Online students engage more in lectures than physical attendees

September 23 2021

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The COVID-19 pandemic has made it necessary to innovate flexible teaching methods. As a result, many instructors have learned to deliver their agendas and instruction via Zoom and Teams. In autumn of 2020,

students returned in limited numbers. They were welcomed by "HyFlex Learning" in which half received remote instruction while the other half were physically present. This new normal became a part of the day-to-day lives of UCPH students.

But how, in practice, did HyFlex instruction for large lectures work out? One University of Copenhagen researcher studied exactly that in a study just published in the Danish journal, *Læring og Medier* (Learning and Media).

"Something that surprised us was how active online students were in terms of asking questions about their instruction. They asked plenty of questions in their chats, unlike physical attendees, who asked very few questions to lecturers," explains Helle Mathiasen, the Department of Science Education professor behind the study.

Together with e-learning consultant Henrik Bregnhøj of UCPH's Centre for Online and Blended Learning (COBL), she included 282 lectures delivered at the University of Copenhagen's pharmaceutical, medical and veterinary faculties and analyzed instant message records of three lectures. Furthermore, Helle Mathiasen conducted 15 group interviews with students regarding their instructional experiences.

"The students express that it is easier to ask questions like, 'how exactly does it affect the molecule?' in a chat than in a physical space, where students don't want to be pegged as the 'he or she that asked the dumb question'. Another possible explanation for why online students were more active in chats may be that they are used to communicating with one another in writing on social media," suggests Mathiasen.

Difference between discussion groups and lectures

Differences in participation between online and physical attendees may

also be due to expectations of what a lecture is intended to be. Professor Mathiasen explains:

"Some students have an expectation that large lectures involve mostly one-way communication by the instructor. Hence, they don't feel that it makes sense to ask questions during that time. The same students may be more active in other situations, such as in smaller discussion groups," says Mathiasen.

However, several research projects demonstrate that students learn most when they actively engage with material by, for example, asking about things that they are uncertain about or in seeking confirmation.

According to the professor, it can be "problematic" when students who have shown up on campus for lectures are not prompted and engaged.

"If we don't actively use what we learn in instruction, it is quickly erased from our memory. Therefore, chats provide a fertile ground for deeper understanding, because there is greater communication between students, as well as with the lecturer," she says.

Chats cannot stand alone

While a chat can be a useful learning tool, certain aspects can't replace physical attendance, where students experience gestures, eye contact and body language as part of the teaching.

"Online education cannot stand alone. However, blends like HyFlex could serve as teaching formats that are more widely deployed in the future. And in particular, if there is an e-moderator who includes questions from the chat and controls the camera in a dynamic way that allows remote students to see when the lecturer is writing on the board or pointing to slides, which as a whole makes them feel seen," she says,

concluding:

"However, we must combat our own tendencies to censor ourselves or be shy about asking important questions. Here, an instructor can play a major role in telling their students that it is okay to make mistakes and that mistakes can be learned from."

More information: Henrik Bregnhøj et al, Hvad kan HyFlex-organiseret undervisning?, *Tidsskriftet Læring og Medier (LOM)* (2021). DOI: 10.7146/lom.v14i24.125533

Provided by University of Copenhagen