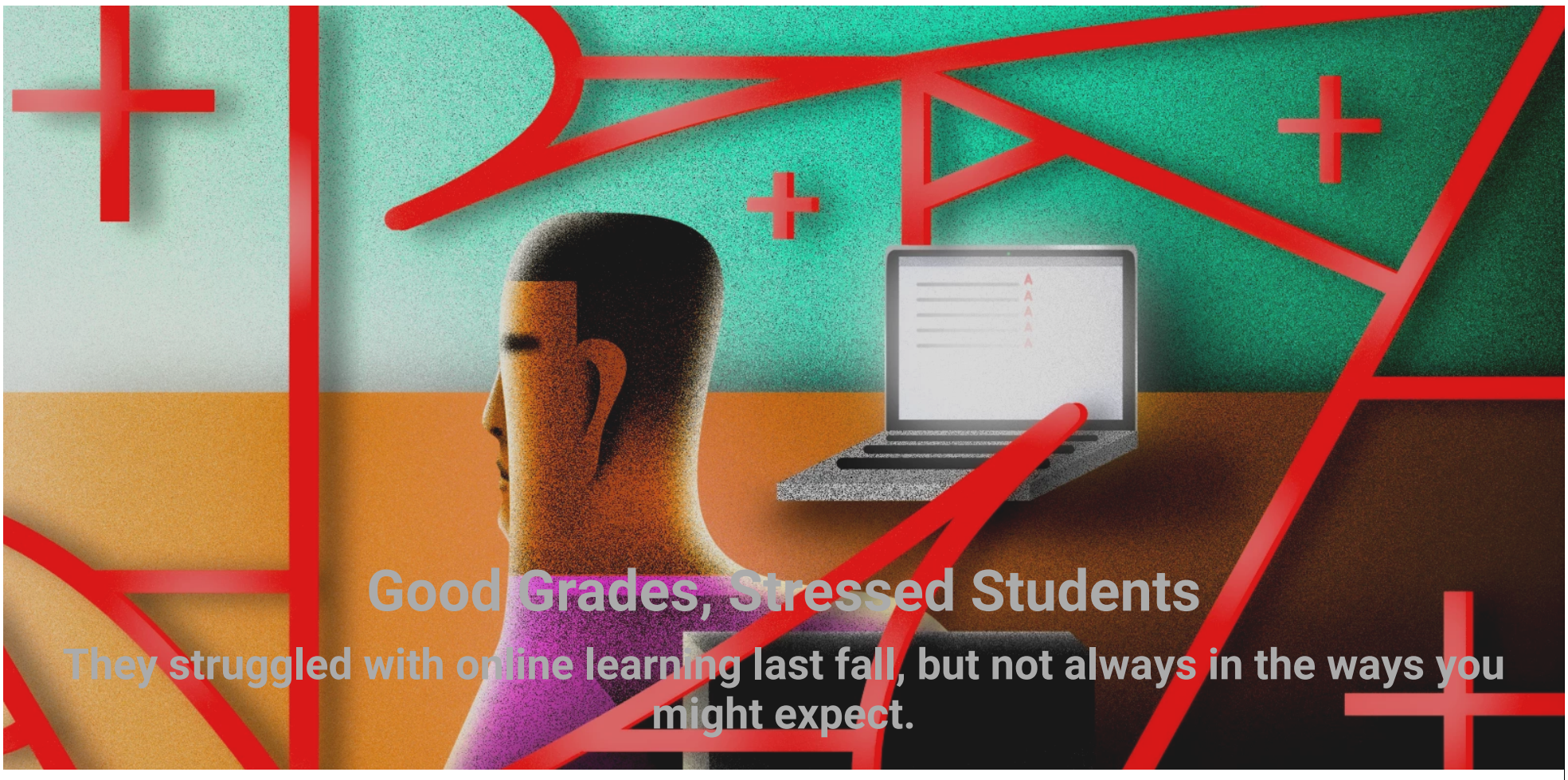
THE CHRONICLE OF HIGHER EDUCATION

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PANDEMIC LEARNING

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As the first full academic year under Covid-19 restrictions grinds on, fall grades are in for colleges around the country. So how are students doing?

The picture is mixed. First, the good news. Undergraduate grades held steady, or even improved, at a number of universities that offered most courses remotely. And that held true even for students in higher-risk groups. That steadiness in grades heartened academic leaders who had tried to lessen the strains of living under a pandemic and the challenges of online learning by investing in faculty-training and technology.

But grades tell only part of the story. A solid GPA can paper over a semester of isolation. Students aren't just missing the parties and late-night talk sessions that make up college life. They've also put on pause the co-curricular experiences that can deepen learning, like working alongside a professor in a lab, studying abroad, or engaging in service work.

And averages can hide a lot. Some campuses saw a rise in the number of students on probation or dropping out after a semester, even if average GPAs did not decline. Some campuses reported a significant amount of cheating, which may skew grades and suggest deeper struggles for students.

While the longer-term effects of learning under this pandemic remain to be seen, colleges are diving into their learning-management systems and digging through student surveys to figure out what worked and what didn't this fall.

If there's a thread that ties many of these findings together, it's this: To thrive at a time when we're spending our days behind doors and in front of screens, students need connections more than ever, connections that recognize their lives beyond the classroom.

By conventional measures of student success, undergraduates at the University of California at Irvine are doing as well, if not slightly better, than last year. The percentage of students earning a 2.0 GPA or lower has dropped compared with fall 2019, while average undergraduate GPA rose, from 3.1 to 3.3.

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Even in those large introductory classes where undergrads often struggle the most, students performed better than the previous fall, according to grades in 15 gateway courses. Those upward trends in grades held true even among first-generation and low-income students, as well as for students from under-represented minority groups. (Half of Irvine's students are first-generation collegegoers, and about a third are low-income. Only 15 percent identify as white and non-Hispanic.)

But what accounts for their solid performance? After all, few undergraduates or their professors would argue that taking all of your courses online is a recipe for academic success.

Did faculty members change their grading standards, perhaps going easier on students? Were instructors being more responsive and accommodating, adjusting deadlines when students hit a roadblock? Or were students simply working harder than ever because they have fewer distractions?

As it happens, a team of researchers at the university has been studying how students learn and grow in college. And they have some answers.

Led by Richard Arum, dean of the School of Education, they have been tracking more than 2,000 students through surveys, academic performance and other data. Arum began the project before the pandemic hit, but has adjusted his research to evaluate its impact.

Arum's team looked at a variety of data, including how much time students logged into their coursework through the learning-management system. It's not surprising that the number of hours students spent in the LMS went up in the past year, he said, given that virtually all classes are now online. But his team also found that time increased in classes that had been online in fall 2019 as well. That's one indication that students are studying harder.

Students' accounts of their behavior back that up: They reported that they were spending about nine hours per week studying for each of their two toughest courses. That's notable, Arum said, considering that previous research has shown that the average college student spends a total of 15 hours per week on their coursework outside of class.

How is it possible that students are studying more, when we know they may have increased responsibilities such as helping parents with child care or holding down part-time jobs? Arum theorizes that they are also spending far less time socializing, commuting, or, in fact, doing any sort of extracurricular activities. In short, he said, "it's not that the faculty have grown soft, it's that the students are working."

That trend echoes what academic leaders on other campuses have found: Students say they are working harder than ever. In a Michigan State survey of more than 7,500 undergraduates about their fall-2020 experiences, about half of the students reported spending more time than in previous semesters writing papers, reading class material, attending or watching lectures, and working on assignments.

But what students are doing is just one side of the equation. What about their professors? Have their efforts contributed to stronger student performance?

Many colleges invested in professional development over the spring and summer to help faculty members create online versions of their courses. Instructors learned how to make short, engaging videos, use more formative assessments and fewer high-stakes exams, encourage group discussion and collaboration, and add flexibility to accommodate students challenged by online learning and the pandemic.

At Irvine, that training made a noticeable difference. In the fall of 2019, students in Arum's study reported that nearly 80 percent of course time was spent in lecture. In the fall of 2020, that figure dropped below 60 percent. Meanwhile, time spent in discussion and group work more than doubled, to 43 percent.

There's a lesson in here, said Arum. "When you move to more engaging, participatory, interactive instructional strategies, student academic engagement goes up."

National survey data backs that up. A study by Tyton Partners and Every Learner Everywhere that tracked faculty members from the spring through the fall found that instructors in large introductory courses who felt prepared to teach in an online or hybrid setting were less likely to report an increase in anticipated failure rates than their peers who did not feel that way.

Many faculty members in the Tyton survey, and elsewhere, said they reached out to students more regularly, created clearer expectations for their courses, and otherwise made more use of teaching practices that research has shown correlates with student success.

Instructors who redesigned their courses for online learning say it has made an impact on their teaching and on their students. Eduardo J. Gonzalez-Niño co-taught an introduction to biology course at the University of California at Santa Barbara this fall and saw students earning more A's and fewer F's compared with previous terms.

Before the pandemic hit, Gonzalez-Niño and his co-instructor, Mike Wilton, who each teach half of the course, were already using active-learning strategies in their classrooms, such as putting students in groups to solve problems together. The challenge, Gonzalez-Niño said, was translating that type of interactive teaching to an online course, knowing that many students might have personal and technological challenges. Santa Barbara has a high percentage of first-generation and Pell-eligible students. It's also designated as a minority-serving and Hispanic-serving institution.

Last summer the two participated in university-run workshops built on principles of inclusive and equitable course design. They decided to create a flexible course with asynchronous components after surveying students anonymously and finding that 30 percent would be unable to attend synchronous classes either because they were living overseas or working, and more than 15 percent did not have broadband access, depending instead on

cellphones or weak internet. Many students also said they were feeling isolated, so the instructors added in plenty of opportunities for virtual meetups.

Gonzalez-Niño filmed a welcome video, explaining that, like many of his students, he is the first in his family to attend college. He created after-hours virtual office hours, in which he invited former students to talk about their careers. He designed more low-stakes assessments such as quizzes and discussion posts. And he modified his grading system so that students earned a small number of points if they kept up with watching his taped video lectures every week.

Throughout the term he also tried to remain flexible. One student told him that her parents were struggling with Covid so she had to take care of her little brother and sister. He gave her more time to turn in her assignments. When she couldn't take an exam at an allotted time because of her child-care responsibilities, he held another slot open for her. The student ended up passing the course. At the end of the term, he said, he received some of the most positive evaluations he's ever gotten.

The experience also changed him.

"To be honest, even though I'm a first-generation student and Hispanic, it is hard to keep all that in mind when you are trying to reach your learning objectives," Gonzalez-Niño said. "You lose sight of that. This made me realize and go back to that, that students are human beings and dealing with a lot of things. That's the silver lining of Covid."

Georgia State University is nationally known for the way it works to help students cope with the challenges they face. Its high-tech, high-touch approach tracks hundreds of risk factors daily so that advisers can reach out to students as soon as they see signs of struggle, such as a couple missed classes or a poor grade on a quiz. Yet Georgia State found that even that high-tech approach wasn't enough for its first-year students when learning during the pandemic.

That's because, in the fall, the university chose to offer about half of its courses asynchronously, figuring students would need and value the flexibility of doing coursework at their own pace. It found, instead, that first-year students struggled without the guardrails of regular, real-time connections with professors and peers.

Even as juniors and seniors performed well in their online classes, the average GPA fell for first-year students, compared with fall 2019, and the number of them earning F's or withdrawing from courses rose significantly.

"First-year students just didn't know how to do college. They didn't have a sense of where they could get support, how all this works, how to organize yourself well enough to know the deadlines," said Allison Calhoun-Brown, senior vice president for student success and chief enrollment officer. "A lot of the best research said that these classes should be taught asynchronously, but we found that students performed much better if the class was synchronous. There was probably a stronger connection to classmates and students."

Georgia State also found that it was more constrained in using those high-tech advising tools in the fall. Its early-alert system identified students who were performing poorly, but advisers found it harder to get those students to respond to their outreach from a distance. Similarly, fewer students took advantage of peer tutoring when it was virtual, instead of in person, when it often came right after class.

"Those kinds of innovations were out the window when it came to the online environment," said Tim Renick, executive director of the university's National Institute for Student Success.

Georgia State took those findings to heart and is making sure students will have more regular, direct interactions this spring, from academic support to advising.

It has asked faculty members teaching asynchronous courses to add synchronous drop-in sessions, which proved popular in the fall with both professors and students. Advisers are more aggressively reaching out to students on academic probation, who risk losing their financial aid if their grades don't improve. And the university started what is unofficially being called a "comeback camp" for the remainder of the spring semester, providing about 2,000 at-risk students with more academic coaching and other support services, said Carol Cohen, assistant vice president for university advising. It is also planning to offer a select group of summer courses for students who performed poorly in them in the fall.

The experiences of Georgia State's students aren't unusual. Asynchronous courses seem to have been challenging for many undergraduates, first-year students in particular, as they weren't yet used to the pace of academic life. Even when students did well, many colleges this fall found that first-year students struggled with time management and engagement in online courses.

At the University of California at Santa Cruz, a student survey this fall found that seven in 10 students had trouble maintaining motivation to perform well in class and to study. In asynchronous classes, 81 percent said difficulty staying motivated was the main obstacle to keeping up with their work. Slightly more than half reported difficulty staying engaged with their courses.

Some colleges sought to alleviate the strain of pandemic learning by giving students more flexibility in grading. Wayne State University allowed students to convert F's and D's to a "pass/no credit" option instead. Indiana University at Bloomington allowed students to withdraw from classes right up until final exams. The University of Michigan at Ann Arbor allowed students to "cover" grades they did not want reflected in their GPAs. (About 30 percent of grades were covered.)

What's interesting about that is that grades and grade distributions weren't much different even when counted, says Tim McKay, associate dean for undergraduate education. He suspects that students simply "took it in the spirit it was intended," which was to reduce worry and stress.

For many lower-income and first-generation students, online learning was hardly the only challenge last fall. They also faced increased family and work pressures.

The Tyton survey found that at institutions with high numbers of Pell-eligible students, instructors of large gateway courses were more likely to see increases in D's, F's, and withdrawals. In the Santa Cruz survey, first-generation students were more likely to report worrying about doing well on tests and about the impact of the pandemic on their families.

Michigan State saw a jump in the number of lower-income and first-generation students on probation, even though the average GPA for first-year students was higher this fall compared with last year. The percentage of Pell-eligible students on academic probation jumped from 7.5 to 11.3; that of first-generation students rose from 8 to 10.5.

"Difficulty paying bills, not having access to reliable technology or the internet, having to provide care for a loved one, finding a quiet and safe place to study" were more prevalent among Pell-eligible students, said Renata Opoczynski, assistant dean for student success assessment and strategic initiatives. "All of those things that they are dealing with take away time to study."

Eve Shapiro is chief knowledge officer for Beyond 12, a nonprofit that provides coaching for about 2,300 college students who are lower-income, first-generation, or from a historically underrepresented group. The organization has been monitoring its students' progress throughout the pandemic, and while many are doing OK in their classes, they are struggling in other ways, Shapiro said.

Many have had a difficult time navigating their college's academic support network of advisers and tutors online. "Especially for students early in their academic careers," she noted, "they just don't have those on-campus relationships to draw on."

Shapiro worries about the long-term impact of this problem. While students are proving to be resilient in their coursework, they may take longer to earn their degree because they're not getting needed advice on course progression. STEM students in particular may have trouble staying on track, given how prescriptive many of those majors are.

Jackie Bell, a sophomore at San Francisco State University and the first in her family to attend college, has faced some of those challenges. A microbiology major with a concentration in clinical sciences, Bell's grades have dropped since her university moved online, in part, she said, because she has found it hard to stay motivated.

She is taking organic chemistry, physics, communications, and philosophy this semester. All but one of her courses are asynchronous, meaning that she can spend hours in her bedroom each day without talking to anyone. Other than a 9 a.m. live class three times a week, she watches taped lectures, takes notes, and works on her assignments until 6 pm.

"It's like: you, your computer, and a ton of work. Have fun," said Bell, who plans to become a medical technician. "I don't truly feel like I'm learning all the stuff in the way that I should or could be."

She has also had difficulty figuring out her path through college. She met virtually with someone in advising, but later found out they had given her the wrong information about courses she needed for her major. She also tried to make an appointment with a counselor without success. They were either swamped or had technical problems.

Being first generation has made this year harder. "I already don't know anything about the system," she said. "Online I have to dig even more. There's nobody telling me, maybe you should check this out."

She is grateful for her Beyond 12 coach, she said, who has sat on the phone with her as she worked her way through the university's website to find the right people to email for advice.

Technology also continues to be a hurdle for many lower-income students. While many campuses purchased laptops and hot spots over the spring and summer to send to students in need, colleges still found gaps this fall. In some cases students were not taking advantage of the technology offered to them.

Southwest Tennessee Community College, where more than half of the students are Pell eligible, for example, purchased 3,500 laptops for students, but only 1,200 were taken. Kendricks Hooker, vice president for academic affairs, thinks that's just one of several reasons students struggled last fall, with the average GPA of first-time students dropping to 0.79, compared with 1.38 in 2019.

"Many of our students were still using their cellphones," Hooker said. The university is working on creating a better remote experience for students in the spring, including letting students know they can borrow laptops and hot spots, and more training for students in effective online-learning strategies.

Michigan State also saw challenges with technology uptake. According to the student survey, about 12 percent of students sometimes had limited or no access to a computer this fall, 36 percent sometimes had limited or no access to the internet, and 83 percent sometimes experienced slow or not working internet.

As at Southwest Tennessee, not all the Michigan State students who needed better technology had asked for it. That's why checking in regularly with students "is a continuous process," said Opoczynski. Of those students who

did seek technology help in the summer, she noted, not a single one was on academic probation, and the lowest GPA was a 3.3.

The arrival of Covid-19 vaccines this spring makes it more likely that in-person activities will resume this fall. But even if that happens, few people expect a complete return to normal. After a year of isolation and turmoil, professors will need to help students catch up on all that they missed. Readjusting to college life will also take time, especially for students who have not set foot on a campus for more than a year — or ever. The lessons learned about the importance of human connection, in and around the classroom, will remain as relevant as ever.

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