



*Engineering Education
Transformations Institute*
UNIVERSITY OF GEORGIA

Responding to the COVID-19 crisis

Making a **Change** through your Stories

Interim brief 2: April 20-May 13, 2020

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#EngineeringExperience

#UGAQuarantales

Click [here](#) to tell your story <https://tinyurl.com/UGAQuarantales>

Be heard. Tell your story. Make a change.

Are you a student, faculty, or staff member in the College of Engineering at UGA? Tell us how you are experiencing the evolving COVID-19 crisis. Your stories will help the College better respond to your needs. To participate, click [here](#).



If you have any questions about this research, please email Dr. Nicola Sochacka sochacka@uga.edu.



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Executive Summary

This second interim brief provides an update on how faculty, staff, and students in College of Engineering at UGA are experiencing the evolving COVID-19 crisis. The stories shared from April 20 to May 13 **reinforce** many of the findings from the [first interim brief](#). For example, the majority of faculty experiences continue to be positive while the majority of student experiences continue to be negative.

The stories suggest that the pandemic has provided an opportunity for faculty, staff, and students to **reflect on what is important for teaching and learning** and to **creatively question features of the status quo**. The stories also provide greater clarity on how to **operationalize a compassionate stance**. These insights have **immediate implications for the upcoming summer semester**, which will be taught online, as well as **for how we will teach and learn in the future**.

1

Both faculty and students lament the loss of face-to-face affordances

Faculty and students noted several aspects of face-to-face learning missing from online environments, including student-instructor interactions, conceptual feedback, collaborative work, and partial credit.

2

Opportunities exist to question the status quo in teaching and learning

There were many stories of stress and frustration. Some stories described new, more personalized, and collaborative approaches to teaching and learning.

3


Compassion is essential, and flexibility is its most basic form

Both students and faculty expressed empathy for the each other. The range of challenges faced by both groups point to the importance of flexibility and communication as we navigate this crisis.


In response to these takeaways, we make the following suggestions to the faculty and students in our College.

1. Reflect on what is lost in the transition from face-to-face to online learning and consider creative ways to achieve the same or better outcomes through different means.


For faculty, this might mean identifying more intentional ways to get feedback from students about their levels of conceptual understanding and to award partial credit for that understanding during assessments. The ideas below can be effective in both physical and online classes.

 **Idea:** Use frequent, low-stakes questions to test if students understand ideas from lectures. For synchronous lectures, you can use [Zoom's polling feature](#) to prepare multiple-choice "clicker" questions for students mid-lecture. For asynchronous lectures, you can ask students to complete short (1-3 questions) multiple choice eLC quizzes on key points from the lecture. Both these approaches allow you to get an instantaneous, at-a-glance view of your students' understanding of key ideas.


Idea: If you are using eLC quizzes for your tests or assignments, you can award partial credit by using [Multi-Select questions](#) (i.e., "Select ALL options that apply) rather than Multiple Choice questions (i.e., "Select the correct answer."), and framing your questions to check for conceptual understanding and problem-solving process knowledge rather than asking for a final numerical answer. Choose the "Correct Answers" grading option to enable partial credit.

 **Resource:** [Rui Li's Circuits Exam](#) - An example of a multi-select eLC quiz used as a Circuits exam by Rui Li, one of the College of Engineering's Dean's Engineering Education Fellows who served as a graduate student instructor of record. Rui supplemented the eLC quiz with 3 workout problems students submitted as a separate document.

For students, this might mean creating online study groups and project teams that leverage available technologies to make collaboration from a distance smoother.

 **Idea:** Reconnect with former study partners and establish an open line of communication that you all can easily access. Cell phone number exchanges



are a good start, but dedicated chat programs like GroupMe, Discord, Slack, or Messenger may be more reliable.

 **Idea:** For team projects, consider using platforms built for collaboration (e.g., Google Drive) to see one another's work in real time, helping your team work as a synergistic group rather than a collection of individuals.


Idea: Take ownership of your learning. Use this opportunity to reflect on what you appreciate most about face-to-face teaching and see if you can come up with an innovative way to recreate this feature in an online environment. Communicate your ideas to your instructors!

2. Leverage experiences of stress and frustration to question the status quo of teaching and learning in online environments.


For faculty, this might mean letting go of timed exams as the gold standard of assessment, exploring other opportunities for students to demonstrate learning outcomes, and finding creative ways to present and consolidate asynchronous material. The table below details some common frustrations expressed by students and opportunities to change teaching and learning practices accordingly.

Common Student Frustrations	Opportunities for Change
<p>Timed synchronous exams present unique challenges in online learning, including variable home/working environments and additional time needed to solve technical issues (e.g., navigating exams or scanning documents.)</p>	<p>Consider making exams asynchronous over the course of a day or more. There are other ways to design exams for academic honesty (e.g., random question pools, open-ended questions), and, the benefits of this approach for student experience are enormous.</p> <p>Forego exams in favor of other ways to demonstrate learning outcome achievement.</p> <p> Alternatives to Proctored Exams - 10 alternative assessments to timed exams, along with a webinar expanding on each.</p>
<p>For learning problem-solving methods, there's no replacement for watching an instructor explain a problem as they solve it by hand.</p>	<p>If you have a tablet, consider using PowerPoint or Kaltura to record yourself writing solutions. If you don't have a tablet, consider using a smartphone to improvise a document camera.</p> <p> Avoid talking through pre-written solutions. It may seem like a good substitute, but for students, it is not nearly as helpful.</p>

Learning material asynchronously (especially through textbooks) takes substantially more time than attending lecture, sometimes doubling a course's workload.

 Check in with students regarding how many hours they spend on coursework each week - both in your course and all courses combined. Formalize out-of-class learning as a regular course assignment in eLC, so that both you and your students can see it as a significant—and important—time investment.




For students, this might mean sharing what is working in other classes with your instructor, that is, channeling your stress into a productive dialogue with your instructor. Our experience working with faculty and reading their stories indicates that the vast majority of faculty are dedicating considerable effort to help students have a positive academic experience during the COVID-19 crisis. Accordingly, course issues are far more likely a result of ignorance than indifference. Talking to faculty can ensure that the issues you face are heard and taken seriously. Consider reaching out to your instructor early and often.

 **Resource:** [How to Give Negative Feedback to a Professor](#) - Offers some relevant tips for giving constructive feedback to your instructor. Although you may not be able to give feedback face-to-face, requesting a brief Zoom meeting to discuss serious issues is often better than sending an email.

3. Build flexibility into College policy, course design, and faculty-student interactions for the duration of the COVID-19 crisis.

For the College, this might mean finding creative ways to adjust policies that affect students based on their Spring 2020 academic performance, such as high-demand major processes. Some students reported performing well in their Spring courses prior to Spring Break, only for their grades to plummet after the shift to online for reasons beyond their control. In some of these cases, these students were in high-demand major gateway courses, and learning that the College has plans to accommodate the crisis into their high-demand major decisions may help ease their anxiety about whether or not they will get into their major of choice.

For faculty, this might mean adjusting your expectations for students, policies for exceptions, and assessment practices to accommodate the wide range of extracurricular challenges students now face.

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-  **Resource:** [Teaching with compassion in the time of COVID-19](#) - Offers several general tips for teaching compassionately, including simplifying learning tasks and ways to show you care about what students are going through. Also emphasizes the importance of **assuming the best of your students**. Designing class-wide policies to deter cheaters (e.g., using strictly timed and/or proctored exams) may unintendedly harm or punish academically honest students in your class.
-  **Idea:** Follow the recommendation above and challenge the status quo of teaching and learning. Changes like more flexible assessment practices and consideration of asynchronous learning as a substantial time investment go a long way toward responding to the various challenges students face. In particular, implementing meaningful alternatives to exams can not only afford greater flexibility to students, but also help students demonstrate knowledge in ways that are more motivating to students, informative to instructors, and that circumvent concerns about academic honesty.
-  **Idea:** Focus on treating students equitably (i.e., according to their unique challenges and conditions) rather than equally (i.e., treating everyone the same) during the remainder of the COVID-19 crisis. Communicate with your students that you understand they may need accommodations for situations beyond disabilities during this time.

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Introduction

The COVID-19 pandemic has had a sudden and significant impact on almost all aspects of daily life in the United States. In the College of Engineering at UGA, faculty, staff, and students are working hard to wrap up a challenging spring semester, plan online summer courses, and prepare for a currently planned return to face-to-face classes in the fall.

In this research project, we are using a novel approach called SenseMaker to investigate how the pandemic is impacting the lives of the engineering community at UGA. This interim brief reports on data collected from April 20 to May 13, 2020.

A survey that puts the power of interpretation in your hands

SenseMaker surveys likely differ from the traditional surveys you may be used to. It is designed to combine the power of first hand accounts (your stories) with quantitative data (how you interpret your stories, e.g., as positive or negative). As described by the creators of SenseMaker “Having the qualitative narratives as well as the quantitative data available simultaneously provides the actionable insights needed for faster and better decision-making.” For more information about SenseMaker, click [here](#).

What we will do with your stories

Your stories will be used to help the College respond to challenges in real time.

Individual stories will be grouped with others to identify patterns and “adjacent possibles” (i.e., early signs of challenges or opportunities) in our college. We will reach out to different groups in the college to discuss potential solutions to the problems we identify and ways to amplify positive developments. We will work with the Dean’s Office and School Chairs to implement these ideas. We will share the findings from this study with all students, faculty, and staff in a series of interim briefs, like this one.

Who we are

We are a team of four faculty researchers and four undergraduate students. Drs. Nicola Sochacka, John Morelock, Racheida Lewis, and Joachim Walther are members of the Engineering Education Transformations Institute (EETI) - a unit in our College that works to build community around engineering education research and practice. Christian Culloty, Jacob Hopkins, Shweta Vedanarayanan, and Kaosi Ofunne are undergraduate research assistants who played a central role in developing the survey for this project and who are leading parts of the data collection, analysis, and reporting. The following EETI-affiliated faculty offered valuable feedback on the design of this study and presentation of the findings: Drs. Nathaniel Hunsu, Dominik May, Beshoy Morkos, Cheryl Gomillion, Peter Carnell, and Ben Fahrman in the College of Engineering, and Dr. Andrew Jackson in the College of Education.

This interim brief

Data collection for this study began on April 10, 2020 and will continue until 1-month after the return to face-to-face classes. This interim brief summarizes findings from April 20 to May 13.

We would like to thank those students, faculty, and staff who have already contributed a story. We invite all members of the college to share how they are experiencing these difficult times. Please feel free to tell several stories - this survey will be open until 1-month after the return to face-to-face classes. Your stories will help us understand the challenges you are facing and the opportunities we need to take advantage of.

Overview of Key Findings

The three takeaways presented at the beginning of this report are based on the following key findings.

Another **29 stories were collected from April 20 to May 13, 2020** (faculty = 13, staff = 0, undergraduate students = 12, graduate students = 5).

Compared to the [first interim brief](#), some **similar patterns were observed**:

- The majority of the faculty responses were positive (8 out of 13). The majority of the student responses were negative (9 out of 17). The majority of faculty indicated that “People in positions of power” are praising them; while the majority of students indicated that people in power are acting with indifference and/or a lack of respect. Stories involving a heavy preference toward “Grit and Perseverance” or “Planning and Efficiency” were more likely to be negative than those demonstrating a preference toward “Willingness to Experiment.” Juggling home and work commitments continues to be a challenge. There was more evidence of members of our community being directly affected by COVID-19 diagnoses. Some stories described deaths.

Distinct from the first interim report, the responses collected from April 20 to May 13 included **three extremely positive stories from students**. All three of these stories described insights or experiences that may not have happened were it not for the pandemic. **We used a special type of XY plot, called a “Heat map,” to investigate these and other positive stories in the SenseMaker analysis software.**

In addition to these updates and the heatmap analysis, **the research team conducted a preliminary thematic analysis of the 29 most recent stories**. This analysis revealed the following insights:

- Faculty and students clearly articulated what was lost in the transition to online learning.
- Emotional distress was a common feature across many stories, especially among students. Some of these stories had a silver lining.

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- As noted above, many of the stories described the challenges of balancing work and home life.
 - Throughout the stories, there was a sense of faculty empathizing with students and students empathizing with faculty.
 - International, graduate, and transfer students described some particularly challenging circumstances.
 - Even in the most difficult of times, there is light.

These key findings are elaborated on in the following pages.

Amplifying the Positive: Heatmap Analysis

Below we illustrate how we used one of the **visual analytic tools** available in SenseMaker (i.e., a heatmap) to begin exploring the question **“How can we create more stories like this and fewer stories like that?”**

This question lies at the heart of the SenseMaker approach. Instead of mandating a particular type of change, SenseMaker provides a way for actors (in our case faculty, staff, and students at UGA) to see areas of potential change that already exist in the system.

The graph below is called a “heatmap.” This heatmap is an XY plot of participants’ responses to one of the dyads (“People in positions of power treated others by...” “Praising them without end” or “With a complete indifference or lack of respect”) and one of the points on the first triad (“This story was about... Opportunity, Struggle, Progress).

We decided to put the dyad on the X axis, as the more independent of the two variables. A value of 0 indicates “Complete indifference or lack of respect” while a value of 100 indicates “Praising them without end.”

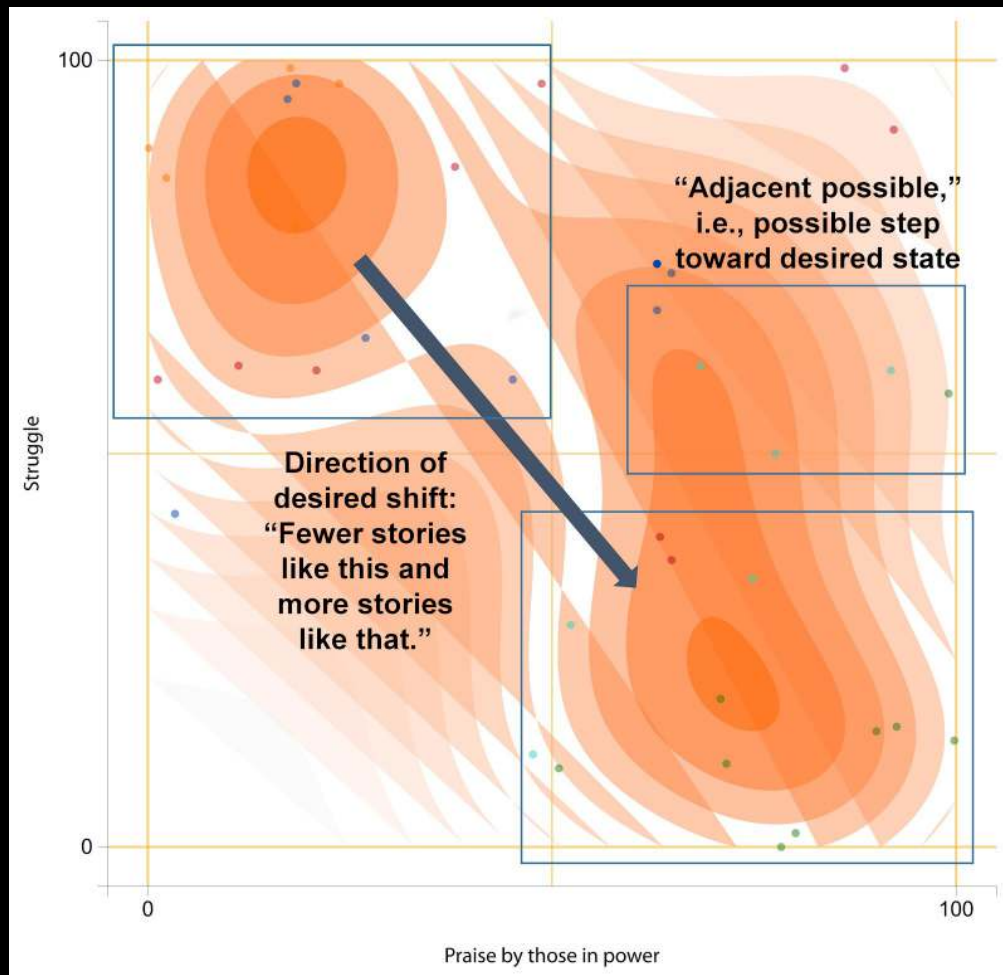
The Y axis shows participants’ responses relative to the “Struggle” corner of the triad. A value of 0 indicates that the response was somewhere along the side of the triangle that connects “Opportunity” to “Progress” while a value of 100 indicates a response right in the “Struggle” corner of the triangle.

The colored dots on the heatmap show participants’ responses to the question “How do you feel about your experience?” (see the key under the figure).

This heatmap shows a concentration of extremely negative, negative, and neutral stories in the top left hand side of the figure and a smaller concentration of extremely positive, positive, and neutral stories in the bottom right hand side of the figure. The smaller concentration of stories on the top right hand side could be called an “adjacent possible,” or a potential bridge to shifting closer to the positive stories in the bottom right quadrant. The question then becomes, **“How can we create more stories like this (the bottom right hand side) and fewer stories like that (the top left hand side)?”**

Our recommendations at the beginning of this report provide some possible answers to this question. However, this question will be best answered in collaboration with the faculty, staff, and students in our College, who we are in the process of reaching out to and working with.

On the next pages we share the titles of the stories, which participants provided, that lie within the three clusters described above. We also provide examples of stories that lie within the desired quadrant.



Green dots indicate extremely positive experiences.

Light blue dots indicate positive experiences.

Red dots indicate neutral experiences.

Dark blue dots indicate negative experiences.

Orange dots indicate extremely negative experiences.

Story titles in top left hand corner

Feeling OFF When I’m ONLINE; online school:(; Covid-19 - A history in the making, realization of society’s faults; Frustrating; Ill Prepared; The Juggle Struggle; It’s hard to work at home; Old School Doesn’t Mesh with New School; The Stressful and Frustrating Story of a Transfer Student; Record your message at the tone; Transformation to Online Learning and COVID-19; Running in and out of Time; Nothing happened; Online tests formatting lead me dropping a class.

Story titles in the “adjacent possible”

We Achieved the Impossible; The rituals of life; The importance of face-to-face interaction; Working with kids at home; Empathize with your students.

Story titles in bottom hand corner

Social distance; Communication is key!; My students > my course; Unforgettable exam experience in the pandemic time; Mentoring a graduate student teacher through the online learning process; Change of Pace; Online Teaching and Learning Discovery; Students still drive the experience; The pendulum swings wider; Work-schedule and motivation; So much more than a final; Balancing work and life - A tale of two teachers; Empathize with your students; Students should still have agency.

Example student story from bottom right hand corner, extremely positive with low struggle (0/100) and high praise (78/100)

Communication is key!

One of my professors has done particularly well during this transition at **asking students for their opinions on things such as the course workload and assignment due dates**. Students were able to voice these opinions in weekly zoom conferences scheduled during our typical course meeting time. Gathering opinions can seem messy and time consuming, but our zoom conversations went smoothly [and] were rather succinct. I found this professor's approach **particularly refreshing because it differs from the more common approach of instructors making unilateral decisions** and simply leaving the course evaluations as the way for students to express their opinions. At a time when things are in such flux, it just seems **logical to consult all of the stakeholders (students!)** before making decisions about the course trajectory. Furthermore, it **helped students to feel connected and valued**, and that is quite important at a time like this.

Example student story from bottom right hand corner, positive with low struggle (34/100) and high praise (75/100)

Change of Pace

In a typical semester, **finals week is often pretty gruelling**. Engineering professors almost always give 3-hr exams for their final, so I would end up with 4-5 when students from other majors would get 2-3. Even without the outbreak, this semester was really stressful, and I was not looking forward to it. Luckily, the outbreak caused the professors to reorganize their finals, and one of them chose a novel approach: **rather than a tough exam for a engineering elective-level class, he made it a project with several options**. We could write a report on engineering case studies, write a critique of a chapter from a textbook he was working on, or solve an extended problem using both analytical and numerical methods. What amazed me is the breadth of the project. Since students have different strengths, they can choose the option that best compliments their abilities, and **I would like to see this sort of project format in future courses**.

Basic Thematic Analysis

We used basic qualitative analysis techniques to identify six themes across the 29 stories collected from April 20 to May 13, 2020. The following sections describe these themes.

Lost in Translation

Many of the stories, from faculty and students, described important features of face-to-face learning that were lost as a result of the sudden transition to online classes.

Example faculty experience (negative + high “Sense of Purpose”)

Because there are limited questions during Zoom sessions (or even when there is a question), I do not go down meaningful tangents which give a fuller picture of the material... **What is particularly missing is the ability for me to read the class.** That is, I cannot receive real-time feedback by seeing the whites (or reds) of students' eyes. **I cannot see their expressions of confusion or comprehension, and then modify my instruction on the fly...** I find that for the most part I am relaying information rather than instructing. Students do ask questions (or perhaps it would be more accurate to say that a voice behind a name asks questions), but it is rather unfulfilling and incomplete.

Example student experience (extremely negative + low “Sense of Belonging”)

I did very poorly in an online exam which I felt was slightly unfair. There were more problems than we previously had on in-class exams but only about ten more minutes to complete the test. Also, **we were encouraged to skip around on the in-class exams if we were stuck on a problem to maximize our grades on the tests, but this was not possible for the online tests as the questions required you to answer before you could move on and you could not change your answers after moving on to the next one.** While the professor did add some multiple-choice questions they were put at the end of the test meaning very few students were even able to view these questions before time ran out. After receiving a failing grade on that test and receiving emails from the professor that the rest of the tests would be formatted and taken in the same way I had to make the decision to drop the class as I had a very small chance to receive a passing grade in the class mainly due to the fact that around 90-95% of the grade for the class was determined by the tests.

Example student experience (negative + no “Sense of Confidence”)

Senior design is a teamwork based course. Working over chat has complicated the process. **My group used to do all of our work together in the Driftmier computer labs where we could ask questions, show our work, and collaborate on one computer.** Now we have to split up the project and work independently. We come together to review our work, but sometimes miscommunications or misunderstandings happen. We can't catch it until we are back together.

Worry, stress, frustration, exhaustion, and anxiety

Emotional distress was a common feature across many stories, especially among students.

Example student experience (negative + high “Grit and Perseverance”)

Recently, as an engineering student, **I have felt overwhelmed and discouraged**. I have been struggling internally with the stress of school, work, money, and family. The transfer to online learning has been difficult as my course load has felt to be doubled. **Every day, I feel as though I cannot catch a break from schoolwork without being behind**. I am struggling with learning the information through online powerpoint rather than lectures. On top of my schoolwork, I have to worry about my job. I am currently at minimum hours at my job, so I have had to dive into my savings since my parents do not have the ability to pay for most of my stuff besides school. This crisis has been a hard pill to swallow for me and my family. My grandparents are in their 70s and 80s, which means I have not been able to see them... It has been hard to grasp that I might not ever see them again. **Internally, my heart and head are running a thousand miles a minute, and I cannot seem to make it stop**. BUT I have learned that my mental health and physical health is more important than most others. During this time, I have learned to lean into God and trust in His plan that it will all work out. I think my faith in Him is the only thing keeping me going everyday. Right now is a valley in most people's lives, but the valleys teach you more than you realize.

Example student experience (negative + high “Can-Do Attitude”)

Switching to online learning has been tough. In regular circumstances, having to take engineering classes would be difficult since the material is so hands on and things like class discussions and being able to bounce off of our teachers' advice are invaluable. The challenges we are facing right now, however, are far from normal. I'm lucky because I have family in Georgia that I can stay with, but my mom, dad, and little sister are at our home [abroad]. It's been hard adjusting to online courses at the same time that literally everything else is changing. **I am constantly worried about my family abroad**, and I hear either from them or online sources about how our whole [country] is periodically shut down to promote social distancing. And when I say shut down, I mean people aren't allowed to leave their homes unless they work in a hospital or are government employees. Grocery stores, home stores, and things that are considered essential in the United States are only open one or two days a week. **All the external stress I am facing and the negative news that demands my attention makes it so hard to get work done**. I am trying my best and I love learning, but the course loads that were normal earlier this year have become heavier and heavier burdens.

Example faculty experience (neutral + high “Self-Reflection”)

At the end of week three, some students are reaching out as they are starting to struggle with mental issues. Depression seems to be a big one, especially with the feeling of isolation. Some students have reported family member who have COVID-19. Some have had family members die from COVID-19.

“Balancing work and life”

Similar to the first 23 stories collected from April 10-19, the most recent 29 stories also described challenges juggling work and home lives.

Example faculty experience (neutral + high “Expectations”)

A student wrote to me a few minutes after finishing/submitted their test (students take the timed 50 minute test at their homes, write answers on paper and scan and submit it on eLC) stating that **it was not fair that students had to take the tests at their individual homes because all homes do not provide the same facilities/atmosphere to take a test**. This student did poorly on the test because they couldn't concentrate due to all the noise and distractions. Their dad was running a drill, mom was talking on the phone and sister was doing something else throughout the test (even though they were all requested to keep quiet).

Example faculty experience (neutral + high “Self-Care”)

I am juggling working entirely at home and parenting kids in school. Even with my partner at home my kids interrupt me for questions that they have - and they are going through major transitions as well: online schooling in elementary school, not seeing their friends, being only with the same four people for a month (going on months) now. The kids are emotionally fragile with large mood swings (and hey, so are the adults!). I am trying to keep up with my full time research. I am writing papers, writing reports, writing proposals, talking to students, having meetings - the day is completely filled with meetings mostly, and in between, in any break, the kids need something reasonable, so **I found my only time for really concentrating and longer writing was when everyone was sleeping.** With a few all-nighters, I decided this was not sustainable for multiple days, but OK for 1-2 days a week, I can stay up a good portion of the night to catch up - tonight is one of those nights. I have given in to the fact that the day is not as productive and yet, things will still get done. I try to focus on the accomplishments and things I can be grateful for to keep me going. My students seem to want to work (I do not pressure them) and some of the most fun conversations/meetings I have had have been with them about cool research ideas or findings during this time. We are trying to support each other in the research group - we meet everyone where they are at and there is no judgment of each other. Everyone needs to take care of their well-being first and foremost. **I do my best to lead with empathy and my students are often motivated to as well.** But there is a positive sense of accomplishment as we still make progress when we can. The work-work balance of life is

never stable anyway, I always say it is a pendulum. Just right now, the swing is a little wider. I will say that the conditioning I got as a parent (of having to be awake at all hours of the night for kids) makes staying up late or getting up at random hours to work something I've had to do before, so I know I can do it. **I just need to watch my longevity and get rest considering we are 1) protecting our immune systems and 2) don't know how long this will go on...**

Empathizing with one another

Throughout the stories, there was a clear sense of faculty empathizing with students. Many of the student stories also acknowledged the challenges faced by faculty.

Example faculty experience (positive + high on "Other" vs. "Self" dyad)

Students are really struggling to transition to online learning. And **I really feel for them**, because it's not easy to shift how you learn overnight with little preparation. There is a reason students take in-person classes, over online. Further, if they knew this semester would be part-online, maybe they wouldn't have taken the same course load. **I feel really bad for them. I have made sure to be as flexible as possible. I empathize with them.**

Example faculty experience (extremely positive + high on "Other" vs. "Self" dyad)

I found the shift to online instruction to be thoroughly supported by college admins. However, **the adjustments I made to my course were based on how I felt my students might've been coping with all this** vs. resources to pick up an in-person class and throw it online. **I didn't bother polling my students on what capabilities they had at home because I didn't want to out anyone or make anyone feel pressured to answer based on what they thought I wanted to hear vs. what they were actually experiencing.** I also believed that not every other instructor my students had may be accommodating/flexible so I adjusted my course with that in mind. There were some kinks but all of those got sorted out with feedback from students. No one seemed to take issue with how I adjusted the course and recently I realized I may have not been totally clear about my decision making process in the beginning (I wrote a letter explaining the process after the fact). I didn't want my students to think my attempt of being empathetic was a lack of care and total disregard to the course. My students were doing well for the most part - I didn't want this adjustment to jeopardize that for anyone beyond reason.

Example student experience (neutral + equal "Feedback from Others" & "Self-Reflection")

From my experiences so far, STEM related courses online prove to be quite the challenge. Some of my professors have completely changed their course times to better fit their schedule causing overlap in ours (the students). This poses new difficulties in having to teach myself one or the other subject, and in any major that can be a difficult task to do.

This is frustrating and causes my typical workday of schoolwork to be about 10 to 12 hours, leaving me with no time to work a real job. The second issue I have been having is the use of this time as what seems to be a vacation by some professors. When reaching out for help or to schedule a meeting, the instructions are either repeated in the email with no further clarification than initially given or with no interest in a zoom meeting. **I know the transition is hard for professors as well**, but the lack of flexibility in multiple courses is quite frustrating, and I do believe it is directly affecting my grades. I am trying to be flexible but I have at least two exams a week, and three semester long projects due with little to no guidance. I am exhausted and I just want this semester to end.

Particularly challenging circumstances

Some students, such as transfer and international students, described some particularly challenging circumstances.

Example transfer student experience (extremely negative + high on “Indifference” vs. “Praise” on the “How people in positions of power treat others” dyad)

I am a second-year transfer student who transferred from [name of institution]. I did not get into the engineering major right off the bat, so I'm retaking several classes to get higher grades. One of those classes is [name of course]. Most of my grade in that class (~80%) depends on the four tests we take. We had taken two tests before the pandemic, and I had an A test average. A large portion of the grade from those tests came from partial credit. **Once the pandemic started, our professor decided to make the new tests have no partial credit.** The third test I took in that class was our first online one, and the first test not to offer partial credit. I scored a 33% on that exam. Had partial credit been offered, I am confident that I would have scored at least a 70%. **I consider it extremely unfair that the grading standards for tests has been changed mid-semester.** I am also retaking Calculus 2, and I have been able to maintain my “A” in that class for the sole reason that the professor created a system for partial credit. **The fact that one of my professors has adapted to continue offering partial credit on tests and another has not has only added to my frustration.** The stressful situation of the pandemic has been made even more stressful by this problem that has an obvious solution. The reason I am so stressed by this is because **my admission into an engineering major is riding mostly on my statics grade. Because students only have two tries to get into the major, and I was rejected from the major once already, this is my last chance to major in engineering at the University of Georgia.** I feel that it is worth it to mention that the major admission process has no appeals process, which I feel is unfair and lazy on the College of Engineering's part. I think that I am a unique case, because I completed upper level engineering classes (strength of materials and fluid mechanics, both with an “A”) at my previous institution, so having no appeals process is absurd and angering to me. This factor has made scoring a 33% on that one statics test extremely stressful to me. If I am not

accepted into an engineering major at University of Georgia, I will be forced to transfer back to Georgia Southern to complete an engineering degree. I know that this is what I want to major in, and I have been successful in the major before. Being forced to do this would be more the result of a systematic failure of the University of Georgia, specifically the College of Engineering, rather than failure on my part.

Example international student experience, told by a faculty member

When we re-started classes after the 2 week Covid-19 suspension, an international student-athlete in one of our undergraduate classes contacted me about being unable to participate in the course because they were travelling and were now quarantined for 14 days in their home country, unable to return to the US. While they were unable to participate in the course due to very limited internet connectivity while in quarantine, they didn't want to withdraw from the course because that would affect their full-time student status which in-turn would affect their immigration status adversely.

Light in even the most difficult of times

We close this second interim report with three final stories.

Example student experience (extremely positive + high "Sense of Purpose")

Since the transition to online learning, my learning experience has been more **self-directed** than it already was. I would say this is overall a positive development, especially since **my instructors have been extremely helpful** with the resources they have provided throughout. The story I would like to share is about the clarity that I have gained over the past few days. Due to the circumstances, I have been feeling extremely powerless and have felt a strong urge to do more, although the best course of action at this moment is to stay at home. In any case, I spent some time thinking about how I would like to help people and the world in general. This pandemic has highlighted many of the issues in our world and though discouraged at first, **I was inspired to really do all that I can to help fix the problems of the world using my own talents.** I believe that I am not alone in this resolve, and that these issues will be addressed more directly and effectively with all our combined efforts.

Example faculty experience (extremely positive + high on "Others" vs. "Self" on the "In this story I decided to put X first..." dyad)

Some of my students told me (their instructor) they enjoy the components of **personalized eLearning**. There are positive aspects of 100% eLearning. Most of my students, though, miss working/interacting with classmates. **A good mix of personalized and interactive learning (whether it's online or in-person) would benefit our students.**

Example student experience (extremely positive + high “Self-Reflection” and “Self-Care” triads)

Ugh, I thought. I was half-way through my fluid mechanics lecture. What a nice day and I'm going to be stuck inside. I opened the window of my apartment bedroom to let some air in. Our lecture was on boundary layers and I was frustrated about the directionality of flow and how to calculate the shear stress. **It seemed complicated looking at the video and my brain started to shut off.** When the Zoom lecture was over, I closed my laptop and decided to go for a walk to clear my head. I'm very lucky to live by [name] Park and the small river that runs through it. Power walking, I stopped to observe a small dog playing in the stream. Interesting, I thought. The water flows around him and **I can see the distinct change to turbulent flow from steady flow depending on the angle he was standing.** The little dog had more trouble fighting the current when he was facing the flow, as opposed to sideways. Less area for the force to be distributed over, I pondered. **It was then I realised exactly how important learning outside of one's normal environment was. The lecture had clicked in my brain thanks to a tiny dog swimming in the river.** While remote learning wasn't what I signed up for, **I am lucky to have the facilities to continue to learn and the understanding and excellent lectures of [name of faculty member]. Getting outside is just as important as studying in this stressful time.**

Final Comments and Next Steps

This interim report is based on the most recent 29 of 52 stories collected as part of this research project. These findings have been disseminated to the Dean and School Chairs in the College of Engineering, as well as to all faculty, staff, and students.

In parallel to keeping up with developments in our college through collecting stories, the next step in this project is to continue “make sense” of these emergent findings in collaboration with faculty, staff, and students. We are working on ways to facilitate this process in an online format.