

To: Institutions using the HEDS COVID-19 Institutional Response Student Survey
From: Charlie Blaich and Kathy Wise
Re: Preliminary survey findings with a focus on student identity
Date: May 15, 2020 (*updated Figures 6 & 7 on 7/7/20*)

The HEDS COVID-19 Institutional Response Student Survey has been open for around a month and a half. In this memo, we'll review how students with different identities experience their institution's response to COVID-19. We'll also update some of the preliminary findings that we've reported in previous memos.

Data for this report

The data for this report are from roughly 20,000 students who took the HEDS COVID-19 Institutional Response Student Survey between April 1 and April 30. These students are from 40 institutions that include smaller private colleges and universities, public regional universities, and community colleges. About two-thirds of the students who responded are women, and two-thirds of the students are White.

We are reviewing data from our COVID-19 surveys as they come in. About two-thirds of the institutions that have registered for the survey have completed it. Even though the data have been stable to date, we would still characterize the findings we describe below as “preliminary” since they may change as more students take the survey. We will continue to issue short summaries of the patterns we see during the spring, and we will note whether the findings of our earlier memos change.

Finally, we've included details of our analyses in the Appendix and footnotes so you can see how we came to our conclusions, and you can duplicate them for your institution if you wish.

Stress

We asked students, “Overall, how much stress are you feeling about the potential consequences of the spread of COVID-19?” As you can imagine, most students reported that they felt at least some stress, and the majority of students reported feeling a great deal of stress (see Figure 1 below).

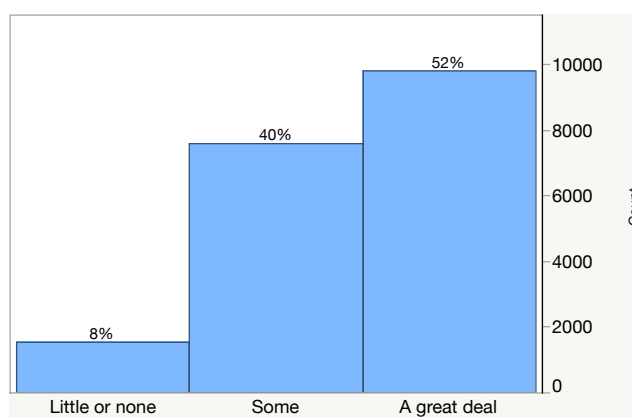


Figure 1: Students' overall level of stress

The picture gets more complicated when we look at the relationship between stress and student identity. We begin by looking at the relationship between stress, gender, and race/ethnicity (see Figure 2 on the next page). Overall:

- Non-binary students reported the highest levels of stress, more than that of students who identify as men or women. Over 70% of non-binary students reported feeling a great deal of stress, compared with 57% of women and 40% of men.

- Women reported the next highest level of stress.
- Men reported lower levels of COVID-19-related stress than women and non-binary students, and White men reported the lowest levels of stress.

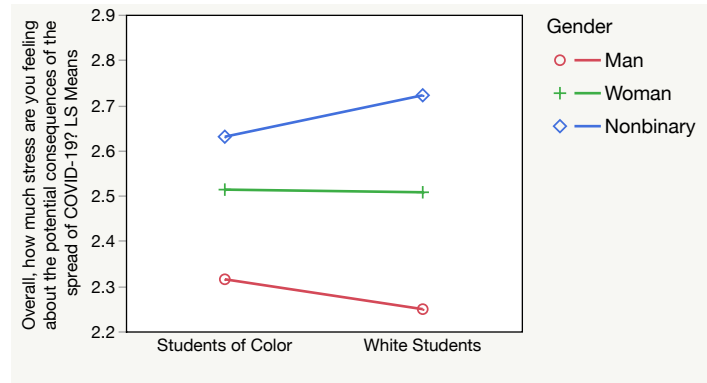


Figure 2: Mean overall stress level by gender and race/ethnicity¹

Juniors and seniors reported slightly more stress than first-year students. Fifty-six percent of juniors and seniors reported experiencing a great deal of stress, while 48% of first-year students reported that much stress.

Worries

We also asked students how much they worried about each of seven different areas. In Figure 3 below, we show the percent of students who reported worrying “often” or “very often” about each specific area of concern.

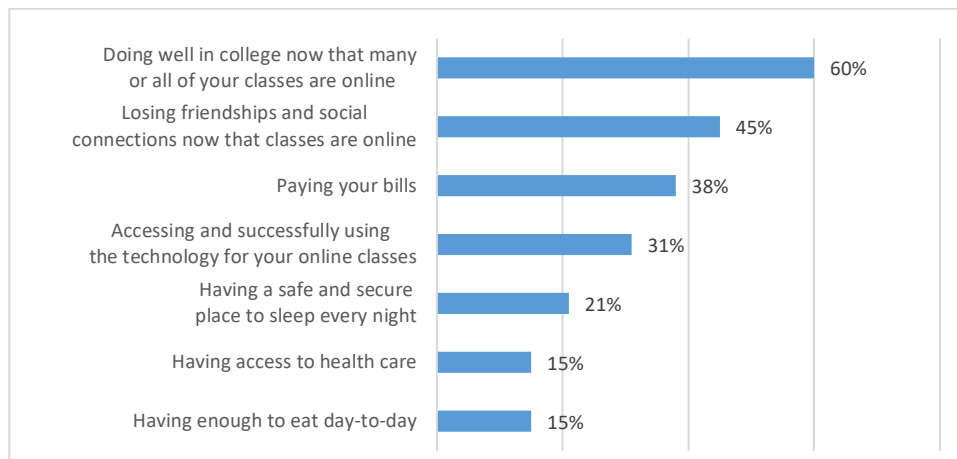


Figure 3: Percent of students who worried often/very often

While successfully adapting to their suddenly all-online learning environment and losing friendships were the biggest concerns, a substantial number of students worried about necessities such as access to health care, a safe place to stay, and having enough to eat.

¹ This graph was generated using two-factor ANOVA with racial/ethnic identity, gender identity, and the interaction of racial/ethnic identity and gender identity as the independent variables and students’ reports of how much stress they felt as the dependent measure. For this analysis, we made students’ reports of their stress into a continuous 3-point variable (1 = little or none; 2 = some; 3 = a great deal). We used contrasts to run significance tests on different combinations of identity and stress, for example, White men versus men who do not identify as White. See the first analysis in the Appendix for more detail.

To get a better sense of how students from different backgrounds experienced these worries, we combined these seven worries into a single scale we've called the Student Worries Scale.² Overall, non-binary students were, on average, more worried than women and men across the seven areas of concern that we asked about in the survey. And, overall, Students of Color were more worried than White students (see Figure 4 below).

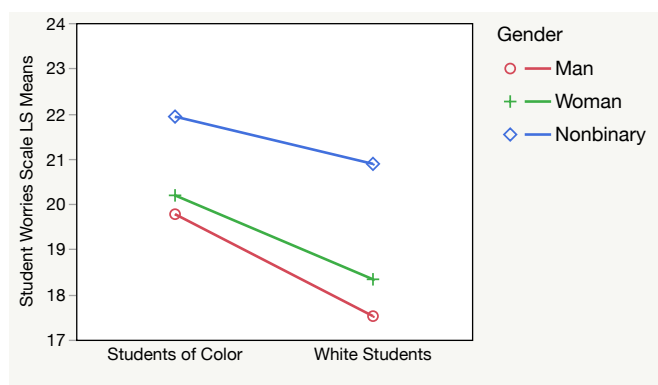


Figure 4: Mean score on Student Worries Scale by gender and race/ethnicity³

The differences between White students and Students of Color were larger on questions about necessities. For example, White students, African American/Black students, and Hispanic/Latino students reported roughly similar levels of worry about doing well in college now that classes are online (see Figure 5 below).

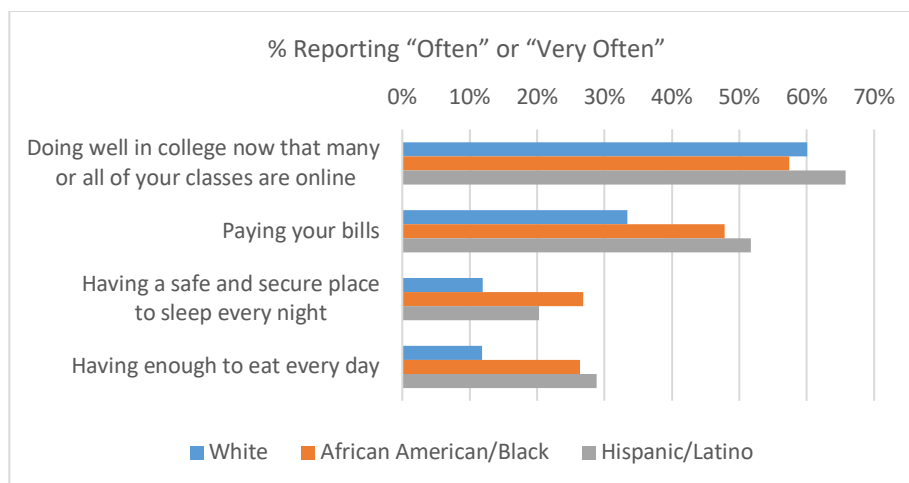


Figure 5: Percent of students who worried often/very often

However, the percent of White students who worried about paying bills, having a safe and secure place to sleep, and having enough to eat is much smaller than that of their African American/Black and Hispanic/Latino peers. Students who were not U.S. citizens or permanent residents also worried more about these necessities than students who identified their race as White.

Overall, students who come from less socially- or economically-privileged backgrounds feel more COVID-19 related stress and worries than students from more privileged backgrounds. This is consistent with the fact that, to

² See the Appendix for a description of this scale.

³ This graph was generated using two-factor ANOVA with racial/ethnic identity, gender identity, and the interaction of racial/ethnic identity and gender identity as the independent variables and students' scores on the Student Worries Scale as the dependent variable. Scores on the Student Worries Scale range from 7-35 points. We used contrasts to run significance tests on different combinations of identity and institutional support. See the second analysis in the Appendix for more detail.

date in the United States, people with less social and economic privilege are more likely to experience negative health, social, economic, and other consequences from COVID-19 than more privileged people.

Students' experience of institutional support

Below, Figure 6 shows the proportion of students who agreed or strongly agreed with each of five statements about their institution's response to COVID-19 this spring.

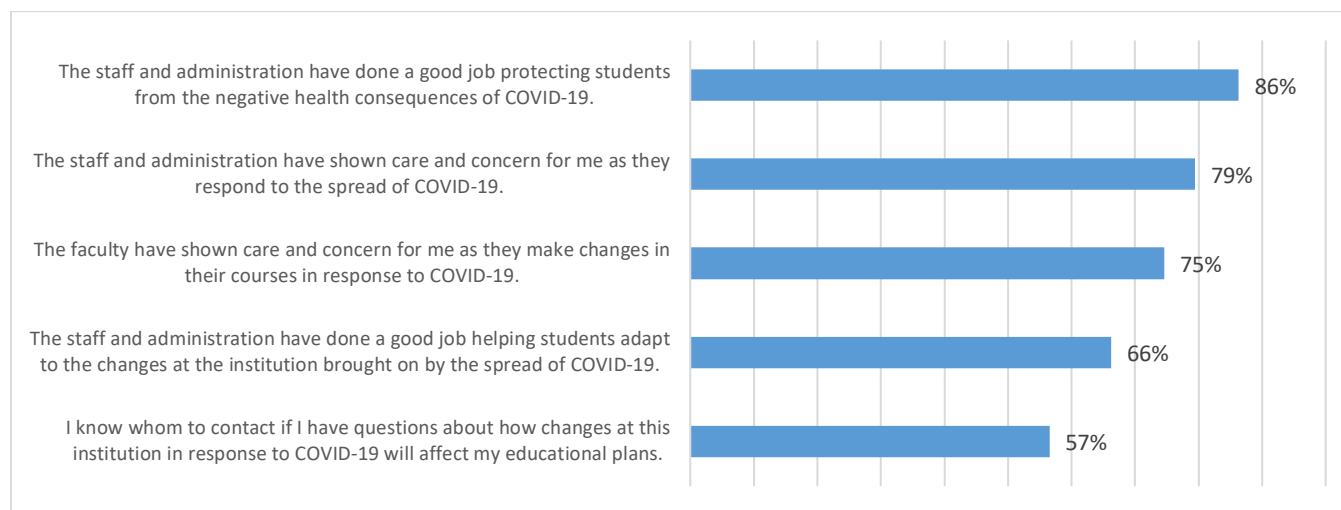


Figure 6: Percent of students who agreed/strongly agreed

Overall, students agreed that they were getting strong support from their institution, staff, faculty, and administration. Likewise, students were generally satisfied with the support they were getting to transition to online classes and figure out the impact of COVID-19 on their educational plans (see Figure 7 below).⁴

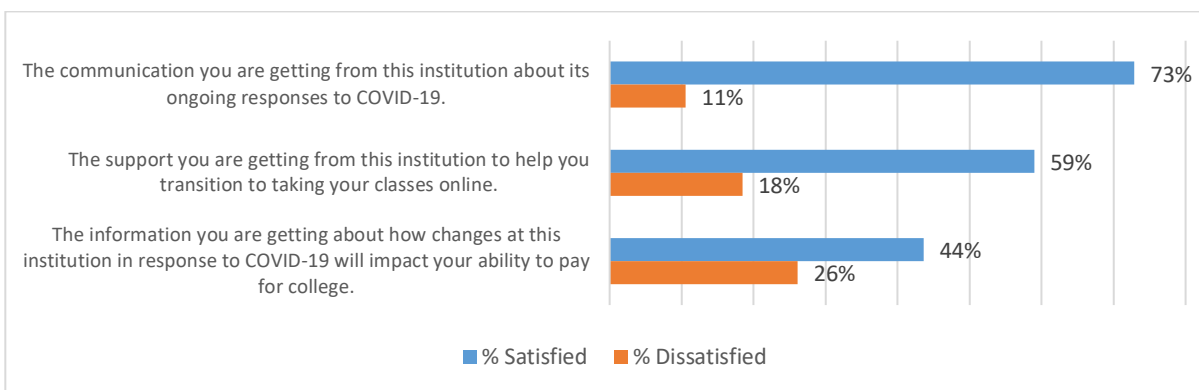


Figure 7: Percent of students who were satisfied vs. dissatisfied

One item that concerns us is that 26% of students were dissatisfied with the information they were getting about how changes at their institution in response to COVID-19 would impact their ability to pay for college.

To get a better sense of whether there are differences in how students from different backgrounds experienced their institution's response, we combined the eight questions from Figures 6 and 7 into one scale (Institutional Support) and looked at how students from different gender and racial/ethnic identities responded overall to this set of questions. In this analysis, lower scores indicate that students had less favorable views about their institution's

⁴ We've included more information about these questions and the scale they form in the Appendix.

efforts to support them. As you can see in Figure 8 below, compared with men and women, non-binary students had substantially less favorable views about their institution’s level of support.

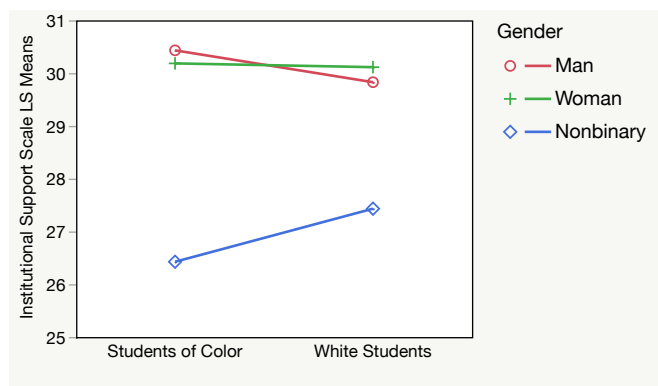


Figure 8: Mean Institutional Support Scale scores by gender and race/ethnicity⁵

Non-binary Students of Color had the least favorable response regarding their institution’s efforts to support them. We also looked at the relationship between different racial/ethnic identities on the Institutional Support Scale and each of the eight questions that compose the scale, and we noted only one consistent difference: Students who were not U.S. citizens or permanent residents had significantly more favorable responses to their institution’s efforts to support them than students with any other racial or ethnic identity that we asked about in the survey.

Plans to return to their institution next fall

In mid-April we reported that most first-year, sophomore, and junior students planned to return to their institution in the fall. Despite now having more students from a more diverse range of institutions, this finding remains the same. Most first-year, sophomore, and junior students reported “definitely yes” (70%) or “probably yes” (21%) when asked whether they planned to return to their institution in the fall. However, because we have a larger data set, we can look at how students from different backgrounds answered this question. Below, Figure 9 includes the percentage of women, men, and non-binary students who responded “probably yes” or “definitely yes” to the question about returning to their institution in the fall.

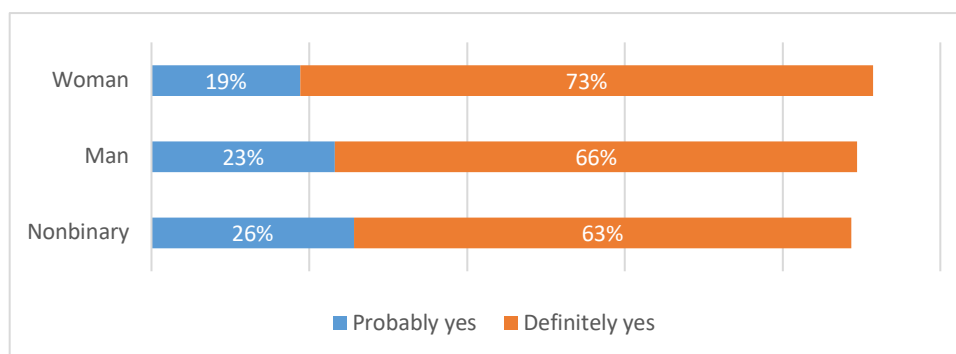


Figure 9: Percent of students who plan to return to their institution in the fall by gender

Women were the most likely to answer “definitely yes” compared to men and nonbinary students who were less likely to answer “yes” and more likely to answer “probably yes.” If we look at a subset of the IPEDS

⁵ This graph was generated using two-factor ANOVA with racial/ethnic identity, gender identity, and the interaction of racial/ethnic identity and gender identity as the independent variables and students’ scores on the Institutional Support Scale as the dependent variable. Scores on the Institutional Support Scale range from 8-40 points. We used contrasts to run significance tests on different combinations of identity and institutional support. See the third analysis in the Appendix for more detail.

race/ethnicity categories,⁶ we see a similar shift with White students being most likely to report “definitely yes” and Students of Color being less likely to report “definitely yes” and more likely to report “probably yes” (see Figure 10 below).

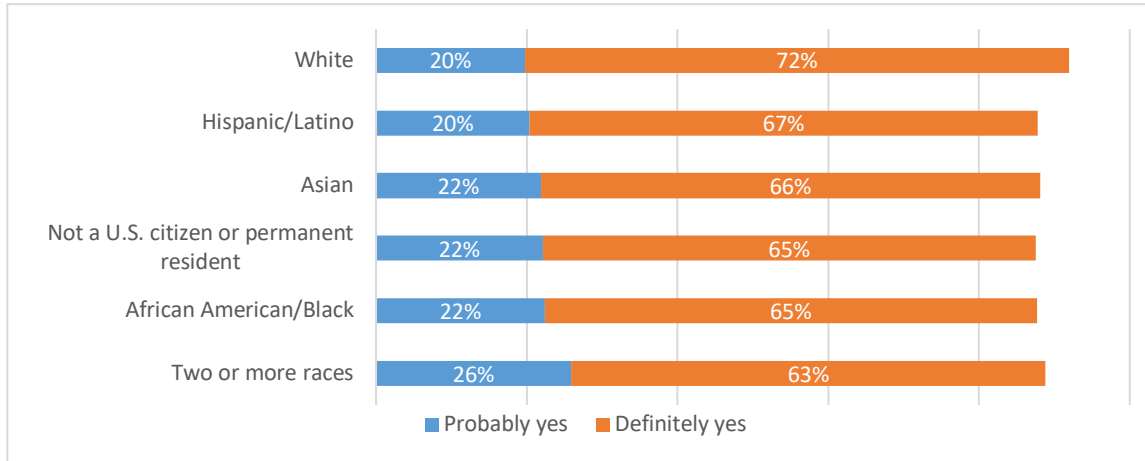


Figure 10: Percent of students who plan to return to their institution in the fall by race/ethnicity

In the previous section of this memo, we reviewed data about students’ sense of institutional support during the COVID-19 challenges. How does students’ sense of support relate to their intention to return? In Figure 11 below, we show the mean Institutional Support Scale⁷ score broken down by how students responded to our question of whether or not they intend to return to their institution in the fall.

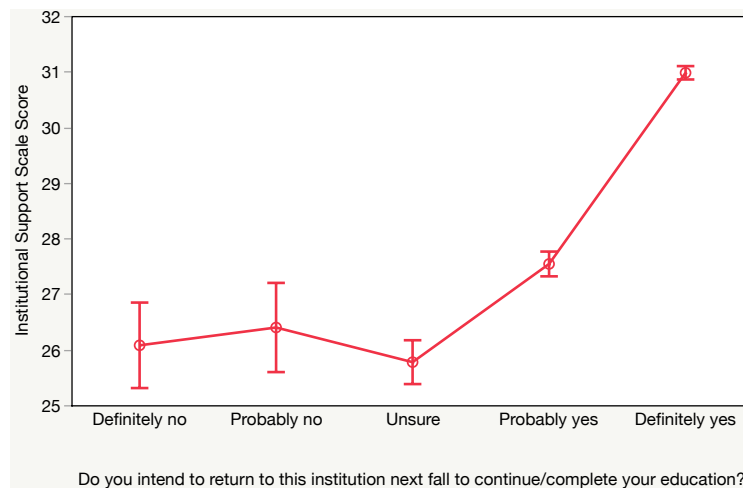


Figure 11: Mean score on Institutional Support Scale by intention to return

Students who say that they will definitely return also have much more positive views of their institution’s efforts to support them. Indeed, the view of institutional support does not differ substantially among students who are less definite about returning in the fall, even if they said they would probably return.

⁶ We excluded students in the IPEDS race/ethnicity categories of Native Hawaiian/Pacific Islander and American Indian/Alaska Native because we had fewer than 25 students in each of these categories among first-years, sophomores, and juniors who responded to this question.

⁷ +/- the 95% confidence interval.

Finally, in the memo we issued in mid-April, we used multiple regression to see what factors were influencing students' intention to return to their institution in the fall. In that report, we identified four significant factors in the following order of impact:

1. Students' sense of connection with their institution.
2. Students' sense of the support they are getting from their institution during COVID-19.
3. Students' concern about the impact of COVID-19 on their lives and education.
4. Students' racial/ethnic identity, with Students of Color being less certain than White students about whether they will return to their institution.

We re-ran that analysis on this larger and more diverse data set and found a few small changes in the number and relative strength of the factors. We now see five significant factors and list them below in order of impact (note: the impact of the last three is essentially equivalent):

1. Students' sense of connection with their institution.
2. Students' sense of the support they are getting from their institution during COVID-19.
3. Students' concern about the impact of COVID-19 on their lives and education.
4. Students' racial/ethnic identity, with Students of Color being less certain than White students about whether they will return to their institution.
5. Students' gender, with men and nonbinary students being less certain than women about whether they will return to their institution.

Students' sense of connection and institutional support have, by far, the most impact on their intention to return to their institution in the fall.⁸ To ensure that support and connection were the most important factors for students from different backgrounds, we used multiple regression to analyze separately the impact of connection and sense of support on students' intention to return for each gender and for five different racial/ethnic identities.⁹ Students' sense of connection to their institution had a significant impact on their intention to return for every group. Students' sense of institutional support had a significant impact on their intention to return for every group except non-binary students and students who were not U.S. citizens or permanent residents.

Summary

Like many of us, students have great stress and worry about the evolving COVID-19 pandemic. More than that, students who have less privileged identities, experiences, and backgrounds are experiencing these stresses and worries more acutely. Another way of thinking about this is that students who have not felt as welcomed to our campus communities are paying a steeper price than majority students as the COVID-19 pandemic rolls on.

But there are things we can do. Even after taking gender and race/ethnicity into account, the greater the overall sense of support that students feel, the lower their level of stress and worry. The more students report satisfaction with the communication from their institution, say that their institution is doing a good job helping them adapt to changes propelled by COVID-19, or feel that people at the institution are showing care and concern for them, the lower their levels of stress and worry. To be effective, we believe it's important to make an extra effort to reach out and support the students at your institution who may not see themselves as full members of your community and to consider the kinds of support that would be most helpful for them. As we noted earlier in this memo, less privileged students are more likely to worry about necessities like food, shelter, and health care—things that many

⁸ The standardized betas in this analysis for sense of connection and sense of institutional support are 0.19 and 0.18 respectively, the standardized betas for the remaining variables are around 0.05. See the fourth analysis in the Appendix for more detail.

⁹ Women, men, and nonbinary students; Asian, African American/Black, White, Hispanic/Latino, Not a U.S. citizen or permanent resident, and Two or more races. We did not have a sufficient number of students who identified as American Indian/Alaska Native or Native Hawaiian/Pacific Islander to run an analysis on those two groups.

of them had when they were in residence at our institutions. These students are also more likely to worry about how COVID-19 will impact their ability to afford their institutions.

It is interesting to us that international students had the most favorable perspectives about their institution's support compared to students in the other racial and ethnic categories we analyzed. We wonder whether this may, in part, be due to the exceptional efforts that many institutions made to provide food, shelter, and maybe even health care for their international students. We're not suggesting that institutions necessarily could have extended such support to a larger number of students, but we wonder if not getting such support might have affected how students' from less privileged backgrounds judged their institution's commitment to them.

Perhaps the most important thing that institutions can do is to make sure that both their outreach *and* their "listening" efforts are reaching diverse members of their student communities. Please note our emphasis on both reaching out *and* listening to. In her lovely essay, "Hope Matters,"¹⁰ Mays Imad reflected on her experience as a middle school student in Baghdad in the 1991 Persian Gulf War and what her teachers did to support her and give her "a tiny sense of normalcy" in the midst of that war. Reflecting on that experience, she reviewed ten things that teachers could do to help their students in the midst of the COVID-19 crisis. The last of these ten items is asking *each* of your students how you can help them:

"Most important, ask each of your students how you can help them. The Persian poet Rumi says, 'Out beyond ideas of wrongdoing and rightdoing there is a field. I'll meet you there.' Likewise, in times of uncertainty and unknowing, we can create space where our students' voice and insights can illuminate the path we are carving out for them—and us."

We hope this is helpful. We'll continue to send out updates as the data come in. Please let us know if you have any questions, thoughts, comments, or suggestions.

Charlie Blaich – charles.blaich@gmail.com and Kathy Wise – kathyswise@gmail.com

¹⁰ <https://www.insidehighered.com/advice/2020/03/17/10-strategies-support-students-and-help-them-learn-during-coronavirus-crisis>. Mays Imad is the coordinator of the Teaching & Learning Center at Pima Community College.

Appendix

Analysis of the quantitative data

Below we've included information on how we scored and analyzed the data for this memo. We are happy to send you SPSS syntax for our scales or for instances in which we reverse coded the data.

Student Stress Question

- Question: Overall, how much stress are you feeling about the potential consequences of the spread of COVID-19?
 - Little or none
 - Some
 - A great deal
 - *Scoring for each response option:* Little or none = 1; Some = 2; A great deal = 3

Student Worries Scale (Overall Cronbach's alpha = 0.77; Cronbach's alpha ranged from 0.73 to 0.78 for different gender and ethnic identities)

We measured this construct using the following 7 questions from the survey (Question 3):

- Question: Given the changes at [Institution Name] caused by the spread of COVID-19, how often do you worry about the following?
 - Doing well in college now that many or all of your classes are online
 - Losing friendships and social connections now that classes are online
 - Accessing and successfully using the technology needed for your online classes
 - Having access to health care
 - Paying your bills (e.g., tuition, loans, rent, internet access, medical)
 - Having a safe and secure place to sleep every night
 - Having enough to eat day-to-day
 - *Response options for these questions:* Very often; Often; Sometimes; Almost never; Never
 - *Scoring for each response option:* Very often = 5; Often = 4; Sometimes = 3; Almost never = 2; Never = 1

Institutional Support Scale (Overall Cronbach's alpha = 0.89; Cronbach's alpha ranged from 0.88 to 0.89 for different gender and ethnic identities)

We measured this construct using the following 8 questions from the survey (Questions 1 and 2):

- Question: Please indicate your level of agreement with each of the following statements about [Institution Name].
 - Overall, the staff and administration at [Institution Name] have done a good job protecting students from the negative health consequences of COVID-19.
 - Overall, the staff and administration at [Institution Name] have done a good job helping students adapt to the changes at the institution brought on by the spread of COVID-19.
 - Overall, staff and administration at [Institution Name] have shown care and concern for me as they respond to the spread of COVID-19.
 - Overall, faculty at [Institution Name] have shown care and concern for me as they make changes in their courses in response to COVID-19.
 - I know whom to contact if I have questions about how changes at [Institution Name] in response to COVID-19 will affect my educational plans.

- *Response options for these 5 survey questions:* Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree
- *Scoring for each response option:* Strongly agree = 5; Agree = 4; Neither agree nor disagree = 3; Disagree = 2; Strongly disagree = 1
- *Question:* Please indicate your level of satisfaction with [Institution Name] about the following:
 - The support you are getting from [Institution Name] to help you transition to taking your classes online
 - The communication you are receiving from [Institution Name] about its ongoing responses to COVID-19
 - The information you are getting about how changes at [Institution Name] in response to COVID-19 will impact your ability to pay for college (e.g., financial aid, student loans, campus jobs)
 - *Response options for these 3 survey questions:* Very satisfied; Generally satisfied; Neither satisfied nor dissatisfied; Generally dissatisfied; Very dissatisfied
 - *Scoring for each response option:* Very satisfied = 5; Generally satisfied = 4; Neither satisfied nor dissatisfied = 3; Generally dissatisfied = 2; Very dissatisfied = 1
 - *Note:* For some of our graphs we combined “Very satisfied” and “Generally satisfied” into the category “Satisfied,” and “Very dissatisfied” and “Generally dissatisfied” into “Dissatisfied.”

On the last four pages of the Appendix, we’ve copied the JMP 15.1 Statistical Software output for the ANOVAs we reviewed on pages 2, 3, and 5, and the overall multiple regression analysis that we reviewed on page 7. For the multiple regression analysis, we used the following dependent and independent variables.

Dependent variable

Students’ confidence that they will return to their institution

We measured this using the following question and response options:

- *Question:* Do you intend to return to [Institution Name] next fall to continue and/or complete your education?
- *Response options:*
 - Definitely yes
 - Probably yes
 - Probably no
 - Definitely no
 - Unsure
 - Not applicable because I am graduating
- *Scoring for each response option:* Definitely yes = 5; Probably yes = 4; Unsure = 3; Probably no = 2; Definitely no = 1; Not applicable because I am graduating = 0
- *Note:* For analyses on intent to return, we eliminated students who answered, “Not applicable because I am graduating” as well as seniors who answered, “Definitely no” or “Probably no.”

Independent variables

Students’ connection with their institution

To measure this construct we used the following question and response options:

- *Question:* How connected do you feel to [Institution Name]?

- *Response options:*
 - Very strong connection
 - Some connection
 - Very little connection
 - No connection
- *Scoring for each response option:* Very strong connection = 4; Some connection = 3; Very little connection = 2; No connection = 1

Institutional Support Scale

See previous description.

Student Worries Scale

See previous description.

Gender

We used the following question to determine students' gender identity:

- *Question:* What is your gender?
- *Response options:*
 - Man
 - Woman
 - Non-binary, please specify: _____

Race/ethnicity

Using multiple questions from the survey, we derived the following racial/ethnic identities:

- American Indian/Alaska Native
- Asian
- African American/Black
- Native Hawaiian/Pacific Islander
- White
- Hispanic/Latino/a
- Not a U.S. citizen or permanent resident
- Two or more races
- Unknown

Please note, we gave institutions the option of eliminating a question on citizenship status.

Summary of Fit

RSquare	0.034507
RSquare Adj	0.034248
Root Mean Square Error	0.627615
Mean of Response	2.437802
Observations (or Sum Wgts)	18650

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	5	262.4692	52.4938	133.2667
Error	18644	7343.8807	0.3939	Prob > F
C. Total	18649	7606.3499		<.0001*

Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t	Std Beta
Intercept	2.4894947	0.011872	209.70	<.0001*	0
Gender[Man]	-0.207427	0.012896	-16.08	<.0001*	-0.16328
Gender[Woman]	0.0208687	0.012405	1.68	0.0925	0.017168
Race/Ethnicity Students of Color-White[Students of Color]	-0.003285	0.011872	-0.28	0.7820	-0.00472
Gender[Man]*Race/Ethnicity Students of Color-White[Students of Color]	0.036293	0.012896	2.81	0.0049*	0.032592
Gender[Woman]*Race/Ethnicity Students of Color-White[Students of Color]	0.0062231	0.012405	0.50	0.6159	0.00762

Effect Tests

Source	Nparm	DF	Sum of Squares	F Ratio	Prob > F
Gender	2	2	198.38039	251.8154	<.0001*
Race/Ethnicity Students of Color-White	1	1	0.03016	0.0766	0.7820
Gender*Race/Ethnicity Students of Color-White	2	2	4.25872	5.4058	0.0045*

Effect Details

Gender

Race/Ethnicity

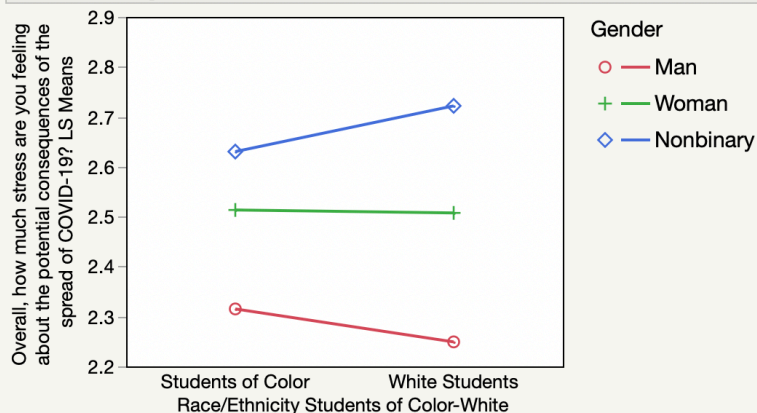
Students of Color-White

Gender*Race/Ethnicity Students of Color-White

Least Squares Means Table

Level	Least Sq Mean	Std Error
Man,Students of Color	2.3150756	0.01433449
Man,White Students	2.2490594	0.00993963
Woman,Students of Color	2.5133016	0.01050264
Woman,White Students	2.5074252	0.00670795
Nonbinary,Students of Color	2.6302521	0.05753337
Nonbinary,White Students	2.7218543	0.03611518

Least Squares Means Plot



Summary of Fit

RSquare	0.029524
RSquare Adj	0.029262
Root Mean Square Error	5.863903
Mean of Response	18.72743
Observations (or Sum Wgts)	18491

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	5	19336.97	3867.39	112.4721
Error	18485	635613.30	34.39	Prob > F
C. Total	18490	654950.27		<.0001*

Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t	Std Beta
Intercept	19.773184	0.111684	177.05	<.0001*	0
Gender[Man]	-1.125347	0.12129	-9.28	<.0001*	-0.09502
Gender[Woman]	-0.510614	0.116676	-4.38	<.0001*	-0.04506
Race/Ethnicity Students of Color-White[Students of Color]	0.8589653	0.111684	7.69	<.0001*	0.132284
Gender[Man]*Race/Ethnicity Students of Color-White[Students of Color]	0.2677487	0.12129	2.21	0.0273*	0.025784
Gender[Woman]*Race/Ethnicity Students of Color-White[Students of Color]	0.068738	0.116676	0.59	0.5558	0.009032

Effect Tests

Source	Nparm	DF	Sum of Squares	F Ratio	Prob > F
Gender	2	2	3107.6284	45.1883	<.0001*
Race/Ethnicity Students of Color-White	1	1	2033.9514	59.1517	<.0001*
Gender*Race/Ethnicity Students of Color-White	2	2	207.8982	3.0231	0.0487*

Effect Details

Gender

Race/Ethnicity

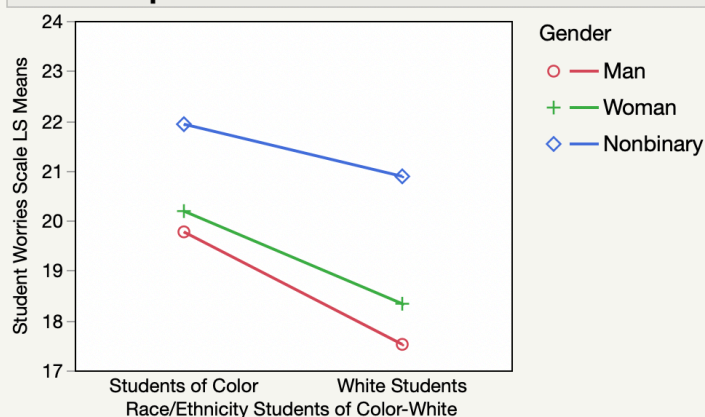
Students of Color-White

Gender*Race/Ethnicity Students of Color-White

Least Squares Means Table

Level	Least Sq Mean	Std Error
Man,Students of Color	19.774551	0.13474007
Man,White Students	17.521123	0.09326600
Woman,Students of Color	20.190274	0.09859826
Woman,White Students	18.334868	0.06290380
Nonbinary,Students of Color	21.931624	0.54211800
Nonbinary,White Students	20.886667	0.33855258

Least Squares Means Plot



Summary of Fit

RSquare	0.005853
RSquare Adj	0.005583
Root Mean Square Error	6.176394
Mean of Response	30.03191
Observations (or Sum Wgts)	18429

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	5	4137.50	827.500	21.6919
Error	18423	702797.74	38.148	Prob > F
C. Total	18428	706935.24		<.0001*

Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t	Std Beta
Intercept	29.069287	0.118247	245.84	<.0001*	0
Gender[Man]	1.0607875	0.128277	8.27	<.0001*	0.086183
Gender[Woman]	1.079509	0.123497	8.74	<.0001*	0.091626
Race/Ethnicity Students of Color-White[Students of Color]	-0.055169	0.118247	-0.47	0.6408	-0.00817
Gender[Man]*Race/Ethnicity Students of Color-White[Students of Color]	0.3568892	0.128277	2.78	0.0054*	0.03311
Gender[Woman]*Race/Ethnicity Students of Color-White[Students of Color]	0.090845	0.123497	0.74	0.4620	0.011467

Effect Tests

Source	Nparm	DF	Sum of Squares	F Ratio	Prob > F
Gender	2	2	3364.3260	44.0959	<.0001*
Race/Ethnicity Students of Color-White	1	1	8.3040	0.2177	0.6408
Gender*Race/Ethnicity Students of Color-White	2	2	369.3050	4.8404	0.0079*

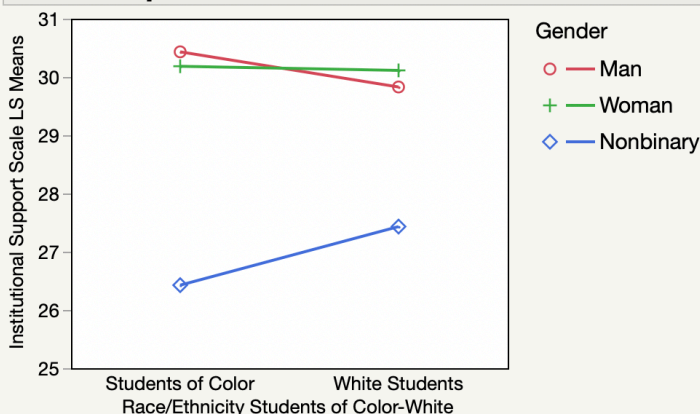
Effect Details

- Gender
- Race/Ethnicity Students of Color-White
- Gender*Race/Ethnicity Students of Color-White

Least Squares Means Table

Level	Least Sq Mean	Std Error
Man,Students of Color	30.431794	0.14147300
Man,White Students	29.828354	0.09827351
Woman,Students of Color	30.184472	0.10397027
Woman,White Students	30.113120	0.06649361
Nonbinary,Students of Color	26.426087	0.57595172
Nonbinary,White Students	27.431894	0.35600144

Least Squares Means Plot



▼ Response Do you intend to return to this institution next fall to continue/complete your education?

▼ Effect Summary

Source	LogWorth	PValue
Connection to this institution	99.441	0.00000
Institutional Support Scale	77.821	0.00000
Race/Ethnicity Students of Color-White	10.941	0.00000
Student Worries Scale	10.362	0.00000
Gender	7.048	0.00000

[Remove](#) [Add](#) [Edit](#) ☐ FDR

▼ Lack Of Fit

Source	DF	Sum of Squares	Mean Square	F Ratio
Lack Of Fit	5147	3254.5046	0.632311	1.4234
Pure Error	8793	3905.9516	0.444211	Prob > F
Total Error	13940	7160.4562		<.0001*
			Max RSq	0.5192

▼ Summary of Fit

RSquare	0.118541
RSquare Adj	0.118162
Root Mean Square Error	0.716703
Mean of Response	4.586076
Observations (or Sum Wgts)	13947

▼ Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	6	962.9597	160.493	312.4489
Error	13940	7160.4562	0.514	Prob > F
C. Total	13946	8123.4159		<.0001*

▼ Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t	Std Beta
Intercept	3.4852815	0.045719	76.23	<.0001*	0
Institutional Support Scale	0.0218289	0.001156	18.88	<.0001*	0.175575
Student Worries Scale	-0.007185	0.001089	-6.60	<.0001*	-0.05577
Connection to this institution	0.1912268	0.008928	21.42	<.0001*	0.19306
Gender[Man]	-0.028069	0.015609	-1.80	0.0722	-0.01855
Gender[Woman]	0.0454986	0.014946	3.04	0.0023*	0.031349
Race/Ethnicity Students of Color-White[Students of Color]	-0.045342	0.006675	-6.79	<.0001*	-0.05485

▼ Effect Tests

Source	Nparm	DF	Sum of Squares	F Ratio	Prob > F
Institutional Support Scale	1	1	183.14921	356.5555	<.0001*
Student Worries Scale	1	1	22.35619	43.5231	<.0001*
Connection to this institution	1	1	235.65846	458.7807	<.0001*
Gender	2	2	16.69117	16.2472	<.0001*
Race/Ethnicity Students of Color-White	1	1	23.70124	46.1417	<.0001*