

# Fostering engagement in online discussion

Creating active discussion in courses can be a challenge even in face-to-face circumstances, especially for STEM courses, which can often be accompanied by large volumes of required content to absorb. Conversations and questions in class tend to select for the most outspoken students, while online discussion boards can feel awkward and forced from canned prompts. For example, in my undergraduate biochemistry course, [General Biochemistry: Metabolism \(CHEM F351\)](#), we get through half of an incredibly dense textbook of material on metabolic pathways, covering a broad array of mechanisms ranging from photosynthesis to heart disease. The curriculum of the course is fairly standardized, and the vast volume of required material can feel overwhelming and tedious to many, making it a challenge to find ways for students to relate to the content in a deep and meaningful way. To help ameliorate this, I have tried to intersperse dense content with methods for broader connections through group projects and online discussion.

## How I am Acclimating to the Digital Classroom

- Pre-Recorded Lectures
- Utilize Zoom for Office Hours
- Participation takes place in a discussion setting (Packback)
- Leveraging online teaching communities



Dr. Oliver's strategies for the digital classroom

I had wanted to have an online discussion component to make course participation more approachable to everyone, and to help students relate to content that otherwise might seem dry and mechanical. A couple of years ago, I discovered an interface that facilitated a more organic discussion experience, and had received pretty good feedback from students about that aspect of the course. What I did not expect, however, is that once we moved fully online this spring due to COVID-19, I learned that fostering that space for community exploration and making connections between content and their current world would become the anchor that kept the momentum in the course going. It helped students find ways to channel and build an enthusiasm for biochemistry and health amid great uncertainty and change. Discussions became less robotic and more conversational

since it was more tied to real-world events occurring in real time. An example question proposed in the class was: "Why are individuals that are diabetic more susceptible to complications associated with COVID-19 infection?"

The discussion format I like is [Packback](#). What I appreciate about this over a traditional forum is that posting and reading posts is easy and streamlined, and there are metrics to help promote engagement such as "curiosity scores." Curiosity scores rate the quality of the question based on the responses and if data, figures or literature is referenced/attached. Curiosity scores per post help build a ranking system for the class, fostering friendly "competition" not tied to the grading of the posts. Since I have implemented this service, a majority of students have been searching and exploring primary literature sources. I usually seed a couple of posts myself about twice a week, but once the buy-in from students happens, usually fairly early on in the semester, a community is formed and the discussions take off. Students ask their own questions and bring in current events and their own curiosities to the course. Discussion has ranged from further exploration deep into biochemical mechanisms to current events, such as how biochemistry impacts fad diets, exercise, vaccines, healthcare and COVID-19, as well as students' own life experiences which helped build personal connections to course content. Not everything discussed is explicitly tied to a particular lesson from the class but that freedom also allows for more engagement and activity. As an instructor, this also provides ways to tie issues and concepts that students are interested in back into the lecture content, adapting and linking content as we move through the semester to help show students where specific concepts may be of particular interest and provide the agency for students to feel like they are contributing to the course and their community of peers.

Learn more about Packback by [watching a recorded seminar](#). You'll have to enter your name and email to view the recording.