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# Explorations of Active Learning

What College Leaders Need to Know

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**T**he Covid-19 pandemic has prompted an unprecedented discussion about teaching and learning, and which methods and strategies are most effective. One teaching style that has been garnering attention is active learning, which replaces the traditional lecture with discussion groups, hands-on work, opportunities to solve problems, and real-world experiences. Research indicates that students perform better on exams after active learning, and that failure rates are comparatively higher under the traditional lecture. But two years after faculty members quickly adjusted to remote learning, how can college leaders get them to embrace another new kind of teaching?

To hear perspectives on active learning, *The Chronicle*, with support from Adobe, recently hosted a virtual forum called “Explorations of Active Learning: What College Leaders Need to Know.” The forum was moderated by Beth McMurtrie and Beckie Supiano, two senior writers for *The Chronicle*. The following comments, which have been edited for clarity and length, represent key takeaways from the forum. To hear the full discussion, access the archived version [here](#).

### SESSION ONE

The first session featured panelists from Harvard University: Louis Deslauriers, director of science teaching and learning in the faculty of arts and sciences and a senior preceptor in physics; Logan S. McCarty, director of science education and a lecturer on physics, as well as on chemistry and chemical biology; and Kelly Miller, an associate senior lecturer of applied physics.

**Beth McMurtrie:** A couple of years ago you and some of your colleagues published a [study](#) based on an experiment you did in an undergraduate physics course at Harvard. What are some of the findings?

**Logan McCarty:** The students in the active-learning classroom scored higher on the test of learning, but their perception of their feeling of learning was lower. So in the active-learning classroom, they rated the quality of the instructor lower. There was a negative correlation between how much students learned, as measured by the test, and how they felt they were learning, as measured by the survey.

**McMurtrie:** My understanding is that it’s the struggle that makes them feel like they’re learning less, when actually that is how they are learning. In your study you talk about the importance of addressing students’ perceptions around active learning up front. What are some things that individual faculty members, as well as departments, can do to encourage students to keep an open mind?



**Beth McMurtrie**

Senior Writer,  
*The Chronicle of Higher Education*



**Logan S. McCarty**

Director of Science Education;  
Lecturer on Physics, Chemistry,  
and Chemical Biology,  
Harvard University

**McCarty:** Administratively, give the instructors tools — for example, data from the study — to help the students buy in. But it's more important for administrators to support the instructor's choice of active learning, and to realize that there are consequences for student course evaluations — understanding that students may have a misperception of the quality of their own learning.

**Louis Deslauriers:** Yeah, superstar lecturers always have the highest course evaluations. When you look at your peers, the ones who lecture traditionally, it's normal to veer away from active learning. At the institutional level, it would be nice to think of an evaluative process that not only depends on student feedback, but on observers that go into the classroom and rate the kind of active learning that's being used and how it's being used.

**Beckie Supiano:** Is active learning slower with respect to covering the various topics?

**Kelly Miller:** What does covering material exactly mean? Do you have to just say it out loud once for you to have been able to cover it? If so, then what's the point? It's not what you covered — it's what you uncovered that matters. Covering things for the sake of ticking a box is not really the goal here. It's to have people have an enduring understanding of the material that you're trying to teach.

**Supiano:** If you could have administrators do one thing to support active learning on their campus, one move that college leaders could make to take things to the next level, what would you like to see them do?

**Miller:** Getting rid of or diminishing the value of student evaluations. They deter people from trying innovative things.

**McCarty:** More peer observation of teaching. It doesn't have to be peer evaluation. It can be pure observation of teaching.

**Deslauriers:** To hire one person in each department, or at least at the division level, that can mentor faculty one on one. Lack of training is the biggest problem in having active learning become more widespread.



**Louis Deslauriers**

Director of Science Teaching and Learning in the Faculty of Arts and Sciences;  
Senior Preceptor in Physics,  
Harvard University



**Kelly Miller**

Associate Senior Lecturer  
of Applied Physics,  
Harvard University

## SESSION TWO

The second session featured panelists from the University of California at Irvine: Andrea Aebersold, the director of faculty instructional development; Jennifer L. Wong-Ma, an associate professor of teaching in the computer-science department; and Brandon Golob, an assistant professor of teaching in criminology, law, and society.

**Supiano:** Andrea, when you run your [active-learning institute at UC-Irvine](#), you talk about the Harvard research that we were just learning about in the first session. Could you tell us a little bit how you frame that?

**Andrea Aebersold:** We all know that there's student resistance, and that faculty find it frustrating if students are telling them, I'm not enjoying this, or are giving them poor evaluations. Having this research was so helpful to give them a heads up: "This is a thing that happens, here's why it happens, and here's a way we can get ahead of it."

I have a whole session in the active-learning institute about student buy-in. You tell them: This is why I'm doing it, here's why you might not like it so much. Then do check-ins throughout the semester about how the class is going. Remind them why you're doing this and what the data shows about students who learn through active learning versus traditional lecture.

**Supiano:** I'm curious if you've talked about these issues with your students?

**Jennifer L. Wong-Ma:** The buy-in is the biggest challenge, it really, really is. It is so important to talk to them and to reiterate to them. You need to be reaching out to them through multiple mechanisms, putting it at the top of every assignment. Reinforcing "this is good for you, and this will help you learn."

**Supiano:** Let's talk about the support that faculty have in active learning, both to get started, and to keep it going on your campus.

**Aebersold:** We just opened a whole building of active-learning classrooms. That's a big, visible reminder to the campus that active learning is something we encourage and support. We have a division of teaching excellence and innovation, so I work with faculty, but we also have experts and directors for online learning and graduate students and postdocs. We're doing research on active learning, and we mentioned the active-learning institute, which is an eight-week training in active learning.



**Beckie Supiano**

Senior Writer,  
*The Chronicle of Higher Education*



**Andrea Aebersold**

Director, Faculty Instructional  
Development,  
University of California at Irvine



**Wong-Ma:** During the pandemic we started doing Friday happy hours for teaching, and just talking about what everyone was doing in their classrooms. We created small groups to teach each other.

**Brandon Golob:** We thought a lot about faculty development and connection, but also about our future faculty — programs that exist for grad students and postdocs. Active learning often hinges on the entire teaching team, which includes teaching assistants and undergraduate peer educators.

**Wong-Ma:** Yes, we're in this together, an atmosphere of learning and sharing and supporting each other.

**Supiano:** How much does the physical classroom space matter?

**Wong-Ma:** What really matters is the type of activities that you're doing as well as the student buy-in. I've been in regular lecture classrooms and had really good experiences by encouraging students to just turn to their partners. The chairs don't need to swivel. You just need to tell them, "Hey, turn around and talk to the person behind you."

But if you really want them to have long discussions and really look at the same paper and work together, the pods and the chairs matter. But having these active-learning techniques in your tool chest can help you adapt to not having the best active-learning classroom.

**Golob:** Continuing to harness which digital tools make for meaningful active learning — if we are in a traditional classroom that may mean talking to one or two people next to you. But I'll use a digital tool to build out the collaborative discussion activity that they're having in the virtual space, and they'll have the opportunity to contribute after the class period ends. So you may just have a small percentage of classroom time dedicated to an activity, but then when they leave, they can supplement reading or other types of passive learning.

**Supiano:** If someone's on a campus where this kind of support doesn't exist, how would you encourage them to make a case for this as a campus priority?

**Aebersold:** Doing things at the ground level. Those conversations about teaching. Finding ways for faculty to sit in on another person's class and learn. Especially now with diversity, equity, and inclusion practices, reminding the administration that this helps all of our



**Jennifer L. Wong-Ma**

Associate Professor of Teaching,  
University of California at Irvine



**Brandon Golob**

Assistant Professor of Teaching  
in Criminology, Law and Society,  
University of California at Irvine

students. And we can start small — it can be a faculty lunch hour where we talk about active learning.

**McMurtrie:** What’s your one-minute elevator pitch to colleagues who are hesitant to move in this direction?

**Aebersold:** I would say, active learning doesn’t mean you don’t lecture, so let’s figure out when is the best time to lecture and when is the best time to do some sort of activity.

**Golob:** This catch-all phrase “active learning” doesn’t mean let’s burn my syllabus and everything to the ground and just start over. It can be a three- to five-minute activity in an hour and a half class.

I’d exhort them to talk to their students and remember that their students are at the forefront of being impacted by this. If you talk to your students who have been in an active-learning class for an extended period, you’ll hear about skill development, but also, “I just discovered that my voice matters,” or, “even as a self-proclaimed introvert, I found that I can participate in this space, and I can be the driver of my own education.”

**Wong-Ma:** Start small. Do something very simple. Maybe it’s a poll at the start of class. See how the students receive it. See how you like the feedback from the students.