachusetts high schools from November 18 to December 9, 2020. Prior to conducting each interview, researchers obtained permission from a parent or guardian, 39% of whom indicated their student was learning remotely full-time, while 6% said they were learning in-person full-time and 55% were in a hybrid at-school/at-home arrangement. The study addresses important questions such as:

- How well do students feel they are learning this school year compared with last year, prior to the coronavirus pandemic?
- Do students' perceptions of their educational experience differ by whether they are learning full-time remotely, part-time in-person and part-time remotely or full-time in-person? Do those differences persist after accounting for other differences related to educational outcomes, such as income and race/ethnicity?
- What aspects of the learning process differ most in students' eyes between the at-home and in-school environments?
- Are students learning remotely more likely to experience negative emotions than those learning full-time or part-time in-person?
- What aspects of learning remotely are particularly challenging for disadvantaged students?

Executive Summary

1 **Most Massachusetts students are learning at least partly from home; a small proportion are full-time in-person.**

Thirty-nine percent of Massachusetts students were learning remotely full-time in November and December 2020, while 55% were in hybrid in-person/remote learning arrangements and 6% were learning in-person full-time. Results for full-time in-person learners are shared with the caveat that this group represents a relatively small segment of students overall at n=57.

- Students from more affluent households are most likely to be in hybrid arrangements, while low-income students are most likely to be learning remotely full-time.
- About one-third of White students (31%) are learning remotely full-time, while 63% are in a hybrid in-person/remote learning arrangement. By contrast, majorities of Black and Hispanic students (58% and 55%, respectively) are learning remotely full-time.
- Private school students, who make up 16% of the total, are far more likely than public district school students to be learning in-person full-time.

2 **Students prefer in-person schooling and rate their learning progress much lower when fully remote.**

Half of all students say they prefer full-time in-person learning. About a third (34%) say they prefer a hybrid in-person/remote learning arrangement, while 16% say they prefer to learn remotely full-time.

- Two-thirds (67%) of those who prefer full-time in-person schooling say it is because they learn more in-person, or because there are things at school they cannot learn online.

Students learning remotely full-time are less likely to say they are satisfied with school this year than those who are learning in-person full-time or part-time — even after controlling for students' demographic characteristics and grade level.

Overall, 18% of students strongly agree that they "learn a lot every day," which is less than the 31% who say they learned a lot every day prior to COVID-19 last school year. However, 41% of those learning in-person full-time say they currently learn a lot every day versus 18% of those in hybrid arrangements and 16% of those learning remotely full-time.

Students learning remotely full-time are also least likely to have positive feelings about the learning process.

- About one in five (21%) strongly agree that they feel motivated to learn versus 26% of those in hybrid learning arrangements and 44% of those learning full-time in-person.
- Thirteen percent strongly agree that they are excited about what they are learning versus 17% of those in hybrid arrangements and 44% of those learning full-time in-person.

About one-third of students in hybrid (31%) or full-time remote learning situations (36%) feel they are falling behind in learning this year versus 8% of those who are learning full-time in-person.

3 Students in remote learning arrangements are more anxious and less likely to feel prepared.

Students in hybrid or remote-only learning arrangements are much more likely than those learning in-person full-time to say they have experienced worry and stress for a lot of the previous day. However, students' likelihood to have felt sad or lonely during a lot of the day is more consistent across learning modes.

Almost half (46%) of 11th- and 12th-graders learning remotely full-time say school needs to do more to help them feel prepared for their post-high school plans. About a quarter of students in hybrid learning arrangements (23%) say the same, as do 7% of those learning full-time in-person.

4 Technological barriers prevent lower-income students — who are among the most likely to be learning exclusively from home — from fully accessing learning at a higher rate.

Low-income students are particularly likely to be in full-time remote learning situations. Fifty-seven percent of those in households with annual incomes under $60,000 are learning exclusively from home versus 37% of those in households earning $60,000 to $119,000 and 31% of those in households earning $120,000 or more.

Parents of students in lower-income households are more likely to lack high-speed internet service (86% of those with incomes under $60,000 vs. 98% of those with incomes of $120,000 or more). Those with lower incomes are also less likely to say their internet connections are reliable (59% of those with incomes under $60,000 vs. 84% of those with incomes of $120,000 or more).

- These differences are also reflected in discrepancies between racial and ethnic groups; 77% of White students live in households with reliable broadband internet connections versus 59% of Black students and 58% of Hispanic students.

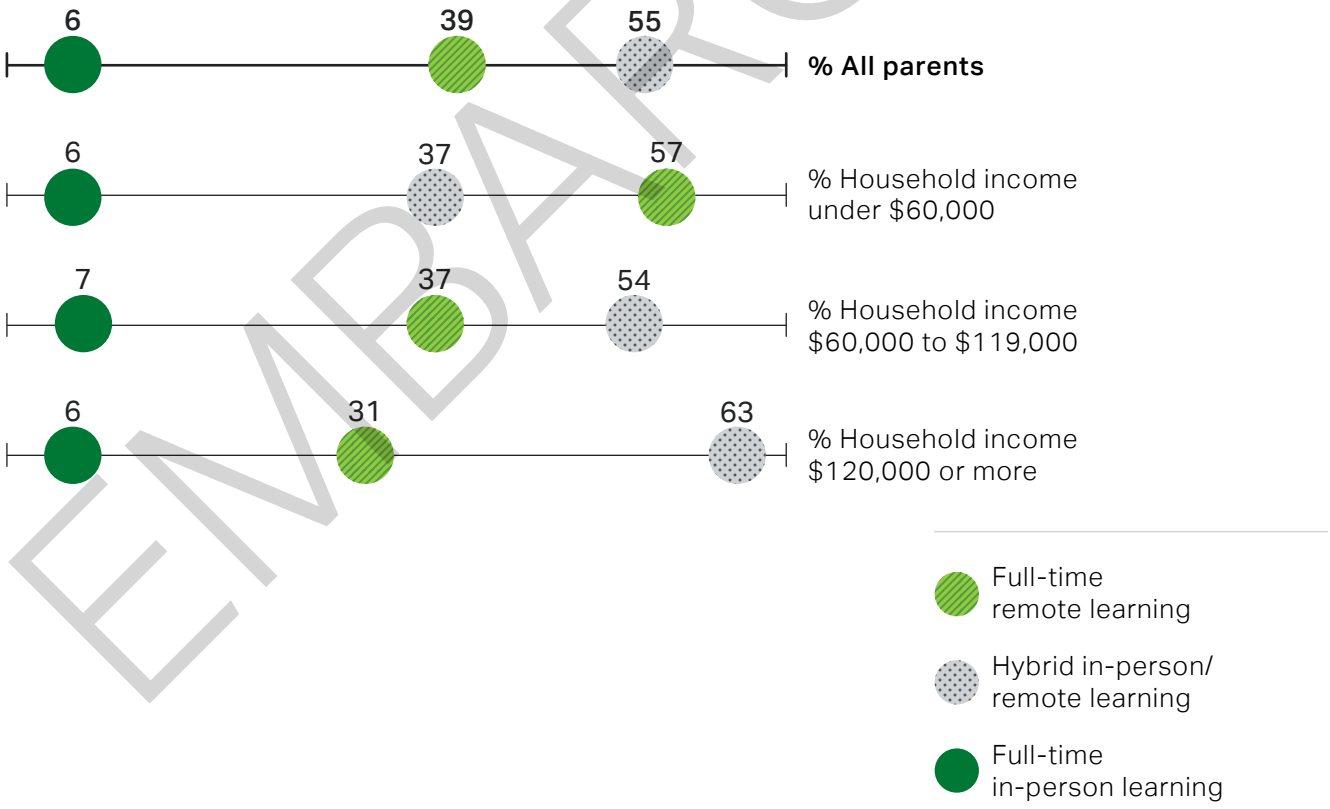
Students in lower-income households are less likely to talk often with their parents about school, and less likely to be able to access help with technology issues from someone at home. These disparities reflect the challenges facing parents in such households in helping their children succeed in a remote-learning environment.

Findings

Students from the lowest-income households are far more likely to be learning remotely full-time (57%) than those in middle-income (37%) and upper-income households (31%).

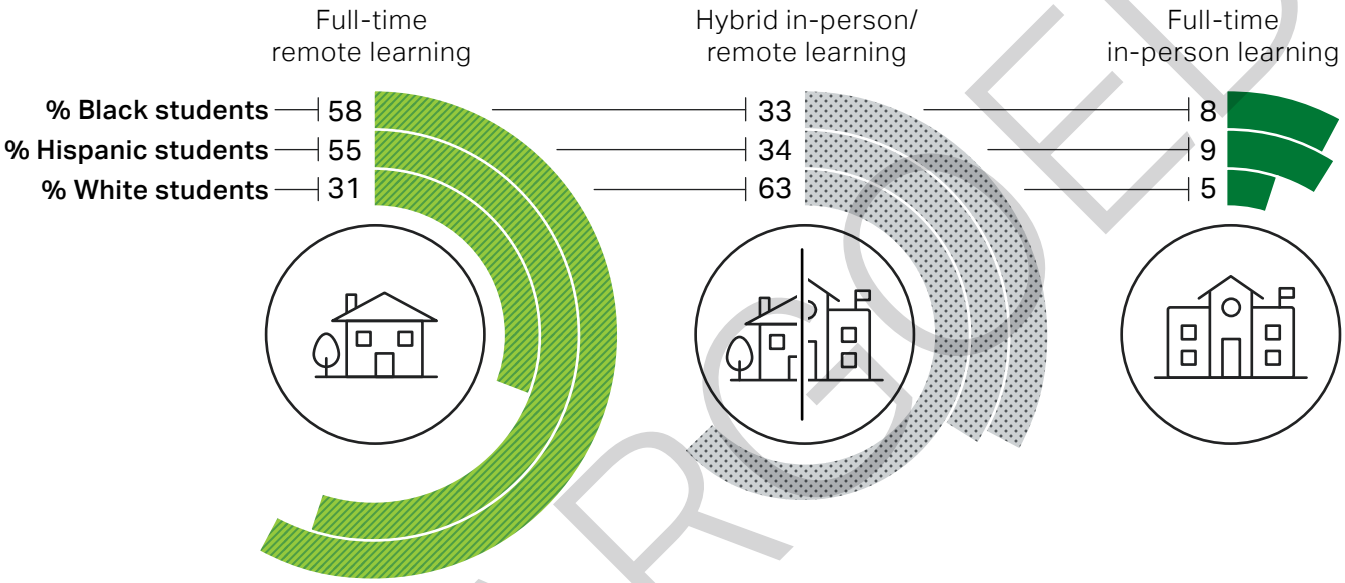
Though the percentage learning in-person full-time did not vary by income group, students from more affluent households are more likely to be in hybrid arrangements with some in-person learning.

CHART 1: **Which of the following best describes the way your student is currently learning?**



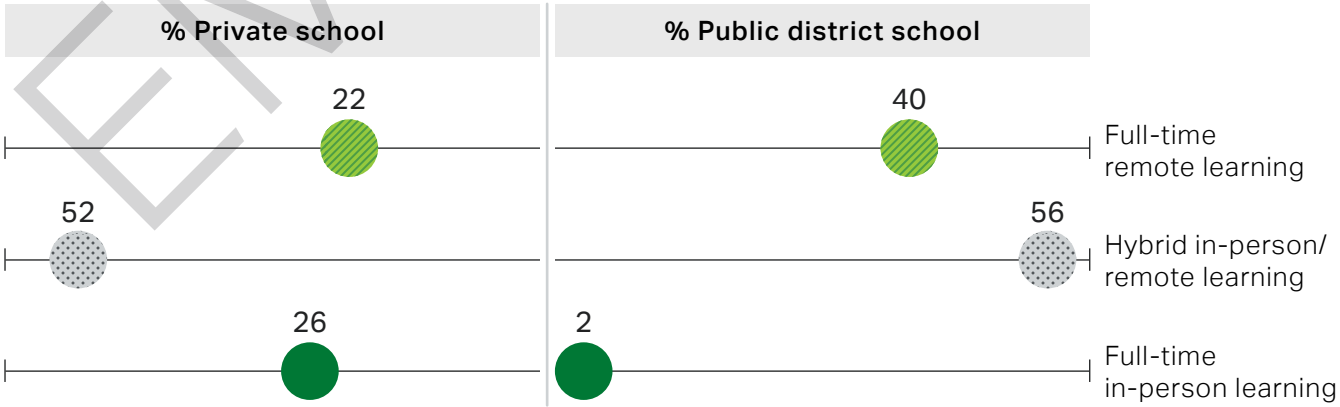
Disparities in learning modes are also evident in differences by race and ethnicity: 31% of White students are learning remotely full-time while 63% are in a hybrid in-person/remote arrangement. By contrast, majorities of Black and Hispanic students (58% and 55%, respectively) are learning remotely exclusively.

CHART 2: **Which of the following best describes the way your student is currently learning?**



Private school students, who represent 16% of all students surveyed, are far more likely (26%) than public district school students (2%) to be learning in-person full-time.

CHART 3: **Which of the following best describes the way your student is currently learning?**



The differences by income, race and public versus private schools translate to varying demographic compositions for students in each type of learning arrangement, seen in Table 1. Notably, more than two-thirds of those learning full-time in-person (69%) attend private schools, partly reflecting state and local government mandates for maintaining social distancing procedures in public district schools. The table also highlights the overrepresentation of higher-income and White students in hybrid learning arrangements.

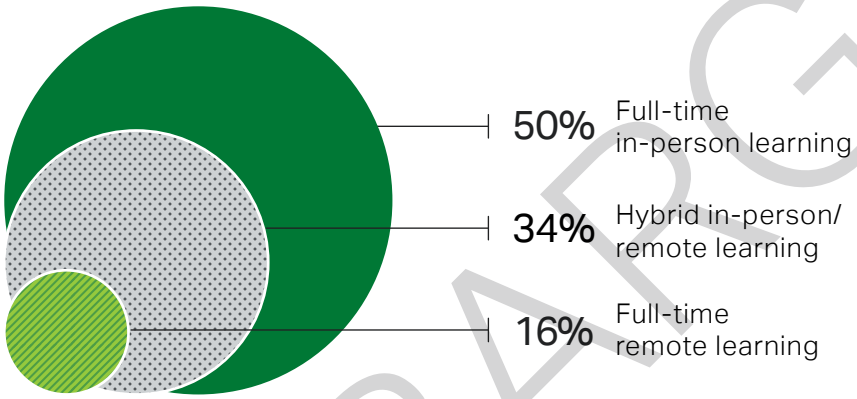
TABLE 1: **Demographic differences by learning arrangement**

	All students	Full-time remote learning	Hybrid in-person/ remote learning	Full-time in-person learning*
Household income under $60,000	**24%**	35%	16%	23%
Household income $60,000 to $119,000	**26%**	25%	26%	30%
Household income $120,000 or more	**50%**	40%	58%	46%
Black	**10%**	15%	6%	14%
Hispanic	**16%**	23%	10%	25%
White	**65%**	53%	75%	53%
Other	**9%**	9%	9%	9%
Public district school	**80%**	83%	83%	31%
Private school	**16%**	9%	15%	69%
Public charter school	**4%**	8%	2%	0%

* Results for the full-time in-person group should be interpreted with caution due to the small sample size (n=57).

Few students want to learn remotely full-time. Asked which type of arrangement they prefer, 16% choose learning exclusively remotely, while half (50%) favor attending school in-person full-time and 34% choose a hybrid in-person/remote arrangement.

CHART 4: **If you had a choice, would you prefer to attend school in-person full-time, attend with at-home distance learning or attend using a hybrid with some in-person and some distance learning?**



2 in 3 students who prefer full-time in-person learning say it is because they learn more in-person, or because there are things they **cannot learn virtually.**

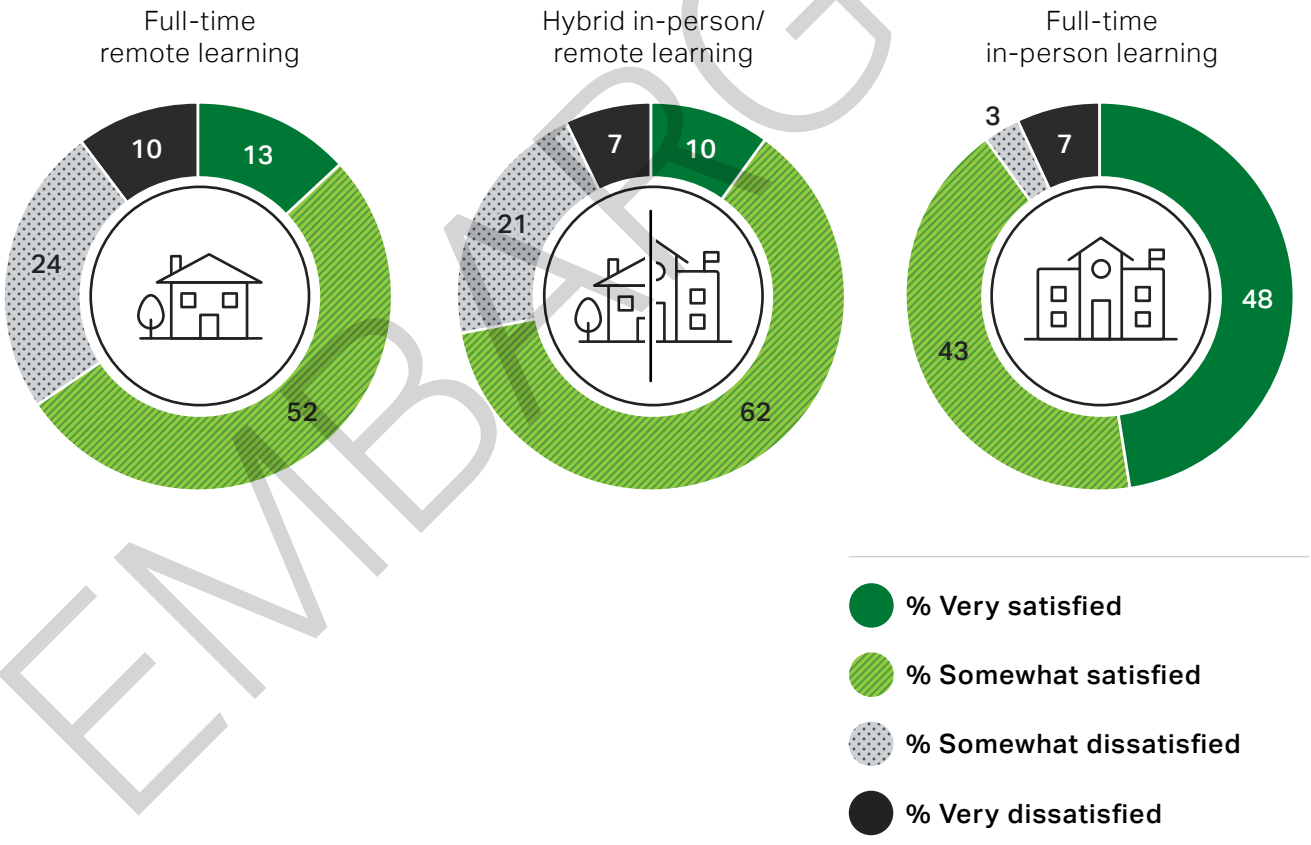
When students who prefer full-time in-person schooling were asked why, two-thirds (67%) say it is because they learn more in person, or because there are things at school they cannot learn virtually. Students' next most common responses are that they want to see friends (26%) or teachers (20%), and that they get special help at school that they cannot get online (21%).

Satisfaction with school is much higher for students who are learning entirely in-person compared with those learning remotely.

One-third of students in full-time remote learning arrangements (34%) are very or somewhat dissatisfied with school this year versus 28% of those in hybrid arrangements and 10% of those who are learning in-person full-time.

Satisfaction is lower for remote-learning students after controlling for gender, race, household income and grade level, but not whether they attend public district versus private school.

CHART 5: **Overall, how satisfied or dissatisfied are you with school this year?**



In-person learning is the most important source of positive student experiences across a variety of indicators.

Students learning full-time in-person are more likely than those learning remotely to say they learn a lot every day, for example, and that their schoolwork is preparing them to succeed. Differences with asterisks in Table 2 remain statistically significant after controlling for whether students attend public district versus private schools (see the Appendix for a more detailed analysis of results from public district vs. private schools), as well as students' household income, gender, race and grade level. As noted in Table 1 on page 7, most students learning in-person full-time (69%) attend private schools while most of those learning remotely full-time (83%) attend public district schools.

TABLE 2: **Percentage who strongly agree with each statement about their school this year**

	Total across learning arrangements	Full-time in-person learning	Hybrid in-person/ remote learning	Full-time remote learning
If I need it, my teachers are available to answer my questions or give me extra help.	**55%**	70%	52%	57%
I feel motivated to get good grades.	**44%**	55%	44%	40%
I feel confident in my ability to succeed.	**39%**	53%	37%	40%
My school makes me feel included.	**37%**	57%	38%	34%
My schoolwork is preparing me to succeed.*	**27%**	61%	26%	25%
My schoolwork challenges me in a good way.*	**25%**	56%	25%	21%
I feel motivated to learn.	**25%**	44%	26%	21%
My teachers understand my life at home.	**19%**	35%	19%	18%
I learn a lot every day.*	**18%**	41%	18%	16%
I am excited about what I am learning.*	**17%**	44%	17%	13%

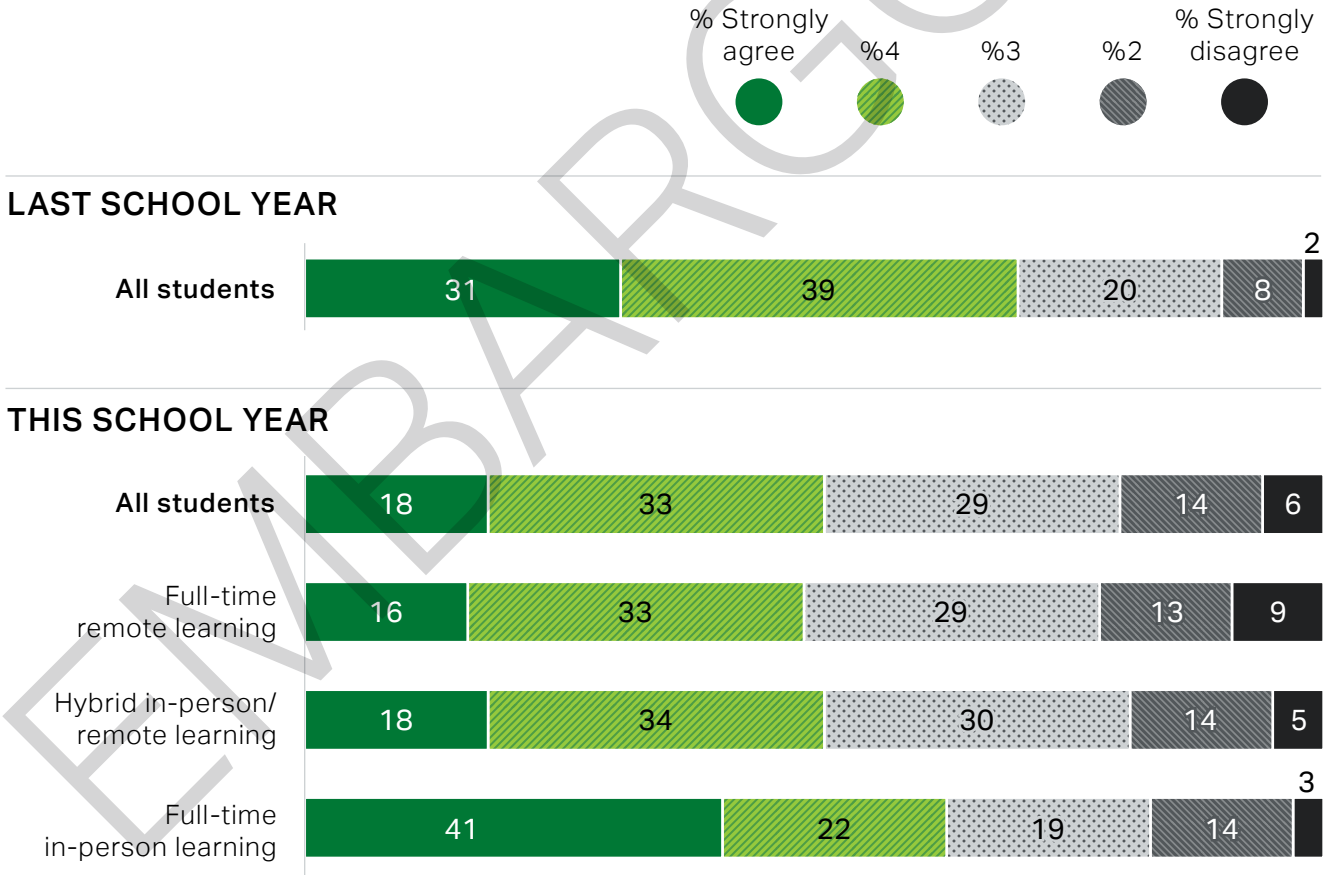
*Difference between full-time remote and in-person arrangements statistically significant at the $p < 0.05$ level after controlling for public versus private schools, as well as students' household income, gender, race and grade level.

13% of students learning remotely full-time say they are excited about what they are learning **versus 44%** of those learning in-person full-time.

Overall, 18% of students strongly agree that they "learn a lot every day," while 31% strongly agree that at this same time last school year, they learned a lot every day.

However, those learning in-person full-time are much more likely to say they currently learn a lot every day than those in hybrid arrangements and those learning remotely full-time.

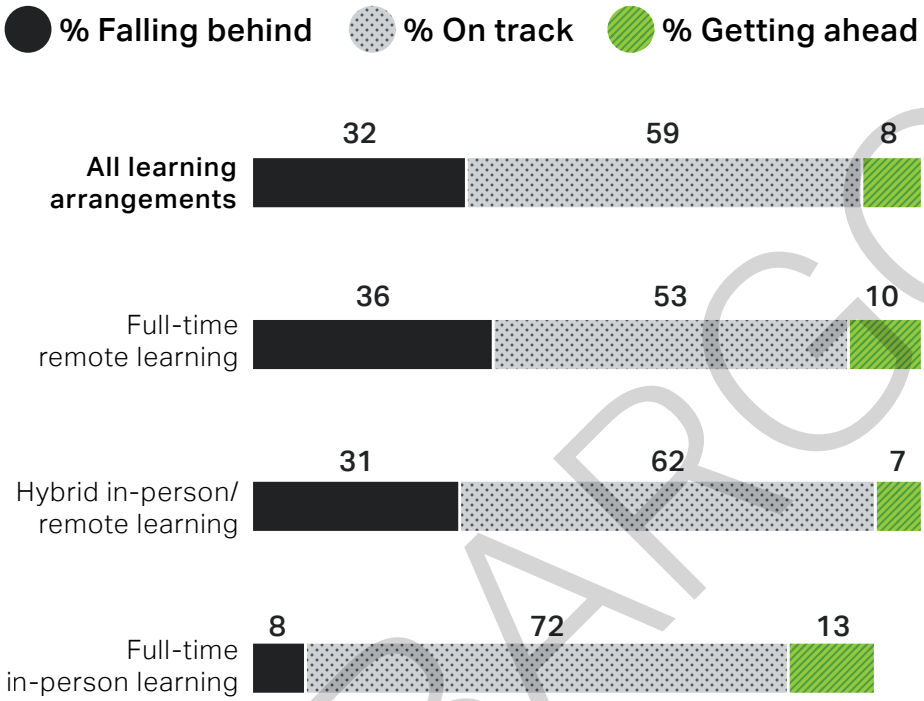
CHART 6: **I learn a lot every day.**



Students' responses to this question differ between those learning remotely full-time and those learning full-time in-person, even after controlling for school type, students' household income, gender, race and grade level.

About one-third of students in hybrid or full-time remote learning arrangements feel they are falling behind this year versus 8% of those who are learning full-time in-person.

CHART 7: **Thinking about your learning this year, do you feel like you are getting ahead, falling behind, or are on track?**



46% of students learning remotely in low-income households feel like they are **falling behind this year.**

The differences by learning arrangement remain significant even after accounting for whether students attend private or public district school, their household income, gender, race and grade level.

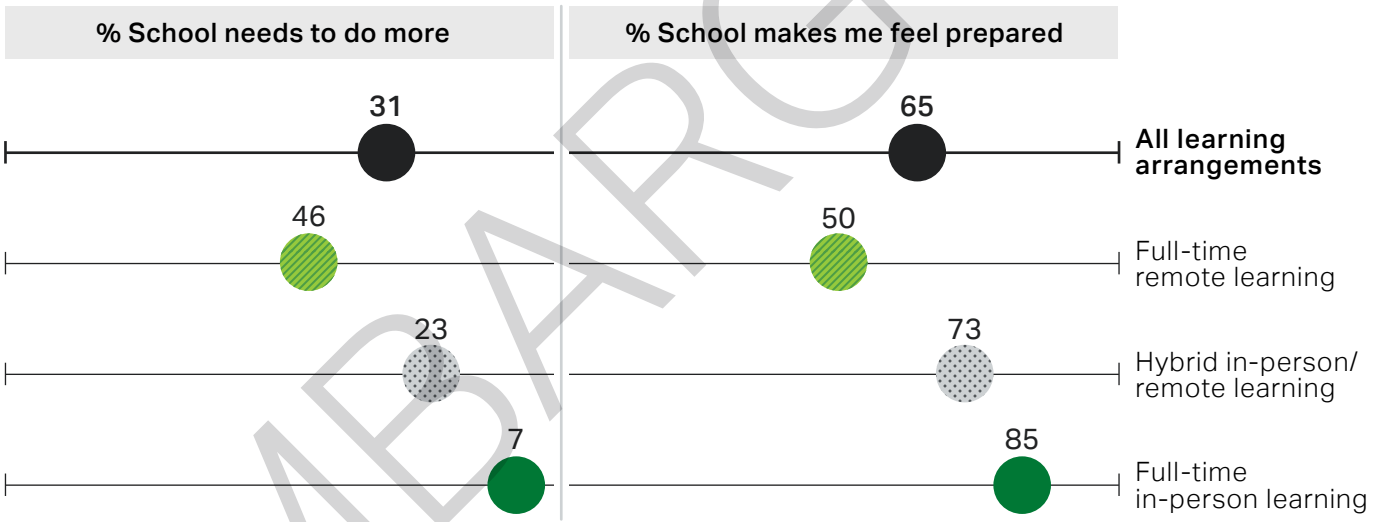
Students learning remotely full-time in households with incomes under $60,000 are particularly likely to say they are falling behind at 46% versus 39% of those in households making $60,000 to $119,000 and 26% of those in households making $120,000 or more.

Many U.S. students learning remotely were already feeling like they were behind prior to the fall 2020 semester. A New Schools Venture Fund-Gallup study conducted in the summer of 2020 found that about half of students in grades 9 through 12 (49%) felt they would need help to catch up from time spent learning at home in the spring semester.

Almost half of 11th- and 12th-graders learning remotely full-time (46%) say school needs to do more to help them feel prepared for their post-high school plans.

This figure drops to 23% among students in hybrid learning situations and 7% among those learning in-person full-time.

CHART 8: **[Asked of 11th- and 12th-grade students:] Do you feel that high school is preparing you [for your post-high school plans] or does school need to do more to help you feel prepared?**

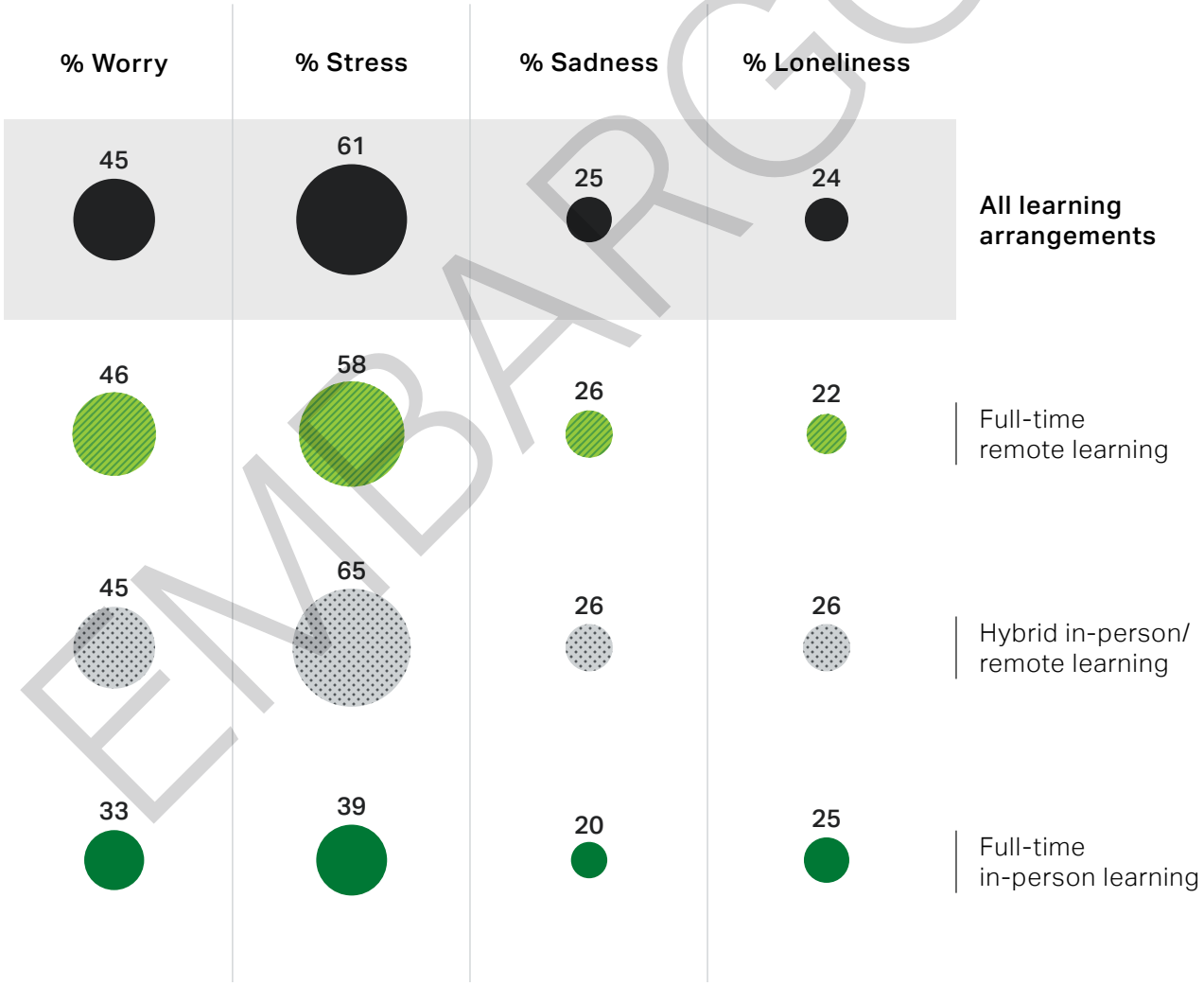


Anecdotal evidence suggests that many of the steps high school students take to prepare for college — including college visits, internships and other extracurricular activities — have been scaled back in light of health guidelines and the increase in other demands facing schools amid COVID-19.

As with other consequences of the pandemic, disadvantaged students may be disproportionately affected by having less resources devoted to college preparation. For example, data from the U.S. Department of Education show that as of January 1, 2021, the percentage of the 2021 senior class in Massachusetts completing an online Free Application for Federal Student Aid form had dropped 11.4% from the same time in the 2019-2020 academic year. The change was more pronounced among Massachusetts high schools with the largest proportions of minority and low-income students.

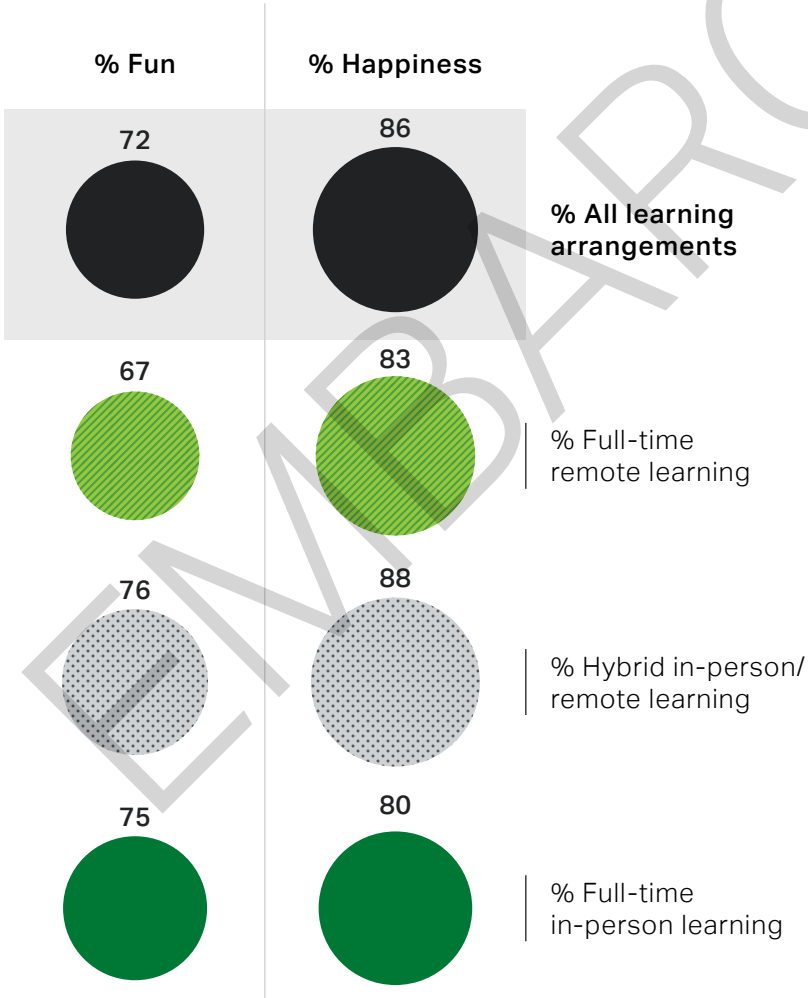
Students in hybrid or remote learning arrangements are much more likely than those learning in-person full-time to experience worry and stress. However, students' likelihood to have felt sad or lonely during a lot of the day was more consistent across learning modes.

CHART 9: **Did you experience the following feelings during a lot of the day yesterday? [Percentage "yes"]**



Students learning remotely full-time are somewhat less likely than those in hybrid arrangements or those learning full-time in-person to say they experienced "fun" for much of the previous day. However, students in hybrid or full-time remote learning arrangements are at least as likely as those learning full-time in-person to say they felt happy for much of the day.

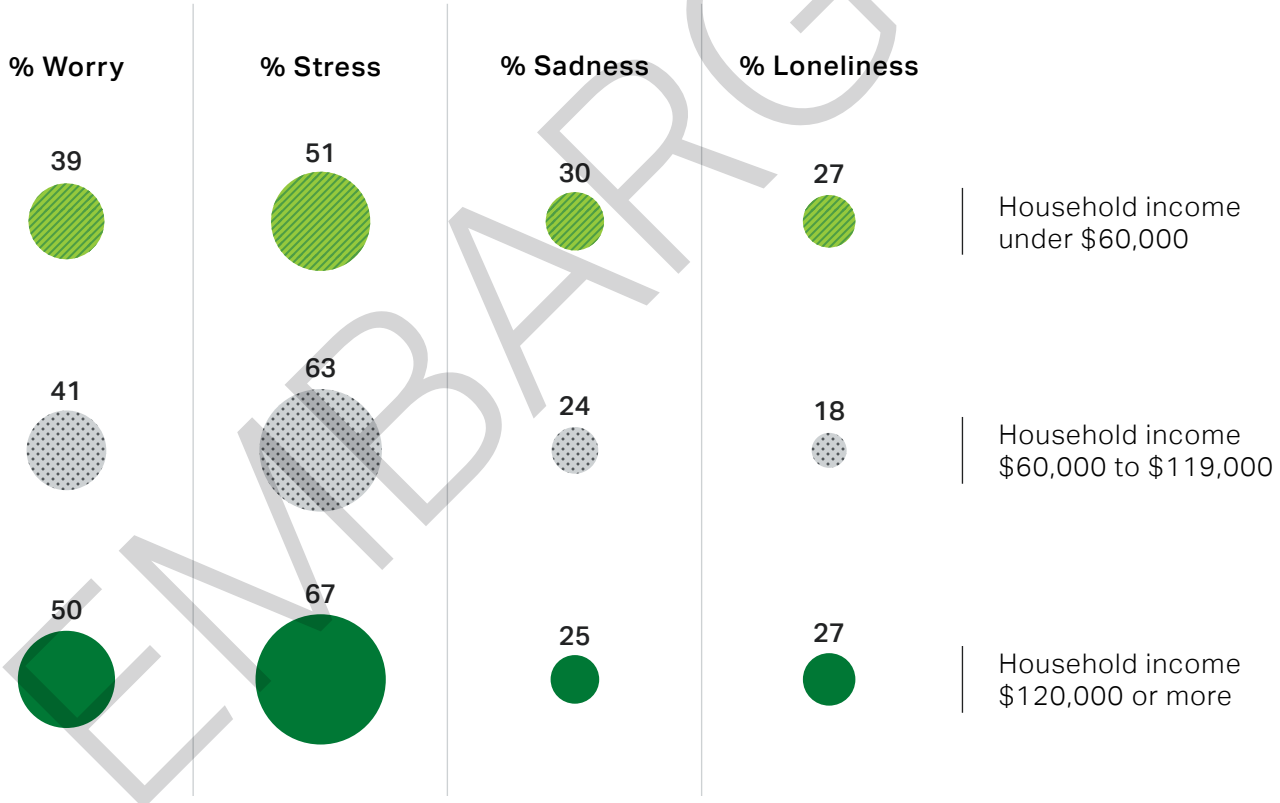
CHART 10: **Did you experience the following feelings during a lot of the day yesterday? [Percentage "yes"]**



Differences by learning arrangement should be considered in the context of other factors that may influence students' self-reported emotions.

Across all learning modes, students in higher household income groups are more likely than lower-income students to say they experienced worry and stress for much of the previous day. This makes the lower incidence of those emotions among full-time in-person learners even more striking, since higher-income students make up a disproportionate share of this group.*

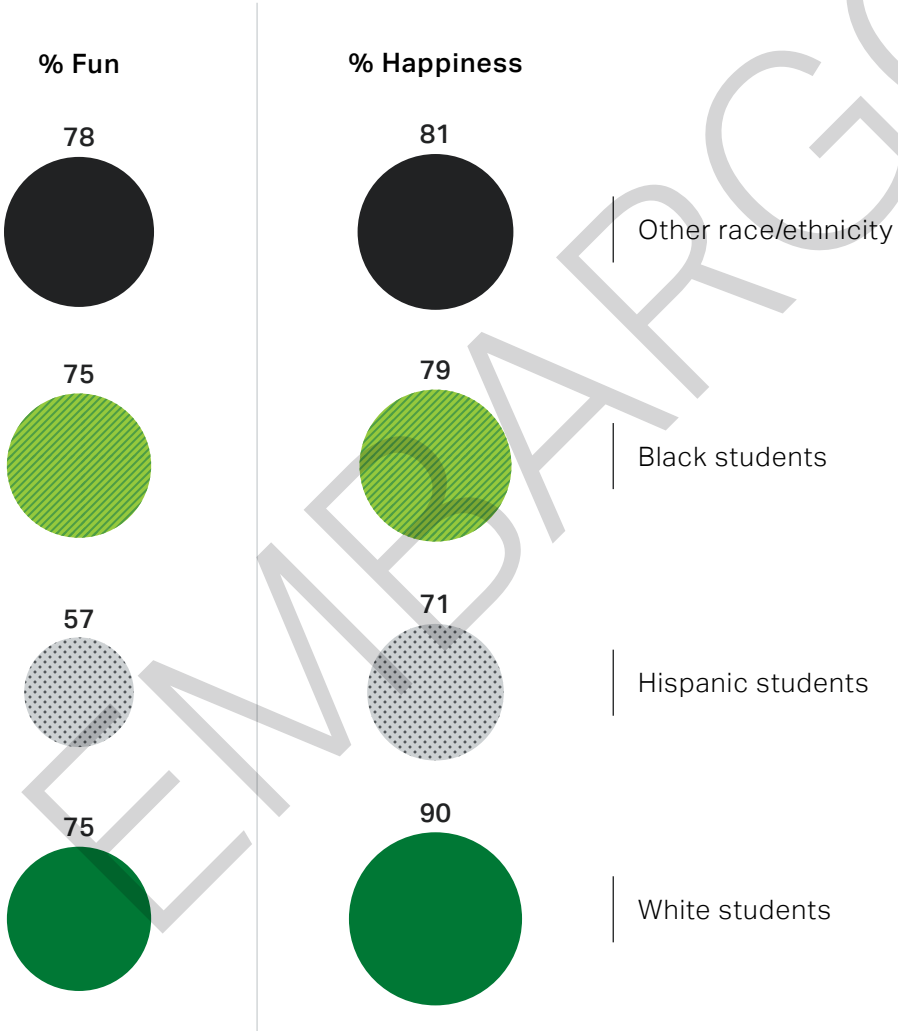
CHART 11: **Did you experience the following feelings during a lot of the day yesterday? [Percentage "yes"]**



*Sampling limitations prevent analysis by learning arrangement within students' income or racial/ethnic group.

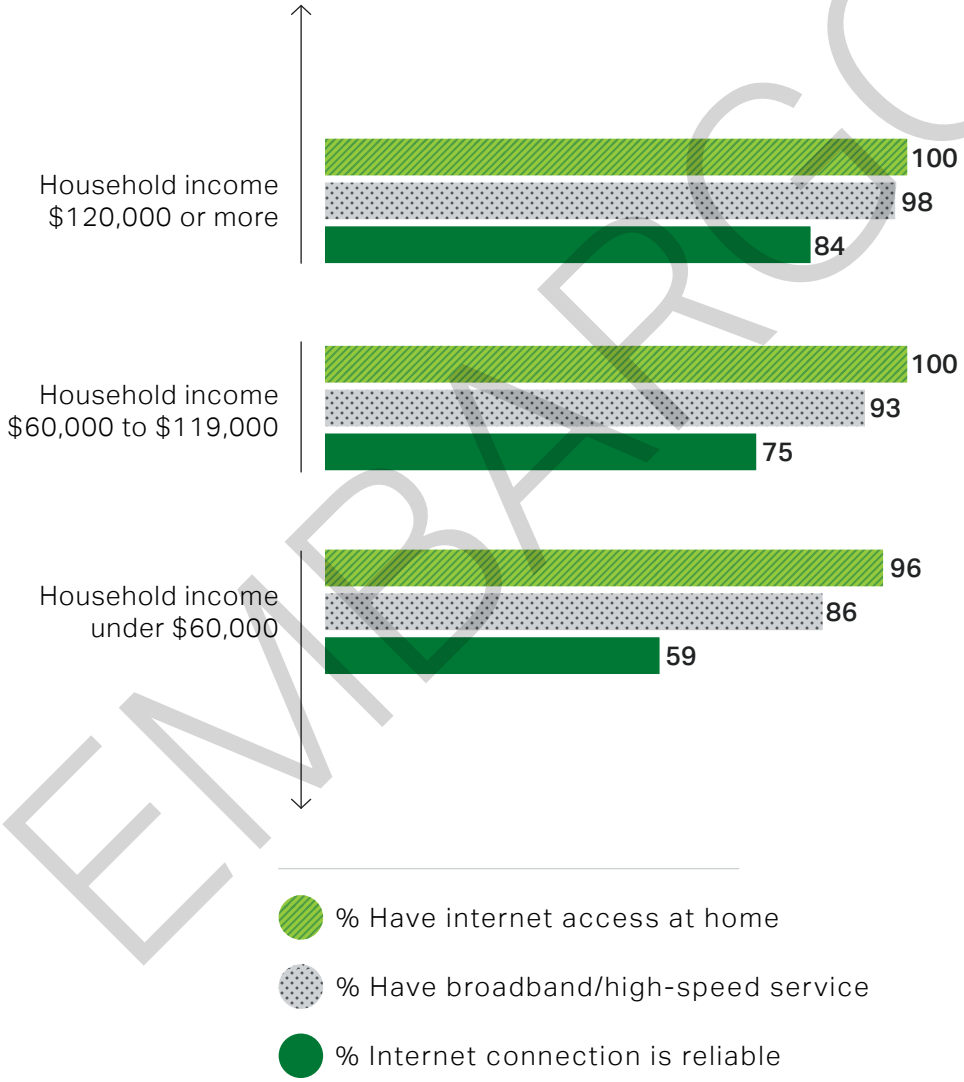
The survey also finds some differences in emotions by racial and ethnic group. Most notably, Hispanic students are considerably less likely to say they experienced fun or happiness for much of the previous day.

CHART 12: **Did you experience the following feelings during a lot of the day yesterday? [Percentage "yes"]**



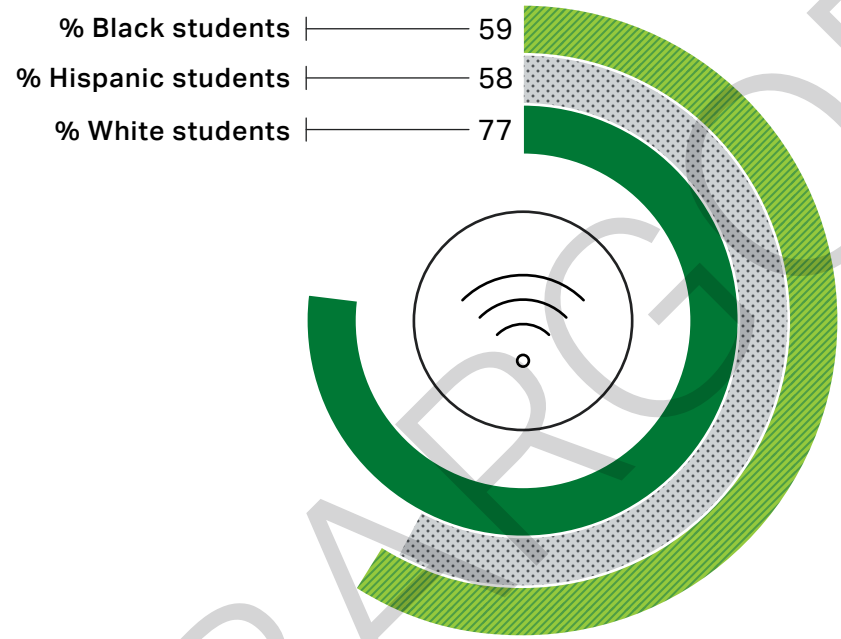
Parents in lower-income households are less likely to say their homes have high-speed service, and that they have a reliable internet connection.

CHART 13: **Access to online classes and services less reliable for students in lower-income households**



The differences by income group are similarly reflected in discrepancies between racial and ethnic groups. For example, 77% of White students live in households with broadband internet connections that their parents describe as "reliable." This figure falls to 59% for Black students and 58% for Hispanic students.

CHART 14: **Black and Hispanic students less likely to live in households with broadband service AND reliable internet access**
[What type of internet access do you have at home? How reliable is your internet connection?]



Students in lower-income households are less likely to talk with their parents about their schoolwork, and less likely to have access to help with technology issues from someone at home.

These disparities reflect the challenges facing lower-income parents and those with less formal education in helping their children succeed in a remote learning situation. Such parents are less likely to have jobs they can do from home and may have less experience with computing devices and online platforms than those with more levels of education.

CHART 15: **How often does your parent or guardian talk to you about your schoolwork or ask you how school is going?**

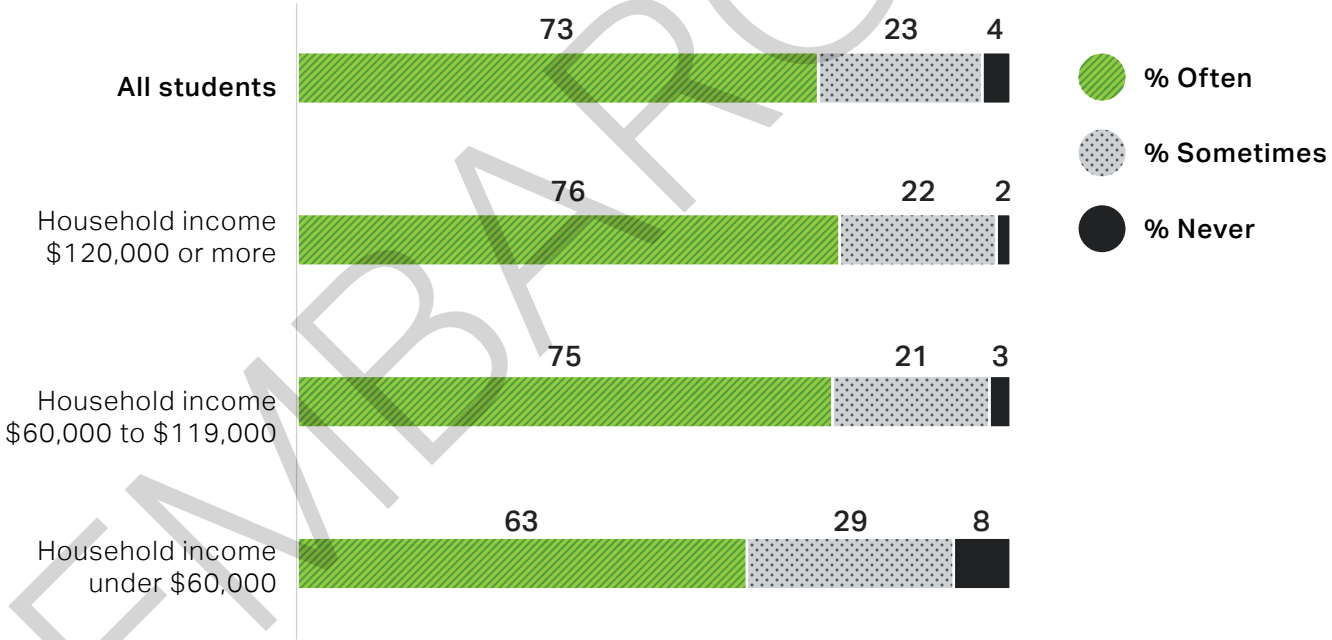
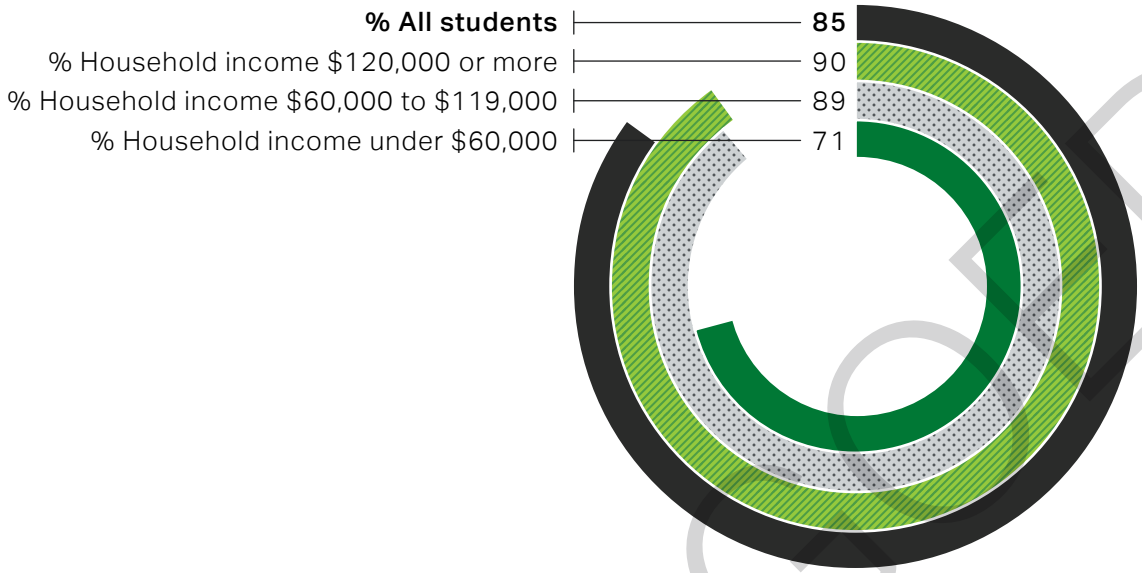


CHART 16: **If you have trouble accessing schoolwork or using technology, is there someone at home who you can ask for help? [Percentage "yes"]**



Methodology

Results for this study are based on telephone surveys conducted Nov. 18–Dec. 9, 2020, with 1,000 students aged 14 to 18 currently enrolled in Massachusetts high schools. Gallup secured permission to interview students from a parent or guardian and asked parents/guardians a limited set of questions about the household characteristics prior to talking to the selected student.

The study was conducted in English and Spanish, and includes students in private, public district and public charter schools. The survey covered landlines and cell phones and was drawn from listed landlines and a cell phone frame, which contains appended billing and ZIP code information. Although this cell phone frame does not cover all cell phone numbers, it does make it possible to target the location of the cell phone owner (such as the state of Massachusetts).

Survey results are weighted to be representative of the study population, using data from the Census Bureau's American Community Survey. For results based on the sample of all students, the margin of sampling error is ±4.0 percentage points at the 95% confidence level, accounting for the design effect from weighting. Margins of error for subgroups are higher.

In addition to sampling error, question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of public opinion polls.

Appendix: Public District vs. Private Schools

Private school students are much less likely to be doing fully remote schooling (22% vs. 42% for public district school students), and private school experiences and students are likely to differ in other ways besides remote status. Thus, this appendix discusses the analysis undertaken to clarify which significant differences are observed, if any, after controlling for mode of schooling.

Table 3 shows results from a regression of the following form:

$$Y = \beta X_i + D_i + P_s + \varepsilon$$

Here, Y represents one of several outcomes of interest, such as satisfaction and whether students report learning a lot every day at school. X represents whether the student is fully in-person, while controlling for hybrid models. The omitted group is students who are fully remote, so that the coefficient β can be interpreted as the mean difference between fully in-person and fully remote. These coefficients are reported in Table 3 in column 1. Column 2 indicates the t-statistic. Values at or above 1.96 are considered statistically significant.

Columns 3 and 4 report the results after controlling for whether the school is public or private. Comparing column 3 to column 1 shows the mean difference between being in-person compared to remote changes after controlling for whether the school is private. Columns 5 and 6 include controls for race, household income, gender and grade level. Thus, any significant effects in column 5 are robust to the most relevant observable differences between students learning under different modes.

TABLE 3: Estimated effects of in-person learning vs. full-time remote learning

	No controls		Control for public vs. private schools		Control for household income, gender, race, grade	
	1	2	3	4	5	6
	Full-time in-person vs. at-home	T-stat	Full-time in-person vs. at-home	T-stat	Full-time in-person vs. at-home	T-stat
Satisfied with school this year.	0.255***	(4.071)	0.130*	(1.954)	0.106	(1.489)
Falling behind.	-0.280***	(-4.230)	-0.212***	(-2.976)	-0.179**	(-2.266)
At my school, I get to do what I do best every day.	0.227***	(4.194)	0.120**	(2.102)	0.0590	(0.951)
I have fun at school.	0.159***	(3.119)	0.0897*	(1.651)	0.0224	(0.380)
I have a best friend at school.	0.0740	(1.057)	0.0382	(0.508)	0.0499	(0.603)
In the last seven days, someone has told me I have done good work at school.	-0.0443	(-0.622)	-0.148*	(-1.944)	-0.222***	(-2.683)
In the last seven days, I have learned something interesting at school.	0.157**	(2.273)	0.00621	(0.0853)	-0.0703	(-0.885)
Adults at my school care about me.	0.183**	(2.573)	0.0649	(0.858)	-0.0301	(-0.366)
I have at least one teacher who makes me excited about the future.	0.113	(1.597)	0.00169	(0.0224)	-0.0547	(-0.667)
My schoolwork challenges me in a good way.	0.352***	(5.841)	0.259***	(4.034)	0.213***	(3.030)
I learn a lot every day.	0.251***	(4.663)	0.177***	(3.078)	0.134**	(2.203)
My school makes me feel included.	0.228***	(3.358)	0.101	(1.410)	0.0652	(0.833)
I am excited about what I am learning.	0.300***	(5.753)	0.238***	(4.274)	0.202***	(3.333)
Teachers are available to answer my questions or give me extra help.	0.127*	(1.804)	0.0363	(0.486)	-0.0283	(-0.345)
My teachers understand my life at home.	0.177***	(3.192)	0.116**	(1.967)	0.0640	(0.979)
I feel motivated to get good grades.	0.149**	(2.131)	-0.0185	(-0.252)	-0.0787	(-0.981)
My schoolwork is preparing me to succeed.	0.355***	(5.739)	0.179***	(2.779)	0.139**	(1.997)
I feel confident in my ability to succeed.	0.136**	(1.975)	0.100	(1.360)	0.0868	(1.086)
I feel motivated to learn.	0.233***	(3.839)	0.116*	(1.811)	0.0808	(1.145)

* Significant at the p<0.10 level

** Significant at the p<0.05 level

*** Significant at the p<0.01 level

UNDER EMBARGO UNTIL
8:00 AM ET 02/02/21

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