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ADVICE

7 Dos & Don'ts for Post-Pandemic Teaching With Technology

Here's what students hope you'll keep doing in the fall — and what they hope you'll drop.

By *Flower Darby*

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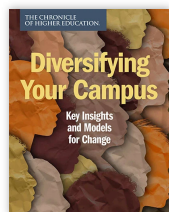
“Truly my eyes feel pain,” said the undergraduate, blinking behind her glasses on Zoom. Part of a [February panel of students](#) sharing their views on pandemic teaching, she explained that staring at online slides for several hours a day in class was not only difficult and tedious but physically unpleasant, too. This year more than ever, she added, “I’m really aware of time spent on the computer.”

Her comment stood out to me — a veteran of [teaching with technology](#) — because I hadn’t ever considered that watching too many slide-heavy Zoom lectures could cause physical discomfort. It made me wonder: What else are we, as instructors, unknowingly doing in our virtual classrooms that might cause students physical or psychological distress?

As we look to a post-pandemic future that [will undoubtedly include](#) some teaching with technology, let’s consider student perspectives on the past year. Here are seven

dos and don'ts based on students' comments from that February panel, plus findings from a recent Educause study, "[Student Experiences Learning With Technology in the Pandemic](#)." My focus here is on what to do, and not do, this fall if you're still teaching (to some degree) in a virtual environment, but many of the following suggestions can be adapted to a physical classroom, too.

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DON'T lecture with slides for an entire Zoom class. Even in a physical classroom, it's hard to stare at slides for an hour, but at least students can also watch the professor and focus on other things at varying distances. Staring at slides on a laptop, as the student panelist made clear, can cause eye strain. To learn more about that and other effects of spending so much time videoconferencing, researchers at Stanford University have created a [Zoom Exhaustion & Fatigue Scale](#) (it's named for Zoom but applies to all such platforms). The Stanford research documents the physical irritation we've all experienced in this screen-heavy year, and underscores the importance of mitigating it as we teach in online spaces.

So instead of delivering a lecture the same way you would in person, embrace the alternatives afforded by technology. Consider using [flipped learning](#) — that is, recording mini-lecture videos (of five to eight minutes) for students to watch ahead of time, in preparation for group activities in your Zoom class. To ensure broad access, caption the videos and provide a time-stamped transcript, or create a bulleted outline of topics and the times when they're discussed on the video. This is a great approach to use when you resume teaching in person, too.

Does the prospect of recording all those videos seem overwhelming? It doesn't have to be. Start **small**: Make it a goal for the fall to **provide one recorded mini-lecture** a week or even one per unit. Making videos gets easier with practice, and remember: They don't have to be polished. Students like to see the real you, anyway.

DO offer more active-learning and discussion exercises in class. I'm not saying you should never lecture in class, via Zoom or in person. Lecture has **a perfectly valid place** in teaching when you, as the expert, need to explain complicated concepts, model disciplinary thinking and problem solving, or offer analogies to foster those "a-ha" moments. What I am saying: Whether you are teaching in person, online, or in some hybrid format in 2021-22, intersperse brief lecture segments with productive activities.

What can you offer in a Zoom class, in particular, to get students actively working with class concepts?

One quick strategy to break up a lecture: Lead a "waterfall." That is, ask students to answer a question in a few words in the chat box, but tell them to wait to post their responses until you give the signal. The result will be a cascade of original answers that achieves multiple goals. You can check students' understanding, promote active listening and engagement, and give them a break from slides, all at the same time. Similarly quick activities include class polls and two-minute think-pair-share exercises. You could also ask students to annotate a whiteboard or a Zoom slide with drawing and stamping tools.

For a more in-depth activity, consider one a student described on the February panel. In one of her classes, she said, students meet every Friday in the same discussion groups to work through a set of questions on a Google Doc and enter their collective answers. "Because we're in the same group every week," she said, "it really fosters an environment of trust."

DON'T require students to use a tech tool that you don't understand. Another student on the panel described her professors' trying to figure out how to use GPS software — in Zoom via screenshare — while asking students to use the app to complete an assignment. If you want students to use a tech tool, make sure you have a degree of confidence in operating it yourself. Faculty members didn't have much time to acquire that expertise in the abrupt shift to remote classrooms in 2020, but this fall you should be able to explain the basics of the tech you are asking students to use.

Likewise, it's a mistake to assume students are “digital natives” who already know how to use their computers or phones for classwork, and are better with tech than you are. It benefits all students if you take a few minutes of class time to orient them to any tech tool you're using. That holds true for your institution's learning-management system (LMS), too: A short video tour can help students feel situated and ready to learn.

DO keep using anonymous polling. Many instructors started using polling on Zoom early in the pandemic to check in frequently with students about their coursework. Such small-scale opportunities to provide feedback were helpful, the student panelists said, and easier to do online. Simple questions — “What did you think of this reading?” or “What questions do you have about this material?” — are a supportive way to see where students might be confused, and adjust your lesson accordingly.

Anonymous check-ins can take place on Zoom with embedded or external polling tools, such as [Poll Everywhere](#), or by way of a simple survey in Google Forms. You can use polling during a live class or asynchronously to help you prepare for the next class meeting. It's a powerful way to connect with students, demonstrate empathy, amplify students' voices, and promote trust.

DO get students up and about. This might be less of an issue in the fall if students are attending more classes in person. But if you are teaching to any degree online in the fall (or even in person), offer students some opportunity to get up out of their seats.

During the February panel, participants were given a chance to ask questions, so I asked the students about the best experience they'd had in a Zoom class. One student said that, after Covid disrupted campus, she'd been curious how her drawing course would be taught online. Her professor asked students to go outside, draw something they could hear, and come back in 10 minutes. That was her best experience, she said: "going out of Zoom and into reality, and then coming back."

That serves as a good reminder that you don't need to use fancy tech all the time, even in an online course. It's more important to think creatively and be open to new approaches. Another simple technique: Offer students a five-minute break and [share a video clip full screen](#) to give everyone a chance to stretch, do "[chair yoga](#)," or just walk around the room. You might not offer chair yoga during an in-person class (or maybe you would!), but virtual classrooms require different considerations.

DO provide more asynchronous materials and activities. During the pandemic, my No. 1 tip for faculty members new to teaching with technology was to take more advantage of their campus LMS. So I was especially pleased when the student panelists suggested that faculty members offer more of their teaching asynchronously. "It helps with my schedule," one said.

It also enables you to [teach more inclusively](#). As we've learned in the past year, not every student has equal access to reliable, high-speed internet service. For that and many other reasons, asynchronous engagement offers a more equitable learning experience, since students can watch videos, post discussions, and take quizzes when conditions are best for them. Plus, async requires less internet bandwidth than does interacting in Zoom.

When — not if — your regular teaching routines are disrupted again (weather emergencies, conference travel, illness), you and your students will be better able to adjust quickly if you have a well-developed set of asynchronous activities. Again, if this feels overwhelming, start small: Add one async element to your class this fall. Add

another in the spring. Over time, your online class materials will become more robust, and so will your confidence in teaching online.

DO emphasize interaction with and between students. This was a key point of the Educause survey. If you add asynchronous activities, don't sacrifice communication with students. If you teach in Zoom, don't neglect opportunities for students to connect with one another, even on a purely social basis. If there's one thing we've learned during this pandemic, it's the importance of connecting with people. This is true in class, too, especially when all or part of a class takes place away from the campus.

We've just been through the wringer in higher education. The [Big Pivot](#), and our subsequent year mostly online, resulted in hastily adopted approaches, lots of trial and error, and general fatigue. Even so, this summer, try to carve out a little time to reflect on what to keep, and what to lose, when teaching with tech. It will benefit your students and you in the fall.

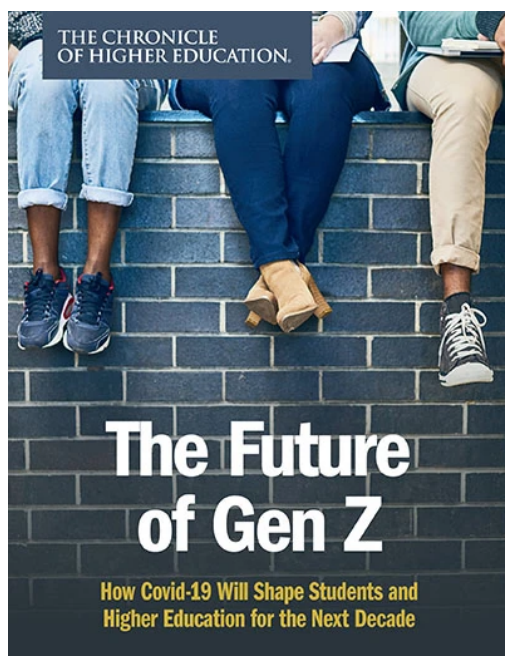
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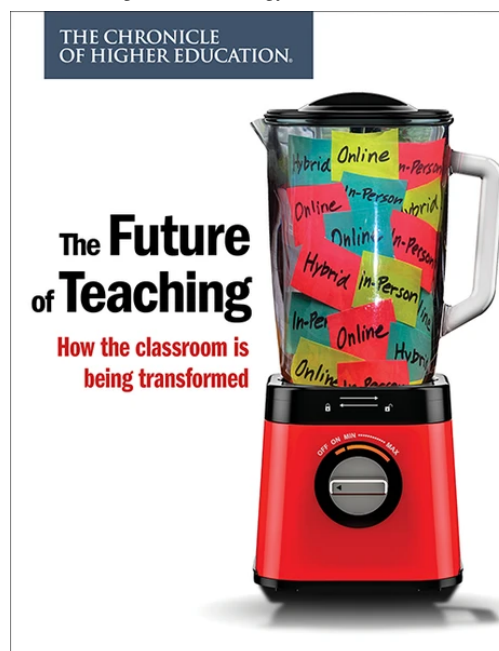
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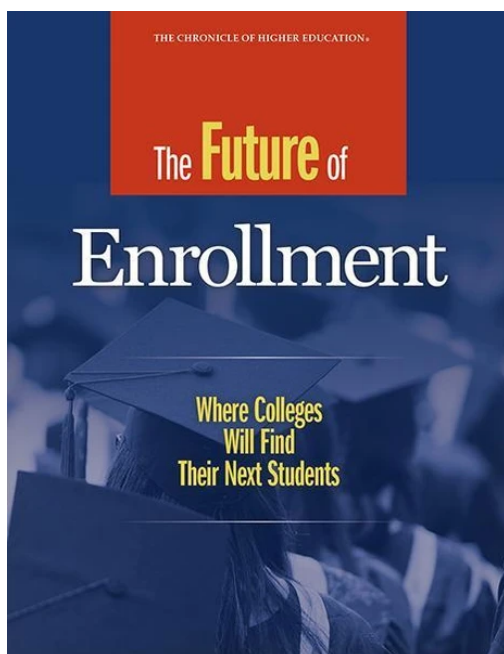
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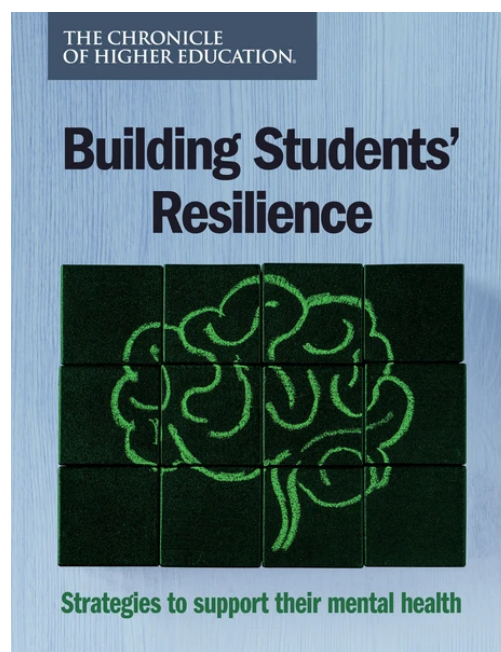
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