

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 retention
Date: April 23, 2020

The HEDS COVID-19 Institutional Response Student Survey has been open for around three weeks now. In this memo, we'll highlight some of the trends in the data we've seen to date about students' plans to return to their institutions in the fall.

Data for this report

The data for this report are from roughly 3,900 students who responded to the HEDS COVID-19 Institutional Response Student Survey¹ between April 1 and April 13. These students are from 10 private colleges and universities with undergraduate enrollments under 4,500. About two-thirds of the sample are women, and two-thirds of the sample are white. We looked for differences by student identity in our analyses and have noted them in this report when we found them.

We are reviewing data from our COVID-19 surveys as they come in. Our findings here are “preliminary” because they may change as students from different backgrounds and different institutions take the survey. The range of institutions participating in the survey will be broader later in the survey window. Students' experiences with their institutions may also be different in May or June than they are now. We will continue to issue short summaries of the patterns we're seeing during the spring, and we will note whether any of the preliminary findings from this report change.

Finally, we've included the details of our analyses in an appendix at the end of this report. We've done this so that people at institutions that are using this survey can take what we've done as a starting point for their analyses. We're also glad to hear other approaches to these data. We've kept it simple for this first report.

Below, we review our analyses of the quantitative and qualitative data on the question of whether students plan to return to their institutions next fall.

Will students return? – the quantitative data

One of the questions that we asked students on the survey was, “Do you intend to return to this institution next fall to continue/complete your education?”² Students could select from one of the following response options:

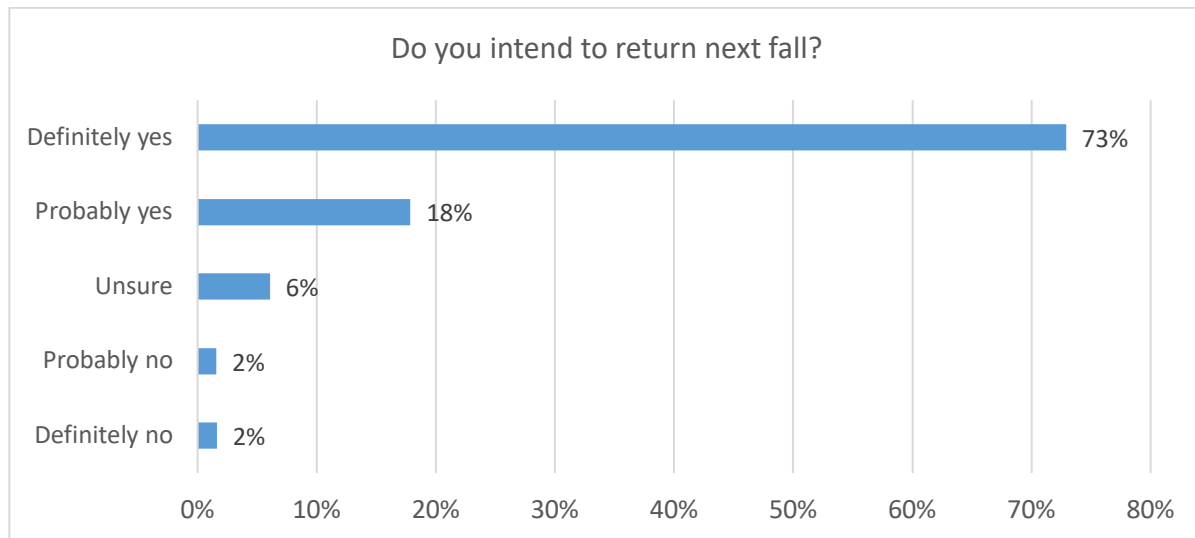
- Definitely yes
- Probably yes
- Probably no
- Definitely no
- Unsure
- Not applicable because I am graduating

Twenty-three percent of the students indicated that they were graduating this spring. Because we're focusing on whether students plan to return, we'll focus on the 77% of students who are not graduating this spring for the rest of this report.

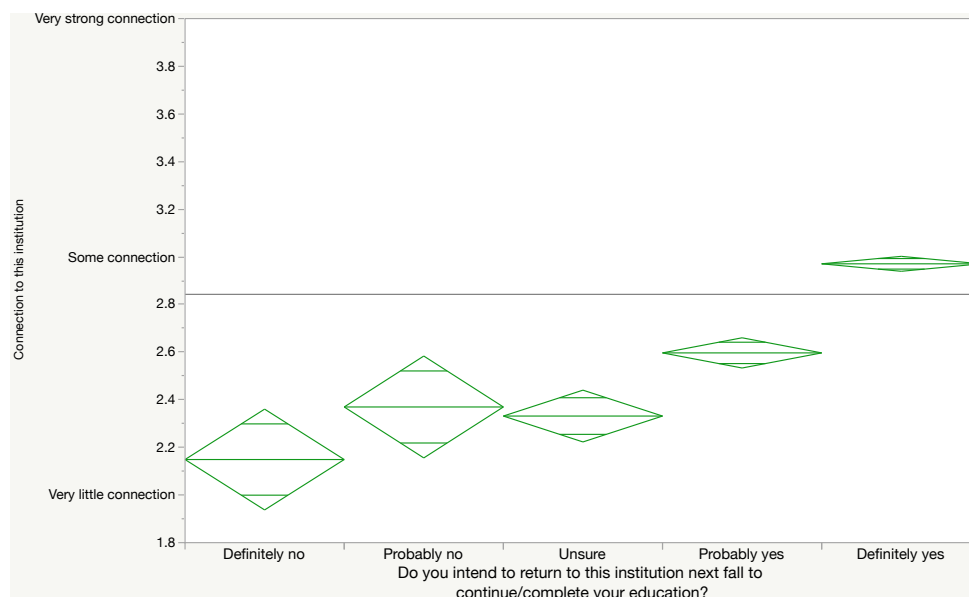
¹ <https://www.hedsconsortium.org/covid-19-institutional-response-surveys/>

² Question 6 on the survey without the module about online instructional methods and Question 11 on the survey with that module.

As you can see in the figure below, almost three-quarters of the students selected “Definitely yes” in response to this question, and only 10% were unsure or unlikely to return.



Often, when we analyze data with “definitely yes/probably yes” or “definitely no/probably no” response options, we are tempted to combine closely-related response options as we have done in this sentence. So, in this case we might say that about 90% of the students said that they intend to return. But we don’t believe that combining the data like this would be appropriate in this case. A student’s sense of connection with their institution is a well-known predictor of retention, and for that reason, we included a question about sense of connection in the survey.³ In the figure below, we show the mean sense of connection (on a scale of 1-4) for students based on their response to the question about whether they intend to return to their institution.⁴



³ “How connected do you feel to [Institution Name]?” The response options are: Very strong connection; Some connection; Very little connection; No connection. This is Question 5 on the survey without the module on online instructional methods and Question 10 on the survey with that module.

⁴ The horizontal line in the middle of each diamond is the mean for that group. The horizontal lines at the top and bottom of each diamond are the upper and lower confidence intervals respectively for the means of each group.

As you can see, the connection scores of students who responded “probably yes” look more like the connection scores of students who report that they are unsure about returning, probably not returning, or definitely not returning than the scores of students who say that they definitely intend to return. Given this and other patterns we’ve seen in our review of the data, we suggest that when it comes to students’ intent to return to their institution, “probably yes” should be read as “maybe no.”

What quantitative factors influence students’ confidence about whether they will return in the fall?

Using multiple regression, we identified four variables that have a significant and unique impact on students’ intention to continue their education at their institution next fall. We’ve listed and described these variables below in order of their impact:

1. Students’ sense of connection with their institution
 - The stronger students’ sense of connection with their institution, the more confident they are that they will return in the fall.
 - Eighty-nine percent of the students who reported the highest level of connection with their institution indicated that they would definitely return in the fall. Less than half (42%) of the students who reported the lowest level of connection with their institution indicated that they would definitely return in the fall.
2. Students’ sense of institutional support
 - The more students feel that their institution is supporting them during the COVID-19 crisis, the more confident they are that they will return in the fall.
 - About 80% of students who agree, on average, that their institution has done a good job protecting students from the negative health consequences of COVID-19, that people at their institution have shown care and concern for them during the changes this spring, and that they know who to contact with questions about the impact of COVID-19 on their educational plans say they will definitely return in the fall. Only 48% of students who don’t agree that these statements characterize their institution’s response to COVID-19 say they will definitely return.
 - Likewise, nearly 85% of students who are satisfied with the support, overall communication, and information they are getting from their institution about how COVID-19 will impact their ability to pay for college indicate that they will definitely return to their institution in the fall. Only 45% of students who are dissatisfied with these aspects of their institution’s support and communication say they will definitely return.
3. Students’ concerns about the impact of COVID-19 on their lives and education
 - The more worried students are about the impact of COVID-19 on their lives and their continued education, the less confident they are about returning in the fall.
 - Students who, on average, worry often about doing well in college now that their classes are online, losing friendships and social connections since they were sent home, paying their bills, having enough to eat, and having access to health care, were 17% less likely to say that they were definitely returning to their institutions in the fall.
4. Students of color are 7% less likely to report that they are definitely returning to their institutions in the fall.

While the effects of students’ concerns or racial and ethnic identity on their likelihood of returning are smaller than the other variables, the impact of these variables can be thought of as additive. That is, a student who doesn’t have a strong sense of connection with their institution, feels that their institution has not supported them this spring, is very worried about the consequences of COVID-19 on their life, *and* identifies as African American

will be at greater risk for not returning than a white student with the same low sense of connection, feelings of being unsupported, and high level of concerns.

Will students return? – the qualitative data

Students who responded “unsure,” “probably not,” or “definitely not” to the survey question about returning to their institution next fall received an open-ended follow-up question asking, “What factor is having the biggest influence on your thoughts about whether or not to return to your institution next fall?” To get better insight into the factors that are influencing students’ intention to return to their institution, we reviewed around 240 responses to this open-ended question.

First, it’s important to note that some students were already thinking about leaving their institutions before the COVID-19 crisis. About one-fifth of the students mentioned reasons for leaving that were mounting prior to this spring. One student even wrote, “It doesn’t have to do with COVID-19.” For other students, institutional changes this spring added to existing concerns and increased their thoughts of leaving. In the words of one student, “I was already unsure about returning to [institution removed], but I have felt so little support throughout this process that I am now considering leaving more seriously.”

When students talked about reasons they might not return to college unrelated to COVID-19 changes this spring, they mentioned things like the college’s location or its distance from home, feeling unsupported, not being able to major in the area they wanted to at their current institution, not feeling like they were part of the campus community, concerns about friends and social opportunities, and financial concerns. Here are a few examples of why students said they might not return that were unrelated to changes stemming from COVID-19:

- “I do not know if [institution removed] is the right fit for me right now. With financial issues already, I’d rather make it easier for my parents and me.”
- “[Institution removed]’s lack of support before the virus.”
- “I no longer plan on pursuing any of the career paths that my major is preparing me for; and the path that I would like to take requires me to transfer to a different school that can better accommodate my preferred major.”
- “My social life wasn’t where I wanted it to be throughout this current semester and last semester.”
- “I think the classes are not enough of a challenge for me personally and I feel like it is hard to form connections and friendships with the students... I also don’t feel like a part of the community even though I try to be a part of events and other things that happen on campus.”
- “I am upset with the way [institution removed]’s administration is run; specifically, [multiple academic departments and administrative offices]. I am paying a lot of money to be here and the administration has not supported me one bit. It is disappointing since I wanted to go to school here so badly.”

Second, the possibility that online classes might continue was a barrier to returning for many students. Almost one-third of the students who said they didn’t know if they were going to come back to their institution in the fall were worried about the possibility of having to do online classes again. Some struggled in their newly online classes because they don’t learn well in an online format or they were having trouble juggling new responsibilities at home with their work for classes. Others never wanted to take online classes and don’t want to continue to pay for college if they can’t return to face-to-face classes. A number of students felt that the quality of their education is suffering now that their classes are online. And still others mentioned challenges with particular subjects or experiences that don’t translate well to a remote format, such as clinical experiences or work that requires access to specialized equipment on campus. Finally, many students connected the new online format to concerns about the value proposition of their institution, saying they were not willing to pay current tuition prices for online

classes. Here are examples of what students wrote when they said that the possibility of more online classes was making them think of not returning in the fall or taking a break from school:

- “I really thrive on face-to-face teaching and physical interaction. Online learning does not work well for me, I don’t know why, it just doesn’t click. If [institution removed] does have to make the decision to remain online, I will most likely take the semester off.”
- “If it is online for the majority of the fall semester, I understand that is out of the school’s hands, but I may take a vacation semester. I cannot justify spending as much money as I do to sit in front of a computer and not receive the resources or be a part of the community that I need to succeed.”
- “I did my research before I came to [institution removed] and I did not want to enroll in a low-residency or online-only program. I am discouraged by how [institution removed] has transitioned and has a different vision for my education.”
- “I will not return for online classes, especially at the current tuition rates. If I can return to campus and fully participate in the things I came to [institution removed] for, I would like to return. If tuition were deeply, deeply discounted, I would consider online classes.”
- “If fall classes are online, I will be forced to withdraw. I can’t waste an entire semester worth of money on classes where I will be unmotivated and unable to reap the most knowledge from what’s been given to me.”
- “The struggles of online course work and professors not caring about us having to adapt to online learning and having no leniency.”
- “Cost for quality. I don’t feel like paying for an experience I am no longer getting.”
- “If there is another quarantine, I would not willingly endure online classes while paying in-person tuition.”
- “If classes will be in person or not. I’d rather wait until they are than pay the same amount of money for courses that are not as interactive and frankly lower quality.”

Finally, a number of students identified financial concerns as the reason they may not be returning to their institutions in the fall. Some of them tied this to value, saying that online classes are not worth current tuition prices. But more students mentioned affordability, saying that they did not think they could pay for college next year. Sometimes their inability to pay was connected to COVID-19, for example if family members or the students themselves had lost jobs this spring, but sometimes questions about paying for college were unrelated to the pandemic. Here are examples of what students wrote when they talked about not being able to afford to continue their college education:

- “Money. Due to health reasons my grandparents will no longer be able to co-sign my loans and no one else has a good enough credit score in my family.”
- “Money - I can’t afford your school.”
- “Loss of income due to COVID-19.”
- “My family is quickly running out of money for the increasing costs of [institution removed], especially considering the fact that, although classes are now online and significantly less hands-on, there is no partial refund for tuition. In addition, not one class that would fulfill any of my remaining major requirements is being offered in Fall 2020 and my family cannot afford to pay for classes I don’t need (and therefore an extra semester).”
- “Cost and weather, but mostly cost. My dad got laid off and the financial aid I was already getting wasn’t enough.”
- “Although I am in a stable position now, employment is looking grim for the summer. I have a scholarship at [institution removed] but am still paying a lot and I need to save money.”
- “My return to [institution removed] depends on how much financial aid I am given next year. With the current COVID-19 crisis, my mother is likely to lose her job. She has a part-time position in my city’s

public library system, and they have already indicated that they were going to lay people off because of this pandemic. My family will likely only be able to afford to pay \$5-10K for my college education, going off the likelihood that she will likely be one of the first to go.”

- “The tuition is much too high.”

Our thoughts and preliminary conclusions

The quantitative data show us that students’ sense of connection with their institution; the extent to which they believe that their institution has supported them during the COVID-19 crisis; their worries, both college related and otherwise; and their racial/ethnic identity are playing a role in their thinking about whether they will return to their institution this fall. The qualitative data add meat to the bones of these findings. They show us that COVID-19 amplifies challenges with students’ connection to their institution and worries about the cost of college that students were facing before the COVID-19 crisis. Moreover, students who chose their institution because of its commitment to high-quality, face-to-face interactions are now confronting the possibility of having to continue their education via a modality that they paid to avoid. Finally, students who’d found ways to pay for college prior to COVID-19 now face the possibility that their financial plan is threatened, if not ruined.

As we’ve said, the findings we describe in this report are preliminary, and given the characteristics of the first institutions that participated in the survey, they may be most relevant to our colleagues at small, private institutions. To think about the implications of these findings, we’ve tried to consider how we might respond to these data if we were helping to lead an institution. Here are some thoughts:

I. Start by remembering that so far, despite the enormous disruptions and uncertainty created by COVID-19, most students want to return to their institutions to continue their education. Another way of saying this is that students who valued their experience at your institution are looking for reasons to return in the face of an uncertain, and even frightening, future. That’s something to build on.

II. A number of the students who are considering leaving are students who were already thinking about leaving before COVID-19 hit. COVID-19 may have amplified their concerns, but it may not have created them. That means that many of the issues that these students are facing are issues that your retention and early alert groups are familiar with and have, hopefully, developed tools to address.

III. Institutional support matters. We can’t say this forcefully enough. There is one clear finding from our decade plus of quantitative research and interviews with hundreds of students at institutions across the country: when students believe that people at their institution a) care for them and b) are committed to their success, it propels their sense of connection to the institution and the growth that they experience in college. Institutional support is now more important than ever, both because your students are experiencing extreme stress and uncertainty and for the selfish reason of keeping them enrolled at your institution. Keep engaging in clear, frequent, honest, and supportive communication with your students. This includes general communication from academic leaders, mid-level communication from people like department chairs, coaches, or band directors, down to individual staff or faculty reaching out to individual students.

In the survey, we asked students what they appreciated most about their institution’s response to COVID-19. Many students mentioned “the constant communication.” As one student wrote, “I have appreciated how many updates I have gotten from the staff and administration over the last few weeks. It has been helpful to have a lot of communication with the administration and with faculty so that I know exactly what is going on. I think transparency with students is the most important thing right now.” Students also appreciated when faculty and

staff reached out to them personally to see how they were doing. One student said, “I have really appreciated my professors reaching out to the students and how my coaches have called weekly, if not daily, to check to make sure we are healthy, our families, and we are succeeding in our course work as well.” Another student wrote, “I appreciate the proactivity in all the [institution removed] faculty and staff in reaching out to the student body. Yes, it gets repetitive, but it never gets old. I appreciate people checking in on my health. I am one lucky girl.”

Asking students how they are doing and listening to their replies shows that you care. Here are a few questions to ask of yourself and your colleagues. Are you communicating with students frequently? Do you review the messages before they go out and make sure that they sound like they come from a person and not a bureaucrat? If students reply, does someone get back to them? For example, if your institution has administered this survey, how will you let students know that you’ve heard their feedback and plan to act on it?

IV. Find ways to address students’ worries and uncertainties. This can include helping students locate reliable sources of food or get support to care for sick parents and friends, helping them figure out how to stay focused in their online home environments, or coming up with ways to share limited internet bandwidth with family members who also need the internet. We understand that some of these concerns fall outside of the kinds of support that institutions usually provide, even to their least privileged students, but circumstances have changed dramatically for many of our students, and we need to meet them where they are.

V. Be flexible. One thing that has struck us in the 15+ years that we’ve been visiting institutions is that students can experience rigid adherence to standards and rules, however well-intended and rooted in experience, as a sign that people at the institution value processes more than people. This is as true for how staff treat students in the business office as it is for ways that faculty set deadlines for class assignments. We understand that this is an extraordinarily stressful time for staff and faculty—we’re all living in this crisis—but having the flexibility to work with students to figure out what’s working for them and what isn’t is a powerful sign of care. It will be another sign to students that their institution supports them, is invested in them, and will find a way to help them weather whatever COVID-19 ups and downs we face in the months to come.

Students often mentioned flexibility in their open-ended comments on the survey. Students deeply appreciated the flexibility and understanding that faculty and staff have shown with classes and coursework, the move off campus, and addressing problems as they arise. When asked what they most appreciated about their institution’s response to COVID-19, one student wrote, “How concerned my professors have been, not just about how we’re doing academically but how we’re handling everything personally. Also, I’ve appreciated how much they’re willing to work with students to adjust to remote learning and do extra work themselves if it will make things easier for us.” Another said, “Professor X has been a god send! She is such a support person and she is going through this WITH us. She has adapted our thesis course as much as possible to fit this and is constantly there if any of her many students need help.” And other wrote, “I have appreciated how accommodating the staff/faculty has been when considering the stress students are and have been under, especially when it comes to extending deadlines for projects, papers, etc.”

VI. To the extent possible, create activities that remind students of their connection with the institution. Continue the student newspaper, promote Zoom parties for clubs or organizations, or do other things that sustain students’ connection with their campus communities and give them hope about what awaits them when they return. Students appreciate your efforts to maintain community when many of them are no longer on campus. One student said they most appreciated, “the fact the even in these weird and tough times, [institution removed] is still working hard to maintain the feeling of community among students and faculty.” Another wrote that they

appreciated, “Trying to keep morale up, having digital events. Most of the time I’m too tired to attend but it’s good to still get the emails.”

VII. Finally, invest in improving the quality of online learning. We don’t know what will happen this fall. We don’t know whether our institutions will be able to offer face-to-face classes, a blend of face-to-face and remote learning, or if we’ll have to provide another term of entirely remote instruction. But based on the student comments we’ve read, we think it’s essential for institutions to ensure that, if it should come to pass, the next round of online instruction is much better than the first round this spring. Many students are worried about getting poor grades, not learning as much as they would have if their classes were in-person, and not being prepared for classes in the fall. Here are a few things students wrote about the challenges they’re facing in online classes:

- “I have other professors who are not as understanding and have continued to push on with a heavy workload. They’re not adapting their expectations to this new reality, and it’s really frustrating. I can’t do everything from home I was able to do on campus because I’m not receiving the same quality of education, and because my environment is not as supportive of learning as it is on campus. I don’t have many quiet places to study or go to online classes. I wish my professors could adjust their expectations and be more lenient now that most students are off campus.”
- “I am worrying a lot about my grades for this semester. Some of my teachers have been very understanding about the stress of this time, and cut down a bit on the academic workload. Others have simply gone ahead or even assigned more homework, thinking that they’re keeping us from being ‘bored’. I am finding it very difficult to find motivation at home, and feel as though I am being pulled in two directions as I am simultaneously expected to participate in family life and be a college student. Although I appreciate the decision that allows us to choose a Credit/No credit option, that still feels like a big decision that could affect my future and graduate school. I wish that instead of having to worry about school as well as Covid, professors would simply ease up slightly on assignments. This is an unheard of time, and as it continues many of us will also know people who are sick and may die. Pretending that we all have a normal day to day and just carrying on with the syllabus seems like a mistake.”
- [My biggest worry or concern is] “That I will lose important assignments because my professors are all using multiple electronic platforms to distribute stuff and I can’t remember who is using what and where they are posting certain assignments.”
- “None of my teachers are on the same page. All using different platforms. Some are adding more HW.”
- “I am worried about doing well in my classes. I genuinely feel that professors are giving me 3 times more work and assignments now that we have transitioned to online and now it takes me 3 times longer to complete a single assignment since it’s hard to get questions understood and answered correctly online. Additionally, response rates from professors aren’t always reasonable and I feel that many of my professors aren’t being accommodating...”
- “Some of my professors are pushing too hard on the online classes. It’s very frustrating and worrying. I feel like I can’t keep up. They are adding more of what to do than what we would be doing if we were on campus. Just because we’re home doesn’t mean we have all day and the ability to complete everything that’s posted. It’s like a maze on Blackboard to even find half the things they post.”
- “I know other students in situations similar to mine, where the professors have taken this time as an opportunity to basically quit teaching. I am worried going into my next class in the same subject matter that I will not be as prepared as I could’ve been.”
- “I don’t think a lot of professors realize how harsh of a transition this is for some of us. Personally, I am going from having multiple spaces on campus where I can be alone, to a small house with thin walls and 4 other family members home 24/7. I do not have my own room, never mind a desk so it is extremely hard to find my own space at home and not get distracted. At school, I only have to worry about myself while at home, I have chores and family responsibilities I have to keep up with. In addition to this, I was

still working my part time job when I first returned home, and I'm sure there are many students who have jobs at grocery stores or pharmacies where they still need to work. I still have yet to develop an effective routine for doing online classes for home and while some teachers have pushed back deadlines a few days, I don't think they really take this into consideration. This has caused a HUGE strain on my mental health, with the scariness that is happening around the world and the added stress of schoolwork on top of it. It is easy to say I am not doing well. I have expressed how harsh of a transition this has been to my professors and the lack of motivation I feel, and while they seem understanding, I do not feel supported. I don't want to throw anyone under the bus because I know it is a very difficult transition for them as well... Honestly, right now I feel like I am drowning in school work and I don't see it getting better before the end of the semester seeing that there are only about three and a half weeks left.

This is not a criticism of the heroic work that so many faculty have done to quickly redesign and deploy their classes this spring. We also know how emotionally draining it might be for faculty who've scrambled to redesign their courses this spring to invest a summer re-working classes for an online environment that they may not end up using. But the hard truth we've seen from survey comments is that many students at small, private institutions choose to pay a premium for a high-quality education. They need to know that if there are future interruptions in their face-to-face learning environment, the education they receive online will still be worthy of that premium. Or they need to know that the institution will charge less for a good, but not quite as good, experience online.

We will update our analyses in a couple of weeks as new data come in. In the meantime, please do not hesitate to contact us with questions, comments, or suggestions.

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

Appendix

Analysis of the quantitative data

To gauge the relationship between students' experiences of their institutions' COVID-19 responses and their confidence that they'll return next fall, we used multiple regression using 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

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

Institutional Support Scale (Cronbach's alpha = 0.87)

We measured this construct using the following 8 questions from the survey:

- *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
- *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

Student Worries Scale (Cronbach's alpha = 0.74)

We measured this construct using the following 7 questions from the survey:

- *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

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. After we analyzed the data using different combinations of these identities, we found that the crude dichotomous variable “Non-White/White” gave us clearer results.

Analyses

Below we've pasted the results of our regression analyses using JMP 15.1 Statistical Software.

▼ Summary of Fit

RSquare	0.102998
RSquare Adj	0.101118
Root Mean Square Error	0.755506
Mean of Response	4.595329
Observations (or Sum Wgts)	2869

▼ Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	6	187.5782	31.2630	54.7716
Error	2862	1633.5992	0.5708	Prob > F
C. Total	2868	1821.1774		<.0001*

▼ Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t	Std Beta
Intercept	3.6979351	0.109457	33.78	<.0001*	0
Institutional Support Scale	0.0177589	0.002793	6.36	<.0001*	0.132931
Worry Scale	-0.011489	0.002732	-4.21	<.0001*	-0.08041
Connection to this institution	0.198643	0.020774	9.56	<.0001*	0.192564
Gender[Man]	-0.042519	0.029528	-1.44	0.1500	-0.02748
Gender[Woman]	0.0280889	0.026729	1.05	0.2934	0.019926
Race/Ethnicity White-Nonwhite[Not White]	-0.040073	0.015699	-2.55	0.0107*	-0.04592

▼ Effect Tests

Source	Nparm	DF	Sum of Squares	F Ratio	Prob > F
Institutional Support Scale	1	1	23.078700	40.4330	<.0001*
Worry Scale	1	1	10.097020	17.6896	<.0001*
Connection to this institution	1	1	52.191691	91.4377	<.0001*
Gender	2	2	2.773726	2.4297	0.0882
Race/Ethnicity White-Nonwhite	1	1	3.719255	6.5160	0.0107*

▼ Effect Details

▼ Institutional Support Scale

▼ Worry Scale

▼ Connection to this institution

▼ Gender

▼ Least Squares Means Table

Level	Least Sq Mean	Std Error	Mean
Man	4.5282647	0.02762151	4.55230
Woman	4.5988727	0.01835928	4.61798
Nonbinary	4.5852138	0.06786510	4.51181

▼ Race/Ethnicity White-Nonwhite

▼ Least Squares Means Table

Level	Least Sq Mean	Std Error	Mean
Not White	4.5307106	0.03323116	4.51826
White	4.6108569	0.02654153	4.62772